

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT
455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV



Th8a

LCP-2-SON-23-0058-2 (Sonoma County Land Use Plan Update)

NOVEMBER 14, 2024

EXHIBITS, Part 1

Table of Contents

EXHIBITS

Exhibit 1 – County Location Map

Exhibit 2 – Proposed LUP Text and Suggested Modifications

EXHIBIT 1 – COUNTY LOCATION MAP

Sonoma County, CA (outlined in black)



Introduction to the Local Coastal Plan

Table of Contents

Introduction	2
1. Purpose and Background.....	2
Background	2
2. The California Coastal Act and Local Coastal Plans.....	3
Local Coastal Plan Review and Updates	3
Coastal Zone Boundary	4
Coastal Act Land Use Priorities	4
Administration	5
Relationship to Other Planning Agencies and Initiatives	5
Prior Coastal Plans	5
1980 Local Coastal Plan	5
1989 General Plan & Local Coastal Plan Amendments	5
Local Coastal Plan Update & 2008 General Plan.....	6
3. Plan Organization.....	6
Local Coastal Plan Sub-Areas	6
3.1 Goals, Objectives, Policies, Programs, and Initiatives	6
Plan Elements	7
Land Use Element	7
Agricultural Resources Element.....	7
Open Space and Resource Conservation Element.....	7
Public Access Element	7
Water Resources Element.....	8
Public Safety Element	8
Circulation and Transit Element	8
Public Facilities and Services Element.....	8

Cultural and Historic Resources Element	8
4. Public Participation	9

Introduction

I. PURPOSE AND BACKGROUND

The purpose of this Local Coastal Plan Update is to help guide land use planning and development decisions within Sonoma County's Coastal Zone in a manner reflective of current community priorities, responsive to present-day conditions, and consistent with the latest California Coastal Commission policy and guidance. This update also reflects policies related to coastal development that were adopted by the Sonoma County Board of Supervisors in General Plan 2020, while generally retaining existing land use designations previously certified by the California Coastal Commission. In addition, this Local Coastal Plan Update adds new information and policy in the following areas: sea level rise (2100 planning horizon), biotic resources, cultural and historic resources, geologic hazards, water resources, and public access. The document has been re-organized to be more consistent with the General Plan 2020 format and includes previously certified Appendices, including the Right-to-Farm Ordinance, Historic Resources Inventory, Scenic Resources, Natural Resources, Shoreline Protection, and Categorical Exclusions.

This updated Local Coastal Plan considers growth on the Sonoma County Coast as projected by historic population growth trends and anticipated increases in visitor-serving uses, and build-out is projected based on the continuation of existing zoning land use, density, and minimum parcel size for the period 2015 to 2035.

BACKGROUND

Native American settlement began on the coast of California about 6,000-10,000 years ago. These populations were primarily hunting and gathering tribes, though more recent populations were involved in complex trading systems. The Kashia band of the Pomo people lived on the Russian River and northern coast. The Coast Miwok lived south of the River; their region included portions of present-day southern Sonoma County and Marin County. Both groups occupied a narrow territory extending from the coast several miles inland. The Pomo appear to have had more contact with Russians who settled at Fort Ross in the early 1800's and became somewhat acculturated to European ways. By the 1870's the Pomo survived in three villages. By 1915 a reservation was granted for their permanent residence. The Miwok were subjected to European influence by the San Francisco and Sonoma Missions.

Historic development and settlement patterns across the Sonoma County Coast were influenced by a variety of groups ranging from Spanish settlers, Mexican residents, Russian traders and various industry activities, such as fishing and logging.

The State of California, Sonoma County, and private organizations such as Sonoma County Land Trust and Wildlands Conservancy have preserved large portions of the coastline for parks, recreation, and protection of environmental resources. Examples include Sonoma Coast State Park (and beaches), Salt Point State Park, Fort Ross State Historic Park, Gualala Point Regional Park, Stillwater Cove Regional Park, and Jenner Headlands Preserve. These parks plus development of private visitor-

serving facilities have attracted more tourists to the coast over the years. Several private residential developments including Timber Cove (1961), The Sea Ranch (1964) and Bodega Harbour (1971) have increased the resident population and options for vacationers. As these communities have grown, the Sonoma County coast has gradually evolved an economy based primarily on recreation and tourism, while traditional resource-based industries, such as logging and commercial fishing have been in decline for several decades.

2. THE CALIFORNIA COASTAL ACT AND LOCAL COASTAL PLANS

The California Coastal Act (Public Resources Code Section 30000 *et seq.*; Coastal Act) was passed by the State Legislature in 1976, became effective on January 1, 1977, and replaced the original Coastal Initiative, Proposition 20, passed in 1972. The California Coastal Act requires each local government with jurisdiction over land within the Coastal Zone to prepare a Local Coastal Program for that portion of the Coastal Zone within its jurisdiction. A Local Coastal Program is a basic planning tool used by local governments, in partnership with the Coastal Commission, to guide development in the Coastal Zone. A Local Coastal Program must include a Land Use Plan, which contains goals and policies for development, and an Implementation Plan that contains measures to implement the plan.

While each Local Coastal Program reflects unique characteristics of individual local coastal communities, the Coastal Commission requires that regional and statewide interests and concerns must also be addressed in conformity with Coastal Act goals and policies. Following adoption by the Board of Supervisors, this Local Coastal Plan Update will be submitted to the Coastal Commission for review and certification that the Local Coastal Plan is consistent with provisions of the California Coastal Act.

LOCAL COASTAL PLAN REVIEW AND UPDATES

Coastal Act Section 30519.5: “Periodic review of certified local programs; recommendations; reports” states:

“(a) The commission shall, from time to time, but at least once every five years after certification, review every certified local coastal program to determine whether such program is being effectively implemented in conformity with the policies of this division. If the commission determines that a certified local coastal program is not being carried out in conformity with any policy of this division it shall submit to the affected local government recommendations of corrective actions that should be taken. Such recommendations may include recommended amendments to the affected local government's local coastal program.

(b) Recommendations submitted pursuant to this section shall be reviewed by the affected local government and, if the recommended action is not taken, the local government shall, within one year of such submission, forward to the commission a report setting forth its reasons for not taking the recommended action. The commission shall review such report and, where appropriate, report to the Legislature and recommend legislative action necessary to assure effective implementation of the relevant policy or policies of this division.”

Consistent with Coastal Act Section 30519.5, Sonoma County shall review the Local Coastal Program and amend as indicated by this review every five years after certification by the California Coastal Commission.

COASTAL ZONE BOUNDARY

The Coastal Zone is defined in Coastal Act section 30103, and its boundaries were further established through maps adopted by the State Legislature in 1976, at the time of Coastal Act enactment. Per the Coastal Act, the Coastal Zone includes land and water of the State of California, from the Oregon border to the U.S.-Mexico border. The Coastal Zone extends seaward to the State's outer limit of jurisdiction, including all offshore islands, and inland generally 1,000 yards. However, in significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. Along Sonoma County's 55-mile coast, the Coastal Zone extends inland generally between 3,000 and 12,000 feet from the shoreline, except around Duncans Mills, Willow Creek, and Valley Ford, where it extends up to five miles inland along the Russian River corridor and the Estero Americano.

COASTAL ACT LAND USE PRIORITIES

California Coastal Act Section 30001 states:

"The Legislature hereby finds and declares:

- (a) That the California coastal zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem.
- (b) That the permanent protection of the state's natural and scenic resources is a paramount concern to present and future residents of the state and nation.
- (c) That to promote the public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment, it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction.
- (d) That existing developed uses, and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to working persons employed within the coastal zone."

Thus, the Coastal Act recognizes the importance of both the natural environment and economic development that is dependent upon the resources of the coast.

The Coastal Act places the highest priority on maintaining and increasing public access to the shoreline and protecting environmental resources. Other high-priority uses include maintaining coastal views and community character, agriculture, coastal-dependent uses such as commercial fishing, and lower-cost visitor and recreational facilities designed to provide access to coastal recreational opportunities.

ADMINISTRATION

After a Local Coastal Program has been certified by the Coastal Commission, permitting authority over most new development in the Coastal Zone is transferred to the local government, which reviews proposals for new development for conformance with the Local Coastal Program. The Coastal Commission retains permanent coastal permit jurisdiction over development proposed on tidelands, submerged lands, and public trust lands. The Commission also acts on appeals from certain local government coastal permit decisions.

In the Coastal Zone, the Local Coastal Program supersedes and takes precedence over other local plans, policies, and regulations with respect to development.

RELATIONSHIP TO OTHER PLANNING AGENCIES AND INITIATIVES

Sonoma County has a particular interest in coordination of land use, infrastructure, and environmental protection with other local, state, federal, and tribal governmental jurisdictions within the County. The County also acknowledges both the presence of federally recognized tribal governments within Sonoma County, and the need for communication and coordination with federal and tribal governments, where development of tribal and non-tribal land is proposed and where tribes seek to acquire new trust land. The Local Coastal Program also considers the policies and concerns of adjacent counties and regional agencies, such as the San Francisco Bay Conservation and Development Commission, the Bay Area Air Quality Management District, the Northern Sonoma County Air Pollution Control District, the San Francisco Bay Regional Water Quality Control Board, the North Coast Regional Water Quality Control Board, the Sonoma County Water Agency, the California Coastal Commission, the Coastal Conservancy, and others. The text of the various Elements notes those situations where these agencies have particular responsibilities that affect the physical development of the Sonoma County Coast and approval of permits.

PRIOR COASTAL PLANS

1980 Local Coastal Plan

The process of preparing the Sonoma County Local Coastal Plan began in 1978, with the first adoption of the Local Coastal Plan by Sonoma County Board of Supervisors in May 1980. The Coastal Commission certified the plan in December 1980 and it became effective in January 1981. In 1982, the Coastal Commission certified The Sea Ranch portion of the Local Coastal Plan and the LCP implementation plan that included the Administrative Manual and the Coastal Zoning Ordinance.

1989 General Plan & Local Coastal Plan Amendments

In 1989 the County adopted a new General Plan, which directed the County to update and revise the Local Coastal Plan to be consistent with the new General Plan. In 1993, 1995, 1999, and 2001 the Coastal Commission certified amendments to the LCP, which adopted technical changes to ensure consistency with the General Plan.

Local Coastal Plan Update & 2008 General Plan

In 2001 the County started revising and updating the 1989 General Plan and simultaneously the Local Coastal Plan. The County adopted Sonoma County General Plan 2020 on September 23, 2008. Accordingly, the Local Coastal Plan Update incorporates applicable General Plan 2020 goals, objectives, and policies; and includes objectives and policies unique to the Coastal Zone and the larger Sonoma Coast/Gualala Basin Planning Area. As mentioned above, the Local Coastal Plan Update incorporates relevant General Plan 2020 goals, objectives, and policies; and includes objectives and policies unique to the Coastal Zone and the larger Sonoma Coast/Gualala Basin Planning Area.

3. PLAN ORGANIZATION

LOCAL COASTAL PLAN SUB-AREAS

The Local Coastal Plan covers a significant portion of the Sonoma County General Plan Sonoma Coast/Gualala Basin Planning Area. The Coastal Zone runs the length of the Pacific Coast margin, from the Gualala River to the Estero Americano. To provide clear mapping of policies and resources within this area, the Sonoma County Local Coastal Plan divides the Coastal Zone into the following ten SubAreas for ease of mapping:

1. The Sea Ranch North	6. The High Cliffs/Muniz-Jenner
2. The Sea Ranch South	7. Duncans Mills
3. Stewarts Point/Horseshoe Cove	8. Pacific View/Willow Creek
4. Salt Point	9. State Beach/Bodega Bay
5. Timber Cove/Fort Ross	10. Valley Ford

3.1 GOALS, OBJECTIVES, POLICIES, PROGRAMS, AND INITIATIVES

Goals are general guidelines that explain what the County seeks to achieve through Local Coastal Plan implementation.

Objectives set forth strategies or implementation measures to help attain the stated goals.

Policies bind the County's actions and establish the standards of review for determining whether land use and development decisions, zoning changes, or other County actions are consistent with the Local Coastal Plan.

Programs are necessary or potential steps for implementation of the Local Coastal Program; for example, further study and development of plans of ordinances.

Initiatives are non-binding and/or advisory statements of intent, encouragement, or pledges of support for specific endeavors, programs, or outcomes; and which may set guidelines and priorities for County actions.

PLAN ELEMENTS

This Local Coastal Plan is divided into elements, each of which corresponds to a planning theme or resource topic. A summary of each plan element is provided below. The elements are presented in the order of appearance within the Local Coastal Plan.

Land Use Element

The Land Use Element establishes allowed land uses and densities, and presents policies specific to the Coast or particular sub-areas. Policies address outer continental shelf development, new residential and commercial development, affordable housing, and visitor-serving commercial uses.

Agricultural Resources Element

The Agricultural Resources Element presents guidelines and policies that apply to lands with an Agriculture land use designation. Policies address marketing of agricultural products, stabilization of agricultural use at the edge of urban areas, limitations on intrusion of residential uses, location of agricultural-serving and visitor-serving uses, provision of farmworker housing, streamlining of permit procedures for agricultural uses, and recognition of the aquaculture and horse industries as agricultural uses.

Open Space and Resource Conservation Element

The Open Space and Resource Conservation Element addresses scenic resources/design, biotic resources, soils, timber resources, mineral resources, energy resources, air quality, and commercial fishing and support facilities. This element also contains a Scenic Resources / Design section, which identifies designated Scenic Landscape Units, Vista Points, and Scenic Corridors. Along with Coastal Design Guidelines, this section establishes siting and design guidelines to protect coastal views and to minimize other visual impacts of development.

This element also identifies designated Environmentally Sensitive Habitat Areas (ESHAs), which include Riparian Corridors, and Biotic Habitat Areas, which include Sensitive Natural Communities and Special Status Animal and Plant Occurrences and Habitats. Policies address the protection and preservation of natural resources (including soils, timber resources, mineral resources, energy resources, and air quality) and the protection and improvement of facilities natural resources associated with the commercial fishing industry.

Public Access Element

The California Constitution provides that the public has the right-of-way to navigable waters and the right to maximum access of the shoreline, and that development shall not interfere with that right. Recreation and visitor-serving uses have priority over all other uses except coastal-dependent industry and agriculture.

This element describes in general the public and private parks, trails, and other recreational facilities on the Sonoma County Coast and includes maps showing the locations of these facilities.

The element describes the types of facilities in the Coastal Zone, the methods and priorities for acquisition of facilities, the Public Access Plan, and the allowable uses of public access facilities. This element also contains policies relevant to recreational boating facilities.

Water Resources Element

Water Resources is a new element developed in recognition of the importance of water to the environment, economic stability, agricultural protection, and overall quality of life of Sonoma County Coast residents. Policies address subjects such as surface water, groundwater, water conservation and re-use, public water systems, and water quality.

Public Safety Element

The Public Safety Element establishes special limitations and procedures for review of development projects located in areas subject to natural hazards, including seismic and other geologic hazards, landslide and erosion on unstable slopes, beach erosion and cliff/bluff stability, flooding, sea level rise, tsunami, and wildland fire. Hazardous materials are also addressed.

Circulation and Transit Element

This element presents plans for the Sonoma County Coast's future highway and transit systems are presented, with emphasis on State Route 1. This element emphasizes an increased role for public transit and other alternative transportation modes and the importance of measures which will allocate existing highway capacity more efficiently during peak travel periods.

Public Facilities and Services Element

The various public facilities and services which may affect the future development of land on the Sonoma County Coast are described in this element, including water, wastewater treatment and disposal, parks and recreation, fire protection, law enforcement, and solid waste management. Policies address the lack of basic services on the Coast, which limits development potential in most areas. Policies also address limitations to emergency medical and other health care services for the Coast's small population spread over large distances. Policies related to youth, family, and senior services are also included.

Cultural and Historic Resources Element

The Sonoma County coast is rich in cultural resources tied to the identity, history, and practices of tribal peoples, and their unique relationship to the landscape.

"Cultural resources" refers collectively to archaeological and paleontological resources, including Native American cultural and sacred sites, tribal cultural resources, artifacts, and remains. In addition "Tribal cultural resources" includes but is not limited to viewsapes, vistas, landscape features, living vegetation, and species used for cultural practices and subsistence.

"Historic resources" refers to structures, sites, and artifacts associated with colonization, settlement, and development of the Coastal Zone by non-Native American cultures. Historic resources are generally structures, sites, and artifacts associated with non-Native American cultures during and

after the Russian and Spanish colonial periods, but these sites may also contain Native American cultural and sacred sites, tribal cultural resources, artifacts, and remains.

4. PUBLIC PARTICIPATION

Sonoma County citizens have played a pivotal role in the establishment of the California Coastal Commission, and have been historical leaders in coastal protection. Accordingly, the Local Coastal Planning process included strong citizen participation from the beginning.

Throughout the Local Coastal Plan Update process, there has been strong public participation. The County held three public workshops in the spring of 2013 as part of the initial plan update process. The Preliminary Draft Local Coastal Plan was published in June 2015, and five additional public workshops were held during the summer of 2015. After integrating community feedback, the Public Review Draft was published in September 2019, with six public workshops to introduce the plan beginning in fall 2019 and finishing in early 2020. Two workshop-style informational updates were presented before the Board of Supervisors and in 2021 four topic-specific workshops were held virtually to discuss some major topics of public comment. These workshops and review periods have generated over 400 comments from hundreds of individuals, interest groups, agencies, and research organizations. Below are some of the key agencies, advocacy groups, and coastal community partners who have been instrumental in the development of the Local Coastal Plan Update.

In 2022 the Board of Supervisors opened a public hearing for adoption of the Local Coastal Plan. Additionally in 2023 meetings were held on the continued public hearing and three additional outreach meetings held with key stakeholders.

Key Organizations that have been actively involved in coastal protection in Sonoma County since 1968 include:

- Sonoma Land Trust
- Coastwalk California
- Bodega Land Trust
- LandPaths
- Save Penny Island
- Sierra Club
- Sonoma County Conservation Action
- Sonoma County Surfriders
- Stewards of the Coast and Redwoods
- Wildlands Trust
- Save the Redwoods League

Agencies providing ongoing participation in the update and implementation of the Local Coastal Program:

- California Coastal Commission
- CSAC / Cal Cities Sea Level Rise Working Group
- NOAA, Greater Farallones Coastal Resilience Working Group
- Caltrans
- CalFire
- California State Parks
- State Lands Commission
- Coastal Conservancy
- U.C. Davis Bodega Marine Lab
- Audubon Canyon Ranch
- Wildlands Institute
- Sonoma County Ag Commissioner
- Sonoma County Regional Parks
- Sonoma County Ag + Open Space District
- Sonoma County Transit

- SCTA/RCPA
- Sonoma Public Infrastructure
- Sonoma County General Services
- Sonoma Water
- Marin County Planning Department
- ABAG/MTC
- Bodega Bay Fire Protection District
- Monte Rio Fire Protection District
- Timber Cove Fire Protection District
- Valley Ford Fire Protection District
- North Coast Fire Protection District

Home Owners Associations that have been actively involved in the development of the Local Coastal Program:

- The Sea Ranch Association
- Bodega Harbour Homeowners Association
- Timber Cove Home Owners Association
- Sereno del Mar Home Owners Association

Advocacy and Community Groups that have been actively involved in the update process:

- Sonoma County Farm Bureau
- Coastwalk
- Surfrider
- Sonoma County Conservation Action
- Greenbelt Alliance
- Sonoma County Land Use and Transportation Coalition
- North Bay Association of Realtors
- Wildlands Institute
- LandPaths
- Sonoma County Land Trust
- Russian River Keeper
- Stewards of the Coast and Redwoods
- Save Our Sonoma Coast
- Concerned Citizens for Estero Americano

Land Use Element: Table of Contents

Land Use Element	4
Introduction.....	4
Purpose.....	4
Relationship to Other Elements	4
Relationship to California Coastal Act.....	4
Section 30005 Local governmental powers; nuisances; attorney general’s powers.....	4
Section 30213 Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals.....	5
Section 30220 Protection of certain water-oriented activities	5
Section 30221 Oceanfront land; protection for recreational use and development.....	5
Section 30222 Private lands; priority of development purposes	5
Section 30223 Upland areas	5
Section 30234 Commercial fishing and recreational boating facilities	5
Section 30235 Construction altering natural shoreline	6
Section 30242 Lands suitable for agricultural use; conversion	6
Section 30243 Productivity of soils and timberlands; conversions	6
Section 30250 Location; existing developed area	6
Section 30252 Maintenance and enhancement of public access	6
Section 30253 Minimization of adverse impacts	7
Section 30255 Priority of coastal-dependent developments.....	7
Section 30603 Appeal of actions taken after certification of local program; types of developments; grounds; finality of actions; notification to Commission.....	7
Section 30610.6 Sea Ranch in Sonoma County	8
Section 30624.9 Minor development; waivers of permit application hearings; notice	11
Section 30604 Coastal development permit; issuance prior to certification of the local coastal program; finding that development in conformity with public access and public recreation policies; housing opportunities for low and moderate income persons	12
Priority of Land Uses.....	13

Principally Permitted Use.....	14
Definition:.....	14
Coastal Development Permit Required.....	15
Coastal Land Use Categories	15
Appeal Jurisdiction	16
1. General Land Use Policies.....	16
2. Land Use Designations	1
2.1 Agriculture.....	1
Land Extensive Agriculture	1
Diverse Agriculture	1
2.2 Recreation	2
Recreation.....	2
2.3 Resources	3
Resources and Rural Development	3
Timber.....	4
Dedicated Open Space Areas	5
2.4 Commercial Land Use	6
Commercial Fishing	6
Commercial Tourist.....	6
Commercial Services	7
2.5 Public Facilities Land Use.....	7
Public Facilities Areas	8
2.6 Residential Land Use	8
Rural Residential	9
Urban Residential.....	9
3. Offshore Energy Support Facilities.....	10
On-Shore and Off-Shore Oil, Gas, and Energy Facilities	10
3.1 Goal, Objectives, and Policies.....	11

4. Affordable Housing	12
4.1 Goal, Objectives, and Policies.....	13
4.2 Program.....	17
4.3 Initiatives	17
5. Visitor-Serving Commercial	17
Existing Visitor-Serving Commercial Facilities.....	17
5.1 Goal, Objective, and Policies	19
5.2 Program.....	21
5.3 Initiatives	22
6. Communities.....	22
6.1 Goal, Objectives, and Policies.....	22
6.2 Programs	25

Land Use Element

INTRODUCTION

The Land Use Element provides the framework for land uses that serves to protect the Coastal Zone's abundant natural resources and provide for enhanced public access and recreation that serves the greater community while balancing the needs of local residents, farmers, and resource managers.

PURPOSE

The Land Use Element, along with the other Elements of the Local Coastal Plan, together comprise the Land Use Plan as defined in Section 30108.5 of the California Coastal Act of 1976. The Land Use Plan provides policies that designate the type, location, and extent of land uses permitted in the Coastal Zone, as well as provide guidance for implementing land use regulation through the Coastal Zoning Code. For each appropriate land use category, the Land Use Plan includes standards for residential density and building intensity.

RELATIONSHIP TO OTHER ELEMENTS

The Land Use Element goals, objectives, policies, programs, and incentives establish a land use plan for development that is within the framework of the other Local Coastal Plan Elements. The following measures are followed to maintain this internal consistency:

1. All Local Coastal Plan Elements use the same population, housing, and employment projections.
2. The policies in the Land Use Element support policies in the Agricultural Resources, Public Facilities and Services, and Public Access Elements.
3. Policies in the Water Resources, Public Safety, Circulation and Transit, and Open Space and Resource Conservation Elements guide and inform Land Use Element policies.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

Section 30005 Local governmental powers; nuisances; attorney general's powers

No provision of this division is a limitation on any of the following:

- (a) Except as otherwise limited by state law, on the power of a city or county or city and county to adopt and enforce additional regulations, not in conflict with this act, imposing further conditions, restrictions, or limitations with respect to any land or water use or other activity which might adversely affect the resources of the coastal zone.
- (b) On the power of any city or county or city and county to declare, prohibit, and abate nuisances.

(c) On the power of the Attorney General to bring an action in the name of the people of the state to enjoin any waste or pollution of the resources of the coastal zone or any nuisance.

(d) On the right of any person to maintain an appropriate action for relief against a private nuisance or for any other private relief.

Section 30213 Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.

Section 30220 Protection of certain water-oriented activities

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221 Oceanfront land; protection for recreational use and development

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property are already adequately provided for in the area.

Section 30222 Private lands; priority of development purposes

The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

Section 30223 Upland areas

Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30234 Commercial fishing and recreational boating facilities

Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

Section 30235 Construction altering natural shoreline

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Section 30242 Lands suitable for agricultural use; conversion

All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Section 30243 Productivity of soils and timberlands; conversions

The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.

Section 30250 Location; existing developed area

(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

(b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.

(c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

Section 30252 Maintenance and enhancement of public access

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise

office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Section 30253 Minimization of adverse impacts

New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
- (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
- (d) Minimize energy consumption and vehicle miles traveled.
- (e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30255 Priority of coastal-dependent developments

Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.

Section 30603 Appeal of actions taken after certification of local program; types of developments; grounds; finality of actions; notification to Commission

(a) After certification of its local coastal program, an action taken by a local government on a coastal development permit application may be appealed to the commission for only the following types of developments:

- (1) Developments approved by the local government between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tideline of the sea where there is no beach, whichever is the greater distance.
- (2) Developments approved by the local government not included within paragraph (1) that are located on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream, or within 300 feet of the top of the seaward face of any coastal bluff.
- (3) Developments approved by the local government not included within paragraph (1) or (2) that are located in a sensitive coastal resource area.

- (4) Any development approved by a coastal county that is not designated as the principal permitted use under the zoning ordinance or zoning district map approved pursuant to Chapter 6 (commencing with Section 30500).
- (5) Any development which constitutes a major public works project or a major energy facility.
- (b)
 - (1) The grounds for an appeal pursuant to subdivision (a) shall be limited to an allegation that the development does not conform to the standards set forth in the certified local coastal program or the public access policies set forth in this division.
 - (2) The grounds for an appeal of a denial of a permit pursuant to paragraph (5) of subdivision (a) shall be limited to an allegation that the development conforms to the standards set forth in the certified local coastal program and the public access policies set forth in this division.
- (c) Any action described in subdivision (a) shall become final at the close of business on the 10th working day from the date of receipt by the commission of the notice of the local government's final action, unless an appeal is submitted within that time. Regardless of whether an appeal is submitted, the local government's action shall become final if an appeal fee is imposed pursuant to subdivision (d) of Section 30620 and is not deposited with the commission within the time prescribed.
- (d) A local government taking an action on a coastal development permit shall send notification of its final action to the commission by certified mail within seven calendar days from the date of taking the action.

Section 30610.6 Sea Ranch in Sonoma County

- (a) The Legislature hereby finds and declares that it is in the public interest to provide by statute for the resolution of the lengthy and bitter dispute involving development of existing legal lots within the unincorporated area of Sonoma County, commonly known as the Sea Ranch. The reasons for the need to finally resolve this dispute include the following:
 - (1) Acknowledgment by the responsible regulatory agencies that development of existing lots at Sea Ranch can proceed consistent with the provisions of this division and other applicable laws provided certain conditions have been met. Development has been prevented at considerable costs to property owners because these conditions have not been met.
 - (2) That it has been, and continues to be, costly to Sea Ranch property owners and the public because of, among other reasons, extensive and protracted litigation, continuing administrative proceedings, and escalating construction costs.
 - (3) The need to provide additional public access to and along portions of the coast at the Sea Ranch in order to meet the requirements of this division. The continuation of this dispute prevents the public from enjoying the use of those access opportunities.
 - (4) The commission is unable to refund 118 "environmental deposits" to property owners because coastal development permit conditions have not been met.
 - (5) It appears likely that this lengthy dispute will continue unless the Legislature provides a solution, and the failure to resolve the dispute will be unfair to property owners and the public.

(b) The Legislature further finds and declares that because of the unique circumstances of this situation, the provisions of this section constitute the most expeditious and equitable mechanism to ensure a timely solution that is in the best property owners and that is consistent with this division.

(c) If the Sea Ranch Association and Oceanic California, Inc. desire to take advantage of the terms of this section, they shall, not sooner than April 1, 1981, and not later than July 1, 1981, deposit into escrow deeds and other necessary documents that have been determined by the State Coastal Conservancy prior to their deposit in escrow to be legally sufficient to convey to the State Coastal Conservancy enforceable and nonexclusive public use easements free and clear of liens and encumbrances for the easements specifically described in this subdivision. Upon deposit of five hundred thousand dollars (\$500,000) into the same escrow account by the State Coastal Conservancy, but in no event later than 30 days after the deeds and other necessary documents have been deposited in the escrow account, the escrow agent shall transmit the five hundred thousand dollars (\$500,000), less the escrow, title, and administrative costs of the State Coastal Conservancy, in an amount not to exceed twenty thousand dollars (\$20,000), to the Sea Ranch Association and shall convey the deeds and other necessary documents to the State Coastal Conservancy. The conservancy shall subsequently convey the deeds and other necessary documents to an appropriate public agency that is authorized and agrees to accept the easements. The deeds specified in this subdivision shall be for the following easements:

- (1) In Unit 34A, a 30-foot wide vehicle and pedestrian access easement from a point on State Highway 1, 50 feet north of a mile post marker 56.75, a day parking area for 10 vehicles, a 15-foot wide pedestrian accessway from the parking area continuing west to the bluff-top trail, and a 15-foot wide bluff-top pedestrian easement beginning at the southern boundary of Gualala Point County Park and continuing for approximately three miles in a southerly direction to the sandy beach at the northern end of Unit 28 just north of Walk-on Beach together with a 15-foot wide pedestrian easement to provide a connection to Walk-on Beach to the south.
- (2) In Unit 24, a day parking area west of State Highway 1, just south of Whalebone Reach, for six vehicles, and a 15-foot wide pedestrian accessway over Sea Ranch Association common areas crossing Pacific Reach and continuing westerly to the southern portion of Shell Beach with a 15-foot wide pedestrian easement to connect with the northern portion of Shell Beach.
- (3) In Unit 36, a 30-foot wide vehicle and pedestrian accessway from State Highway 1, mile post marker 53.96, a day parking area for 10 vehicles, and a 15-foot wide pedestrian accessway from the parking area to the beach at the intersection of Units 21 and 36.
- (4) In Unit 17, adjacent to the intersection of Navigator's Reach and State Highway 1, 75 feet north of mile post marker 52.21, enough land to provide day parking for four vehicles and a 15-foot wide pedestrian accessway from the parking area to Pebble Beach.
- (5) In Unit 8, a 30-foot wide vehicle and pedestrian accessway from State Highway 1, mile post marker 50.85, a day parking area for 10 vehicles and a 15-foot wide pedestrian accessway from the parking area to Black Point Beach.
- (6) With respect to each of the beaches to which access will be provided by the easements specified in this subdivision, an easement for public use of the area between the line of mean

high tide and either the toe of the adjacent bluff or the first line of vegetation, whichever is nearer to the water.

(7) Scenic view easements for those areas specified by the executive director, as provided in subdivision (d), and which easements allow for the removal of trees in order to restore and preserve scenic views from State Highway 1.

(d) The executive director of the commission shall, within 30 days after the effective date of this section, specifically identify the areas along State Highway 1 for which the scenic view easements provided for in paragraph (7) of subdivision (c) will be required. In identifying the areas for which easements for the restoration and preservation of public scenic views will be required, the executive director shall take into account the effect of tree removal so as to avoid causing erosion problems. It is the intent of the Legislature that only those areas be identified where scenic views to or along the coast are unique or particularly beautiful or spectacular and which thereby take on public importance. The restoration and preservation of the scenic view areas specified pursuant to this subdivision shall be at public expense.

(e) Within 30 days after the effective date of this section, the executive director of the commission shall specify design criteria for the height, site, and bulk of any development visible from the scenic view areas provided for in subdivision (d). This criteria shall be enforced by the County of Sonoma if the deeds and other necessary documents specified in subdivision (c) have been conveyed to the State Coastal Conservancy. This criteria shall be reasonable so as to enable affected property owners to build single-family residences of substantially similar overall size to those that property owners who are not affected by these criteria may build or have already built under the Sea Ranch Association's building design criteria. The purpose of the criteria is to ensure that development will not substantially detract from the specified scenic view areas.

(f) On and after the date on which the deeds and other necessary documents deposited in escrow pursuant to subdivision (c) have been conveyed to the State Coastal Conservancy, no additional public access requirements shall be imposed at the Sea Ranch pursuant to this division by any regional commission, the commission, any other state agency, or any local government. The Legislature hereby finds and declares that the provisions of the access facilities specified in this subdivision shall be deemed adequate to meet the requirements of this division.

(g) The realignment of internal roads within the Sea Ranch shall not be required by any state or local agency acting pursuant to this division. However, that appropriate easements may be required by the County of Sonoma to provide for the expansion of State Highway 1 for the development of turnout and left-turn lanes and for the location of a bicycle path, when the funds are made available for those purposes. The Legislature finds and declares that this subdivision is adequate to meet the requirements of this division to ensure that new development at the Sea Ranch will not overburden the capacity of State Highway 1 to the detriment of recreational users.

(h) No coastal development permit shall be required pursuant to this division for the development of supplemental water supply facilities determined by the State Water Resources Control Board to be necessary to meet the needs of legally permitted development within the Sea Ranch. The commission, through its executive director, shall participate in the proceedings before the State Water Resources Control Board relating to these facilities and may recommend terms and conditions that the commission deems necessary to protect against adverse impacts on coastal zone resources.

The State Water Resources Control Board shall condition any permit or other authorization for the development of these facilities so as to carry out the commission's recommendation, unless the State Water Resources Control Board determines that the recommended terms or conditions are unreasonable. This subdivision shall become operative if the deeds and other necessary documents specified in subdivision (c) have been conveyed to the State Coastal Conservancy.

(i) Within 90 days after the effective date of this section, the commission, through its executive director, shall specify criteria for septic tank construction, operation, and monitoring within the Sea Ranch to ensure protection of coastal zone resources consistent with the policies of this division. The North Coast Regional Water Quality Control Board shall review the criteria and adopt it, unless it finds the criteria or a portion thereof is unreasonable. The regional board shall be responsible for the enforcement of the adopted criteria if the deeds and other necessary documents specified in subdivision (c) have been conveyed to the State Coastal Conservancy.

(j) Within 60 days after the date on which the deeds and other necessary documents deposited in escrow pursuant to subdivision (c) have been conveyed to the State Coastal Conservancy, the commission shall refund every Sea Ranch "environmental deposit" together with any interest earned on the deposit to the person, or his or her designee, who paid the deposit.

(k) Notwithstanding any other provision of law, on and after the date on which the deeds and other necessary documents deposited in escrow pursuant to subdivision (c) have been conveyed to the State Coastal Conservancy, a coastal development permit shall not be required pursuant to this division for the construction of any single-family residence dwelling on any vacant, legal lot existing at the Sea Ranch on the effective date of this section. With respect to any other development for which a coastal development permit is required within legally existing lots at the Sea Ranch, no conditions may be imposed pursuant to this division that impose additional public access requirements or that relate to supplemental water supply facilities, septic tank systems, or internal road realignment.

(l) Notwithstanding any other provision of law, if on July 1, 1981, deeds and other necessary documents that are legally sufficient to convey the easements specified in subdivision (c) have not been deposited in an escrow account, the provisions of this section shall no longer be operative and shall have no force or effect and thereafter all the provisions of this division in effect prior to enactment of this section shall again be applicable to any development within the Sea Ranch.

(m) The Legislature hereby finds and declares that the provisions for the settlement of this dispute, especially with respect to public access, as set forth in this section provide an alternative to and are equivalent to the provisions set forth in Section 30610.3. The Legislature further finds that the provisions of this section are not in lieu of the permit and planning requirements of this division but rather provide for an alternative mechanism to Section 30610.3 for the resolution of outstanding issues at the Sea Ranch.

Section 30624.9 Minor development; waivers of permit application hearings; notice

(a) For purposes of this section, "minor development" means a development which a local government determines satisfies all of the following requirements:

(1) Is consistent with the certified local coastal program, as defined in Section 30108.6.

- (2) Requires no discretionary approvals other than a coastal development permit.
 - (3) Has no adverse effect either individually or cumulatively on coastal resources or public access to the shoreline or along the coast.
- (b) After certification of its local coastal program, a local government may waive the requirement for a public hearing on a coastal development permit application for a minor development only if both of the following occur:
- (1) Notice that a public hearing shall be held upon request by any person is provided to all persons who would otherwise be required to be notified of a public hearing as well as any other persons known to be interested in receiving notice.
 - (2) No request for public hearing is received by the local government within 15 working days from the date of sending the notice pursuant to paragraph (1).
- (c) The notice provided pursuant to subdivision (b) shall include a statement that failure by a person to request a public hearing may result in the loss of that person's ability to appeal to the commission any action taken by a local government on a coastal development permit application.

Section 30604 Coastal development permit; issuance prior to certification of the local coastal program; finding that development in conformity with public access and public recreation policies; housing opportunities for low and moderate income persons

- (a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with Chapter 3 (commencing with Section 30200) and that the permitted development will not prejudice the ability of the local government to prepare a local coastal program that is in conformity with Chapter 3 (commencing with Section 30200). A denial of a coastal development permit on grounds it would prejudice the ability of the local government to prepare a local coastal program that is in conformity with Chapter 3 (commencing with Section 30200) shall be accompanied by a specific finding which sets forth the basis for that conclusion.
- (b) After certification of the local coastal program, a coastal development permit shall be issued if the issuing agency or the commission on appeal finds that the proposed development is in conformity with the certified local coastal program.
- (c) Every coastal development permit issued for any development between the nearest public road and the sea or the shoreline of any body of water located within the coastal zone shall include a specific finding that the development is in conformity with the public access and public recreation policies of Chapter 3 (commencing with Section 30200).
- (d) No development or any portion thereof which is outside the coastal zone shall be subject to the coastal development permit requirements of this division, nor shall anything in this division authorize the denial of a coastal development permit by the commission on the grounds the proposed development within the coastal zone will have an adverse environmental effect outside the coastal zone.

(e) No coastal development permit may be denied under this division on the grounds that a public agency is planning or contemplating to acquire the property on, or property adjacent to the property on, which the proposed development is to be located, unless the public agency has been specifically authorized to acquire the property and there are funds available, or funds which could reasonably be expected to be made available within one year, for the acquisition. If a permit has been denied for that reason and the property has not been acquired by a public agency within a reasonable period of time, a permit may not be denied for the development on grounds that the property, or adjacent property, is to be acquired by a public agency when the application for such a development is resubmitted.

(f) The commission shall encourage housing opportunities for persons of low and moderate income. In reviewing residential development applications for low- and moderate-income housing, as defined in paragraph (3) of subdivision (h) of Section 65589.5 of the Government Code, the issuing agency or the commission, on appeal, may not require measures that reduce residential densities below the density sought by an applicant if the density sought is within the permitted density or range of density established by local zoning plus the additional density permitted under Section 65915 of the Government Code, unless the issuing agency or the commission on appeal makes a finding, based on substantial evidence in the record, that the density sought by the applicant cannot feasibly be accommodated on the site in a manner that is in conformity with Chapter 3 (commencing with Section 30200) or the certified local coastal program.

(g) The Legislature finds and declares that it is important for the commission to encourage the protection of existing and the provision of new affordable housing opportunities for persons of low and moderate income in the coastal zone.

(h) When acting on a coastal development permit, the issuing agency, or the commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state.

PRIORITY OF LAND USES

The Coastal Act established a framework for preserving coastal resources, protecting public access to the ocean, and guiding development to maximize protection of these resources. Consistent with the Coastal Act, the Local Coastal Plan establishes a prioritization of land uses, where lower priority development may not interfere with higher priority uses of land and resources.

“Undeveloped areas” are considered at a landscape scale and not intended to include individual vacant parcels within developed residential or commercial areas. This prioritization is shown below in **Table C-LU-1**:

Table C-LU-1: Priority of Coastal Land Uses

	Undeveloped areas	All Coastal Areas	Developed areas
High  Priority of Use  Low	Agriculture (Prime coastal dependent), forestry (productive timberland), coastal dependent public recreation [30213, 30242, 30243, 30250(a), 30250(b)].	Coastal dependent ¹ public recreation and public access areas [30213, 30220, 30221]	Coastal dependent industry and commerce, commercial fishing, coastal dependent public recreation and special communities [30213, 30234, 30250(a), 30250(b), 30253(e), 30255]
	Water dependent ¹ public recreation [30220, 30221, 30223]		
	Local Priority: Affordable dwelling units for extremely low, very low, and low-income households. Accessory dwelling units. (CCC REVISED)		
	Non-coastal ¹ or non-water dependent public recreation [30220, 30221]		
	Visitor-serving ¹ commercial recreation, lower cost [30222, 30213, 30250 (c)]		
	Visitor-serving ¹ commercial recreation, higher cost [30222, 30250 (c)]		
	Market rate housing general industrial, or commercial development ² [30222, 30250, 30255]		
	Development that is not a priority use is discouraged in undeveloped areas.		
Notes: ¹ Recreational uses of the coast that do not require extensive alteration of the natural environment have priority in intertidal and waterfront areas over recreational uses that would result in substantial alteration of the natural environment [30233, 30235, 30255] ² Concentration of development policies [30250(a)] limit development in rural areas, except public recreation and visitor-serving uses.			

PRINCIPALLY PERMITTED USE

Definition:

Within the context of the California Coastal Act, a principally permitted use is a single category of development identified for each land use category that clearly carries out the intent of that land use category and development associated with that use is consistent with the Coastal Act. An example of a principally permitted use would be a single family home within the Rural Residential land use. By designating development as principally permitted, such development will only be appealable to the

Coastal Commission if it is otherwise appealable based on its geographic location, which is discussed below.

The Coastal Commission does not allow multiple uses to be identified as principally permitted. Each category is limited to a single principally permitted use.

Coastal Development Permit Required

A Coastal Development Permit is required for principally permitted development unless the development is statutorily excluded by the Coastal Act or categorically excluded by an Exclusion Order issued by the Coastal Commission. Consistent with Section 30603 of the Coastal Act, the decision to approve or deny a Coastal Development Permit issued for a Principally Permitted cannot be appealed to the Coastal Commission except in the following circumstances:

1. The development is between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tideline of the sea where there is no beach, whichever is the greater distance.
2. The development is located on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream, or within 300 feet inland of the top of the seaward face of any coastal bluff.
3. The development is located within or may adversely impact an Environmentally Sensitive Habitat Area.
4. Any development of a major public works project or a major energy facility.

While Coastal Development Permits for Principally Permitted uses may not be appealable to the Coastal Commission, these permits are still subject to local appeal to the Board of Zoning Adjustments and the Sonoma County Board of Supervisors. No portion of the Local Coastal Plan is intended to alter or limit the application of the Categorical Exclusion Order E-81-5.

COASTAL LAND USE CATEGORIES

There are two categories of potential uses in the Coastal Zone. Principally Permitted Uses generally have more streamlined approval processes, while Other Permitted Uses may require other discretionary approvals in addition to a Coastal Development Permit. The two categories are defined below in Table C-LU-2

Table C-LU-2: Priority of Coastal Land Uses

<i>Principally Permitted Uses</i>	<i>Other Permitted Uses</i>
Principal <u>Permitted</u> Uses as described in the Coastal Zoning Code and consistent with the primary purpose of the land use category. Coastal Development Permits are required for all non-exempt or excluded activities including Principally Permitted Uses. Coastal Permits issued for Principally Permitted Uses remain subject to local appeal, but are not appealable to the California Coastal Commission, pursuant to Section	Land uses permitted or conditionally permitted in the Coastal Zoning Code not described as Principally Permitted Uses are secondary and subordinate to the principal permitted uses and must be compatible with principally permitted land use. It should be noted that the term "permitted uses" as used in the descriptions of the land use categories identify permissible uses consistent with the purpose of the land use category, subject to zoning and permitting requirements of the County. All development within the Coastal Zone

30603(a)(4) of the Coastal Act, <u>unless appealable for geographic reasons.</u> Uses shall not be considered principally permitted if located within an environmentally sensitive habitat area or major view shed designated in the Open Space and Resource Conservation Element. All principally permitted uses are subject to site development standards. Outside of commercial land use designations all commercial uses that require a coastal development permit are appealable to the Coastal Commission.	requires a discretionary Coastal Development Permit, unless exempt or otherwise categorically excluded by order of the Coastal Commission. Any development that is not designated as the Principally Permitted Use in a particular zone may be appealed to the Coastal Commission.

Geographic Appeal Jurisdiction

Approval of a coastal development permit for any project within the appeal jurisdiction area may be appealed to the Coastal Commission. This area includes, but is not limited to: areas west of Highway 1 or first public road that is not Highway 1, areas within 100 feet of a wetland, estuary or stream, public trust lands, tidelands and submerged lands, areas inland 300ft from bluff or sandy beach and development located in a sensitive coastal resource area, including areas shown in Figure C-OSRC-2 “Environmentally Sensitive Habitat Area” or areas meeting criteria found in the Open Space and Resource Conservation Section 8 “Environmentally Sensitive Habitat Areas”.

I. GENERAL LAND USE POLICIES

The following policies apply to implementation of this Plan as well as development in all land use categories and uses associated with that development:

Policy C-LU-1a: The Coastal Zoning Code and the Coastal Administrative Manual shall be consistent with Goals, Objectives, Policies, Programs, and Incentives of the Local Coastal Plan.

Policy C-LU-1b: Require a coastal development permit for any project that meets the definition of development pursuant to Coastal Act Section 30106. Exempt certain categories of development from coastal development permit requirements pursuant to Title 14, Division 5.5, Chapter 6 of the California Code of Regulations. Establish a coastal development permit waiver process for other types of de minimis development including qualifying agricultural uses, smaller structures, or temporary uses.

Policy C-LU-1c: With the exception of development excluded from the permit requirements of the Coastal Act under Title 14, Division 5.5, Chapter 6 of the California Code of Regulations, by a Coastal Commission Exclusion Order, and/or development excluded by Attachment B of the certified Coastal Administrative Manual, Coastal Development Permits shall be required for any project that meets the definition of development pursuant to Coastal Act Section 30106. A waiver may be considered for non-excludable small-scale agricultural uses or vegetation management, smaller structures, and temporary uses where it can be demonstrated that the project will not have adverse impact to coastal resources or coastal access.

Policy C-LU-1d: Noise generated by coastal development or any use associated with coastal development shall not exceed the following standards as measured at the property line or nearest noise-sensitive resource, whichever is more restrictive:

Average noise for 30 minutes in any hour:	45 decibels
Average noise for 15 minutes in any hour:	50 decibels
Average noise for 5 minutes in any hour:	55 decibels
Average noise for 72 seconds in any hour:	60 decibels

“Decibel” means the sound pressure relative to 20 micropascals as measured at the property line, adjusted to International Organization for Standardization ISO 226 equal loudness contours.

These standard are subject to the following adjustments:

Daytime noise emitted between 7:00 am and 10:00 pm may be increased by 5 decibels.

Where natural ambient sound is significantly below the standards, noise shall be limited to no more than 1.5 decibels above the ambient sound level.

Where natural ambient sound is significantly above the standards, maximum noise generation may be adjusted upward to match ambient levels to a maximum of 5 decibels.

Policy C-LU-1e: Projects shall evaluate potential for project noise to have an adverse impact on biological resources. If noise levels allowed by C-LU-1d have potential to have an adverse impact on biological resources, noise emissions shall be further limited to prevent creating any significant adverse impact on biological resources.

Policy C-LU-1f: Standards found in policies C-LU-1d and C-LU-1e may be exceeded for emergency operations, operation of existing roads, and agricultural operations as well as temporary noise generation from solid waste collection, school functions, and property maintenance.

Policy C-LU-1g: Special events may exceed standards found in policies C-LU-1d and C-LU-1e on a temporary basis if noise generated by the event is found to have no significant impact on biological resources, or be determined to not create a nuisance. Events that expose people and wildlife to loud impulsive sounds in excess of 85 decibels, such as fireworks, are prohibited.

Policy C-LU-1h: Vibration generated by coastal development or any use associated with coastal development shall not exceed a Peak Particle Velocity (PPV) of 0.01 at the project boundaries in developed areas. In undeveloped and agricultural areas, PPV cannot exceed 1.00. In all cases, PPV cannot exceed values that will result in damage to coastal resources

This policy does not apply to the following activities:

1. Geotechnical borings necessary to determine site stability and suitability for development.
2. Emergency repairs for which a Coastal Emergency Permit has been issued.
3. Installation of road signs, guardrails, and safety-related road equipment such as call boxes or traffic signals.

Policy C-LU-1i: The following standards apply to all exterior lighting with the exception of temporary lighting associated with emergency response and emergency infrastructure repair:

1. Lighting shall be fully shielded to prevent nighttime light pollution.
2. Lighting shall be downward facing, located at the lowest possible point to the ground to prevent spill over onto adjacent properties, glare, nighttime light pollution and unnecessary glow in the rural night sky.
3. Light fixtures shall not be located at the periphery of the property and shall not reflect off structures. Security lighting shall be put on motion sensors.
4. Flood lights and uplights are not permitted except in agricultural operations and commercial fishing facilities.
5. Signs that emit light are prohibited and lights used to illuminate signs shall be shielded to prevent light spill beyond the sign and not exceed a total light output of 1000 lumens
6. Light fixtures emitting over 1000 lumens are prohibited except where needed for agriculture, commercial fishing, and first responders.
7. Total illuminance created by artificial lighting, shall not exceed 1.0 lux at the property line. Color temperature of exterior light sources shall be 3000 Kelvin or lower.

2. LAND USE DESIGNATIONS

Descriptions of land use designations follow, along with a brief discussion of uses and the permitted residential density allowed by designation. The Coastal Zoning Code further describes the uses that are permitted within each category and provides additional standards for such development. Additional uses and structures accessory to and compatible with the primary use and consistent with the Local Coastal Plan may also be allowed subject to permitting requirements of the Coastal Zoning Code.

For all land use designations, all uses located in an environmentally sensitive habitat area, habitat buffer, riparian corridor, critical habitat area, major view, or cultural resource area shall not be considered principally permitted uses, intended to be the primary use of the land. Table C-LU-3, below shows the relationship between land use and zoning:

Table C-LU-3: Land Use and Zoning Table

Land Use Designation	Corresponding Zoning District	Principally Permitted Use
Land Extensive Agriculture (LEA)	Land Extensive Agriculture (LEA)	<u>Agriculture, defined as the production of food, fiber, plant materials, and the raising and maintaining of livestock and farm animals, and closely related essential support uses including incidental preparation of agricultural production, and limited farm-related residential development supporting farm families and agricultural workers.</u>
Diverse Agriculture (DA)	Diverse Agriculture (DA)	<u>Agriculture, defined as the production of food, fiber, plant materials, and the raising and maintaining of livestock and farm animals, and closely related essential support uses including incidental preparation of agricultural production, and limited related residential development.</u>
Recreation (R)	Planned Community (PC) Resources and Rural Development (RRD)	<u>(PC Zoning): Recreation as intended for use in the community's Precise Development Plan.</u>
Resources and Rural Development (RRD)	Resources and Rural Development (RRD)	<u>(RRD Zoning): Land management activities including activities consistent with passive and coastal-dependent recreation activities.</u> <u>Resource conservation including land management activities.</u>
Timber (T)	Timber Preserve (TP) Resources and Rural Development (RRD)	<u>Land management for the continued operation and protection of Timber Preserves.</u>

Table C-LU-3: Land Use and Zoning Table

Land Use Designation	Corresponding Zoning District	<u>Principally Permitted Use</u>
<u>Dedicated</u> Open Space (OS)	Planned Community (PC) Rural Residential (RR)	<u>Common areas without structures in planned communities and development dedicated to resource protection and passive recreation</u>
Commercial Fishing (CF)	Commercial Fishing (CF)	<u>Support facilities for commercial fishing, including docks and mooring facilities, fish buying and selling facilities; warehouses for storage of fishing gear, boats, and trailers; and related accessory structures and uses including fishing supply stores and bait and tackle shops.</u>
Commercial Tourist (CT)	Commercial Tourist (CT) (formerly Visitor-Serving Commercial)	<u>Visitor-serving commercial uses including campgrounds, hotels, motels, inns, resorts, bed and breakfast inns; limited retail shops, bars, restaurants, guest ranches; art galleries, and visitor information centers.</u>
Commercial Services (CS)	Commercial Services (CS) (formerly Rural Services) Community Commercial (C2)	<u>Local-serving commercial uses such as retail, business, and professional services that serve the local community.</u>
Public Facilities (PF)	Public Facilities (PF)	<u>Utility and public service facilities owned or operated by government agencies, non-profit entities, or public utilities.</u>
Rural Residential (RR)	Rural Residential (RR) Agriculture and Residential (AR) Planned Community (PC)	<u>Single-family dwellings, including accessory dwelling units.</u>
Urban Residential (UR)	Low Density Residential (R1) Medium Density Residential (R2) Planned Community (PC)	<u>Single-family and multifamily dwellings, including accessory dwelling units, that are within an Urban Service Area.</u>

2.1 AGRICULTURE

Agricultural uses are among the highest priority uses within the Coastal Zone. The purpose of this land use category is to preserve and protect appropriate coastal agriculture. The land use plan includes two agricultural land use designations, Land Extensive Agriculture and Diverse Agriculture. The two designations vary in the type of agricultural uses and support uses allowed, and by allowable residential density.

Agriculture is the principally permitted use on lands with agricultural land use designations, with the exception of cannabis cultivation. Certain types of residential units may also be allowed up to four units per parcel when supporting agricultural uses onsite.

Land Extensive Agriculture

Purpose	To enhance and protect land best suited for non-intensive agriculture of relatively low production on relatively large parcels, by establishing densities and parcel sizes that are conducive to continued agricultural production.
Corresponding Zoning District(s)	Land Extensive Agriculture (LEA)
Principally Permitted Use	Agriculture, defined as the production of food, fiber, plant materials, and the raising and maintaining of livestock and farm animals, and closely related essential support uses including incidental preparation of agricultural production, and limited farm-related residential development supporting farm families and agricultural workers.
Minimum Parcel Size	Land divisions shall be permitted only for the purpose of increasing or enhancing agricultural production and must result in a minimum parcel size of 640 acres.
Allowable residential density	One single-family residence per 160 acres or one per parcel, if a parcel is less than 160 acres. All dwelling units shall be clustered in relation to physical land features and property management conditions. Dwelling units shall be sited and designed to be consistent with agricultural operations and shall comply with Agricultural Resources Element policies.
Other Residential Uses	Agricultural employee units and farm family housing that that do not count toward density, and are associated with the principally permitted use. In no case shall the total number of residential units exceed four units per parcel.
Designation Criteria	A Land Use Map Amendment to apply the Land Extensive Agriculture land use designation requires a Local Coastal Plan Amendment, subject to certification by the California Coastal Commission, and must meet the standards in Chapter 3 of the California Coastal Act, be consistent with other policies of the Local Coastal Plan, and meet one or more of the following criteria: 1. Soil and water are adequate for livestock grazing or other crop production. 2. Most parcel sizes in the area are greater than 60 acres. 3. Existing or historic use for livestock grazing, dairy ranching, hay or similar forage crop.

Diverse Agriculture

Purpose	To enhance and protect land best suited for diverse types of agriculture on relatively small parcels in which farming may be part-time and may not be the principal occupation of the farmer, protect a variety of agricultural uses of scale and intensity to be compatible with coastal resources, and limit the conversion of agricultural parcels to non-agricultural use.

Corresponding Zoning District(s)	Diverse Agriculture (DA)
Principally Permitted Use	Agriculture, defined as the production of food, fiber, plant materials, and the raising and maintaining of livestock and farm animals, and closely related essential support uses including incidental preparation of agricultural production, and limited related residential development.
Minimum Parcel Size	160 acres.
Allowable Residential Density	One single-family residence per 40 acres or one per parcel, if a parcel is less than 160 acres when supporting agricultural uses onsite. All dwelling units shall be clustered in relation to physical land features and property management conditions. Dwelling units shall be sited and designed to be consistent with agricultural operations, and shall comply with Agricultural Resources Element policies.
Other Residential Uses	Agricultural employee units and farm family housing that do not count toward density, and are associated with the principally permitted use. In no case shall the total number of residential units exceed four units per parcel.
Designation Criteria	A Land Use Map Amendment to apply the Diverse Agriculture land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Diverse Agriculture land use designation must also be consistent with other policies of the Local Coastal Plan and meet one or more of the following criteria: 1. Soil suitable for food crop production and adequate water for irrigation. 2. Most parcel sizes in the area are greater than 10 acres. 3. Existing or historic use as orchard, vineyard, other food crop production, hay or other forage crop production, livestock grazing, dairy ranching, or other type of farming. 4. Qualifies for Prime or Non-Prime Agricultural Land Conservation Act Contract. 5. Areas which may not meet the above criteria but which are surrounded by lands in farming.

2.2 RECREATION

Recreation land use is applied to areas that meet criteria for Resources and Rural Development land use, but have severe development constraints such as geologic, flood, or fire hazards, marginal or unproven water availability, or limited septic capability, or is vulnerable to environmental impact, that limit development to land management activities, and passive recreational use, or low impact coastal-dependent recreation facilities, such as boat launching or fishing areas. This land use may also be applied to areas with a legally established pre-Coastal Act recreational facilities, such as campgrounds.

Land within undeveloped common areas that are part of a Planned Community precise development plan may also be designated as Recreational land use, subject to a Local Coastal Program amendment.

Recreation

Purpose	To accommodate private or public recreational facilities.
Corresponding Zoning District(s)	Planned Community (PC) Resources and Rural Development (RRD)

Principally Permitted Use	Planned Community zoning: Recreation as intended for use in the community's Precise Development Plan. Resources and Rural Development zoning: Land management activities including activities consistent with passive and coastal-dependent recreation activities ~~and limited related residential development.~~
Minimum Parcel Size	640 acres. Land divisions shall be permitted only for the purpose of increasing or enhancing natural resources.
Permitted Residential Densities	One single-family residence per 160 acres or one per parcel, if a parcel is less than 160 acres.
Other Residential Uses	Other resource-related dwelling units that do not count toward density, such as agricultural employee units and farm family dwellings, may be allowed. The total number of residential units shall not exceed four units per parcel.
Designation Criteria	A Land Use Map Amendment to apply the Recreation land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Recreation land use designation must demonstrate adequate road access for the allowed uses and that allowed uses will not adversely affect agriculture or resource production uses and meet one or more of the following criteria: 1. Has severe development constraints such as geologic, flood, or fire hazards, marginal or unproven water availability, or limited septic capability, or is vulnerable to environmental impact, but suitable for low intensities of recreational use, passive recreation, or coastal dependent recreation. 2. Land is recognized as a legally established recreational use. 3. Land is a designated common area without development which is committed to recreation in a planned community.

2.3 RESOURCES

Resources and Rural Development

Examples of uses allowed in the Resources and Rural Development land use designation may include land management for the purposes of resource conservation as described in the Coastal Zoning Code for Resources and Rural Development, including passive recreation. Passive recreation is defined as recreational use or activities that require no special or formal facilities or are natural areas and include, but are not limited to, bicycle riding, walking, hiking, bird watching, etc. Lands designated as Resources and Rural Development are intended primarily for a variety of land management activities, including agricultural uses, limited related residential development, and coastal-dependent recreation activities.

Purpose	To protect lands needed for use and production of natural resources (e.g., water, timber, geothermal steam, or aggregate production), water resources, scenic resources, and biotic resources, and to protect lands constrained by geologic, flood, or fire or other hazards, from intensive development.

Corresponding Zoning District(s)	Resources and Rural Development (RRD)
Principally Permitted Use	Resource conservation including land management activities ~~and limited related residential development.~~
Minimum Parcel Size	640 acres.
Allowable Residential Density	One single-family residence per 160 acres or one per parcel if a parcel is less than 160 acres.
Other Residential Uses	Other resource-related dwelling units that do not count toward density, such as agricultural employee units and farm family dwellings, may be allowed. The total number of residential units shall not exceed four units per parcel
Designation Criteria	A Land Use Map Amendment to apply the Resources and Rural Development land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Resources and Rural Development land use designation must also be consistent with other policies of the Local Coastal Plan and meet one or more of the following criteria: 1. Land has severe constraints such as geologic, flood, or fire hazards; marginal or unproven water availability; or limited septic capability. 2. Land contains natural resources such as water, timber, geothermal steam, aggregate, or soil. 3. Land contains biotic or scenic resources. 4. Land is vulnerable to environmental impact.

Timber

Timber lands may also be used for limited accessory uses and very low-density residential development not in conflict with the primary resource use of the site. Lands zoned Resource and Rural Development (RRD) with an underlying land use designation of Timber may also be used for agricultural operations and very low-density residential development not in conflict with the resource use of the site.

Purpose	To protect timberland needed for commercial timber production under the California Timberland Productivity Act.
Corresponding Zoning District(s)	Timberland Production (TP) Resources and Rural Development (RRD)
Principally Permitted Use	The principally permitted use on lands designated and zoned for Timber is land management for the continued operation and protection of Timber Preserves ~~including limited related residential development to support the use.~~ Lands Zoned Resources and Rural Development: Resource conservation and associated land management activities.
Minimum Parcel Size	640 acres.

	Land divisions shall be permitted only for the purpose of increasing or enhancing timber production.
Allowable residential density	One single-family residence per 160 acres or one per parcel, if a parcel is less than 160 acres. Other resource-related dwelling units that do not count toward density, such as agricultural employee units and farm family dwellings, may be allowed. The total number of residential units shall not exceed four units per parcel.
Other Residential Uses	None.
Designation Criteria	A Land Use Map Amendment to apply the Timber land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Timber land use designation must also be consistent with other policies of the Local Coastal Plan and meet one or more of the following criteria: 1. Land is predominantly in Timber Site Class I, II, III, IV, or V. 2. Land has existing or historic use for timber production. 3. Timber production is considered the highest and best use of the land. 4. Timberland needed for commercial timber production under the California Timberland Productivity Act. 5. Land for which harvesting of timber is not prohibited by restrictions placed on property. 6. A parcel or contiguous ownership of at least 40 acres in Timber Site Class I or II if it is not contiguous to and under the same ownership as the surrounding land in timber production. 7. A parcel or contiguous ownership of at least 80 acres in Timber Site Class III, IV, or V if it is not contiguous to and under the same ownership as the surrounding land in timber production. 8. Areas which may not meet the above criteria but which are surrounded by lands in timber production.

Dedicated Open Space Areas

Purpose	To designate common areas which are committed to perpetual open space in planned developments.
Corresponding Zoning District(s)	Planned Community (PC) zone for The Sea Ranch planned development. Rural Residential (RR) zone for the Bodega Harbor and other planned developments.
Principally Permitted Use	Lands designated as Dedicated Open Space are intended to remain as common areas without structures in planned communities and planned developments. Principally Permitted Uses on Dedicated Open Space areas are limited ~~for~~ <u>to</u> resource protection and passive recreation.
Designation Criteria	A Land Use Map Amendment to apply the Dedicated Open Space land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Dedicated Open Space land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Land is a designated common area without development which is committed to open space in a planned community. 2. Lands without existing residential, commercial, or industrial development.

2.4 COMMERCIAL LAND USE

Commercial Fishing

Commercial fishing uses include fish buying and selling facilities; warehouses for storage of fishing gear, boats, and trailers; and related accessory structures and uses including fishing supply stores and bait and tackle shops.

Purpose	To accommodate a variety of commercial, light to medium industrial, and service uses which support the commercial fishing and other coastal-dependent industries.
Corresponding Zoning District(s)	Commercial Fishing (CF)
Principally Permitted Use	Support facilities for commercial fishing, including docks and mooring facilities, fish buying and selling facilities; warehouses for storage of fishing gear, boats, and trailers; and related accessory structures and uses including fishing supply stores and bait and tackle shops.
Minimum Parcel Size	• 1.5 acres if served by individual wells and septic systems. • 1 acre if served by public water and septic systems. • 10,000 square feet if served by public sewer systems.
Designation Criteria	A Land Use Map Amendment to apply the Commercial Fishing land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Commercial Fishing land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Lands are not converted from an Agricultural land use category which shall have priority over other commercial or industrial land uses. 2. Lands shall be located within an Urban Service Area. 3. Lands shall have convenient access to a county or state maintained road, preferably a designated arterial or collector. 4. Lands shall be in close proximity and no more than one-half mile to a harbor, marina, bay, or the ocean. 5. The intended commercial or industrial uses shall be directly related to: a) support of fishermen and the fishing industry, b) support of boat builders/repairers and the boat building/repair industry; or, c) support of other industries which depend on the marine environment and resources. 6. Lands shall not be located in a Scenic Landscape Unit or Scenic View Corridor.

Commercial Tourist

Commercial tourist uses include hotels, motels, inns, resorts, campgrounds, bed and breakfast inns; limited retail shops, bars, restaurants, guest ranches; art galleries, and visitor information centers.

Purpose	To accommodate visitor-serving commercial uses, including lodging, campgrounds, restaurants, retail shops principally serving tourists, and recreation facilities
Corresponding Zoning District(s)	Commercial Tourist (CT)
Principally Permitted Use	Visitor-serving commercial uses including campgrounds, hotels, motels, inns, resorts, bed and breakfast inns; limited retail shops, bars, restaurants, guest ranches; art galleries, and visitor information centers.
Minimum Parcel Size	• 1.5 acres if served by individual wells and septic systems. • 1 acre if served by public water and septic systems.

	• 10,000 square feet if served by public sewer systems.
Designation Criteria	A Land Use Map Amendment to apply the Commercial Tourist land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Commercial Tourist land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Lands shall not be converted from an Agricultural or Commercial Fishing Land Use categories which have priority over visitor-serving commercial uses. 2. Lands shall have convenient access to a county or state maintained road, preferably a designated arterial or collector. 3. Visitor-serving commercial uses would be compatible with nearby agricultural operations and uses in the surrounding area. 4. The site is within or adjacent to a designated Urban Service Area. 5. Lands shall not be located in a Scenic Landscape Unit or disrupt a Major View.

Commercial Services

Purpose	To accommodate the day-to-day retail business, service, recreational, and professional service needs of local residents.
Corresponding Zoning District(s)	Commercial Services (CS) Community Commercial (C2)
Principally Permitted Use	Local-serving commercial uses such as retail, business, and professional services that serve the local community.
Minimum Parcel Size	• 1.5 acres if served by individual wells and septic systems. • 1 acre if served by public water and septic systems. • 10,000 square feet if served by public sewer systems.
Designation Criteria	A Land Use Map Amendment to apply the Commercial Services land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Commercial Services land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Lands are not converted from an Agricultural, Commercial Fishing, or Commercial Tourist land use category, which shall have priority over other commercial land uses. 2. The designation does not reduce opportunities for affordable or workforce housing. 3. Lands shall have convenient access to a county or state maintained road, preferably a designated arterial or collector. 4. The amount of land designated for local-serving commercial uses shall be consistent with the population projected for the local market area. 5. In rural areas, lands may be limited to a single parcel and be restricted to that level which can be served by an individual well and septic system. 6. Lands shall not be located within a Scenic Landscape Unit or Major View shed.

2.5 PUBLIC FACILITIES LAND USE

Lands designated Public Facilities are owned and operated by a city, county, special district, federal agency, or state for the primary purpose of providing an essential public service, including public safety, administrative services and the production, generation, transmission, collection, and storage of

water, waste, or energy. Public uses are also allowed in other land use categories; the Public Facilities and Services Element establishes policies for the location of public uses in other land use categories.

Public Facilities Areas

Purpose	To accommodate institutional or public uses which serve the community or public need and are owned or operated by government agencies, non-profit entities, or public utilities.
Corresponding Zoning District(s)	Public Facilities (PF)
Principally Permitted Use	Utility and public service facilities.
Minimum Parcel Size	6,000 square feet.
Designation Criteria	A Land Use Map Amendment to apply the Public Facilities land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Public Facility land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Ownership or long-term lease by a government agency, other non-profit entity, or public utility. 2. Adequate road access. 3. Lands are not suitable for and will not adversely affect agriculture or resource production activities.

2.6 RESIDENTIAL LAND USE

The Land Use Plan has two residential land use categories: Rural Residential and Urban Residential. While other land use designations may permit limited or incidental residential use, only these two categories will be considered residential land use designations.

On lands designated Rural Residential and zoned Rural Residential or Agricultural and Residential, limited crop and farm animal husbandry is allowed.

Planned Community zoning is applied with the approval of a Precise Development Plan in either Rural Residential or Urban Residential land use. The Precise Development Plan prescribes specific development and land uses. Both the Precise Development Plan and Planned Community zoning approval requires a Local Coastal Program amendment.

Additional standards applicable to development on residential lands may be included in the Coastal Zoning Ordinance and local area design guidelines.

Residential densities are based on availability of public services and infrastructure, land use compatibility, environmental suitability, projected population and development, and neighborhood character. Environmental suitability includes but is not limited to protection of habitat area, riparian corridors, major views, minimizing the risk of hazards and vulnerability to sea level rise, and coastal bluff erosion.

Rural Residential

Purpose	To provide for very low-density residential development on lands which have few if any public services but which have access to county maintained roads.
Corresponding Zoning District(s)	Rural Residential (RR) Agricultural and Residential (AR) Planned Community (PC)
Principally Permitted Use	Single-family residential uses and accessory dwelling unit.
Minimum Parcel Size	1.5 acres if served by an individual well and septic system. 1 acre if served by a public water system.
Allowable Residential Density	1 to 20 acres per dwelling unit. Maximum residential density is applied based on similar density of existing lots in the surrounding area, suitable soils for septic disposal, available water, environmental suitability, access to arterial or collector roads, proximity of commercial services and public services and facilities, and no significant impacts on agriculture and resource production.
Other Residential Uses	Accessory structures such as guest houses, storage buildings, pool houses, and garages.
Designation Criteria	A Land Use Map Amendment to apply the Rural Residential land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Rural Residential land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Lands are not converted from an Agricultural, Commercial Fishing or Commercial Tourist land use category, which shall have priority over residential land uses. 2. The area does not have soils suitable for agricultural production. 3. The area does not include substantial agricultural or resource uses. 4. Lands have access to a County maintained road. 5. Lands have enough groundwater for individual wells. 6. Lands have sufficient permeability for individual septic systems.

Urban Residential

Purpose	To accommodate a variety of types of low- and medium-density housing types in areas with public services.
Corresponding Zoning District(s)	Low Density Residential (R1) Medium Density Residential (R2) Planned Community (PC)
Principally Permitted Use	Single-family and multifamily residential uses.
Minimum Lot Size	6,000 square feet.
Allowable Residential Density	1 to 6 units per acre in low-density residential zones and 6 to 12 units per acre in medium-density residential zones.

	Residential density may be increased if the project qualifies under the state density bonus program outlined in California Government Code Section 65915; or, the County supplemental density bonus program or housing opportunity area program; and in the Coastal Zoning Ordinance under affordable housing program requirements and incentives. Approval of any increase in residential density is subject to specific findings regarding the adequacy of public services, consistency with the Local Coastal Program, and mitigation of impacts to coastal resources. Application of higher residential density under the density bonus or housing opportunity programs may require a Local Coastal Plan Amendment.
Other Residential Uses	Low Density Residential (R1) allows for the development of single family residences and associated accessory structures and uses on small lots developed in accordance to density. Medium Density Residential (R2) allows for the development of multifamily residential development in accordance with permitted density, including those developed as transitional and density bonus projects.
Designation Criteria	A Land Use Map Amendment to apply the Urban Residential land use designation requires a Local Coastal Plan Amendment subject to certification by the California Coastal Commission and must meet the standards in Chapter 3 of the California Coastal Act. A Local Coastal Plan Amendment to apply the Urban Residential land use designation must also be consistent with other policies of the Local Coastal Plan and meet all of the following criteria: 1. Lands are not converted from an Agricultural, Commercial Fishing, or Commercial Tourist land use category, which shall have priority over residential land uses. 2. Lands are within a designated Urban Service Area. 3. Adequate water, sewer, public safety, park, school services, and other necessary infrastructure are available or planned to be available. 4. Lands have convenient access to designated arterial or collector roads. 5. Lands are not subject to unacceptable levels of risk such as flooding, geologic hazards, excessive noise, or other hazards. 6. Lands have convenient access to commercial uses and community services.

3. OFFSHORE ENERGY SUPPORT FACILITIES

The Sonoma County Local Coastal Plan does not support general industrial and commercial energy development on the Sonoma County coast. Long-range protection of coastal resources, agriculture, forestry, commercial and recreational fishing, and enhancement of tourism and recreation are the priorities of the Coastal Program. These priorities are considered to be incompatible with energy development, in particular off-shore drilling.

On-Shore and Off-Shore Oil, Gas, and Energy Facilities

In 1981, the U.S. Department of the Interior proposed Outer Continental Shelf (OCS) oil lease sales off the central and northern California Coast, including the Bodega Basin. Due to its existing harbor facilities, the Bodega Bay area was considered a possible onshore support base for the future offshore oil production platform. The availability of land, housing, harbor facilities, and public and commercial services influence the location for a potential future onshore support base.

The size of an onshore support base varies with the estimate of the amount of oil found during exploration. The lease sale proposed in 1981 would have required a temporary support base of five to ten acres for platform construction during the exploration phase. During the development phase a permanent facility would have been constructed at the same location, and additional land may have been necessary based on the amount of oil found during exploration. Ultimately a support base of 10

to 20 acres with wharf and loading facilities, a heliport, and a channel depth of 15-20 feet may have been necessary. Ultimately the Bodega Basin was removed from the list of areas proposed for lease sale.

Concerns in the 1980s about development of the Outer Continental Shelf led to the 1986 approval of Ordinance 3592R, known as the On-Shore Oil and Gas Facilities ordinance of Sonoma County. The ordinance is the result of a countywide ballot initiative that requires voter approval of any proposed Local Coastal Plan Amendment to allow onshore facilities that would support oil and gas development of the outer continental shelf.

The County then initiated a more detailed study (entitled "Offshore Oil Development: Onshore Support Facilities Feasibility Study") of the potential impacts of onshore support facilities on the Sonoma County coast. One of the primary findings of the study is that no suitable sites exist on the Sonoma County coast for industrial on-shore oil support facilities, due to a number of physical, environmental, and policy constraints.

The report noted that Bodega Bay could be considered as a site for a very limited and restricted crew or supply base on land designated Commercial Fishing. However, sea level rise may further reduce the feasibility of major facilities along the shoreline. A complete environmental analysis, including the potential effects of sea-level rise, and a voter-approved Local Coastal Plan Amendment, would be required.

3.1 Goal, Objectives, and Policies

GOAL C-LU-3: Protect the Sonoma County coast from Outer Continental Shelf oil and gas exploration and development, offshore energy production, and mining development.

Objective C-LU-3.1: Discourage offshore oil and gas exploration and development off the Sonoma County coast.

Objective C-LU-3.2: Prohibit construction of onshore support facilities for offshore oil and gas development to protect the sensitive coastal habitats along the National Marine Sanctuaries.

Policy C-LU-3a: A Local Coastal Plan Amendment shall be required for any proposed onshore facility to support offshore oil and gas exploration or development. Any such amendment shall not be effective until a majority of the voters in Sonoma County, in a general or special election, approve the proposed amendment, unless such amendment is approved by the California Coastal Commission pursuant to Section 30515 of the California Coastal Act:

“Section 30515 Amendment for public works project or energy facility development

Any person authorized to undertake a public works project or proposing an energy facility development may request any local government to amend its certified local coastal program, if the purpose of the proposed amendment is to meet public needs of

an area greater than that included within such certified local coastal program that had not been anticipated by the person making the request at the time the local coastal program was before the commission for certification. If, after review, the local government determines that the amendment requested would be in conformity with the policies of this division, it may amend its certified local coastal program as provided in Section 30514.

If the local government does not amend its local coastal program, such person may file with the commission a request for amendment which shall set forth the reasons why the proposed amendment is necessary and how such amendment is in conformity with the policies of this division. The local government shall be provided an opportunity to set forth the reasons for its action. The commission may, after public hearing, approve and certify the proposed amendment if it finds, after a careful balancing of social, economic, and environmental effects, that to do otherwise would adversely affect the public welfare, that a public need of an area greater than that included within the certified local coastal program would be met, that there is no feasible, less environmentally damaging alternative way to meet such need, and that the proposed amendment is in conformity with the policies of this division.”

Policy C-LU-3b: Prohibit facilities that support offshore oil, gas, or energy production within the Commercial Fishing land use category.

Policy C-LU-3c: Prohibit facilities that support development or operation of off-shore mining facilities. Amendment of this policy shall not be effective until a majority of the voters in Sonoma County, in a general or special election, approve the proposed amendment.

Policy C-LU-3d: Prohibit facilities that support development or operation of off-shore energy production or storage facilities. Prohibit industrial energy production facilities in the Geologic Hazard Severity Zone without an amendment of this policy. Amendment of this policy shall not be effective until a majority of the voters in Sonoma County, in a general or special election, approve the proposed amendment. This policy does not apply to microgrids.

4. AFFORDABLE HOUSING

The major goal of this Affordable Housing section is to protect and promote low- and moderate-cost housing in the Coastal Zone to carry out the provisions of California Coastal Act Policy Section 30604 (f)-(g):

“(f) The commission shall encourage housing opportunities for persons of low and moderate income. In reviewing residential development applications for low- and moderate-income housing, as defined in paragraph (3) of subdivision (h) of Section 65589.5 of the Government Code, the issuing agency or the commission, on appeal, may not require measures that reduce residential densities below the density sought by an applicant if the density sought is within the permitted density or range of density established by local zoning plus the additional

density permitted under Section 65915 of the Government Code, unless the issuing agency or the commission on appeal makes a finding, based on substantial evidence in the record, that the density sought by the applicant cannot feasibly be accommodated on the site in a manner that is in conformity with Chapter 3 (commencing with Section 30200) or the certified local coastal program.

(g) The Legislature finds and declares that it is important for the commission to encourage the protection of existing and the provision of new affordable housing opportunities for persons of low and moderate income in the coastal zone.

(h) When acting on a coastal development permit, the issuing agency, or the commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state.”

Visitor-serving commercial development, agricultural production, and coastal-dependent uses, to varying degrees, all depend on the availability of seasonal and year-round housing opportunities for persons operating or employed in these industries. However, there are unique considerations for affordable and workforce housing development in the Coastal Zone, including high property values and the remote nature of the Coastal Zone. Transit service to the Coastal Zone is limited. The nearest incorporated city, Sebastopol, is more than 10 miles from the edge of the coastal zone and more than 15 miles to Bodega Bay, the most populous area of the Sonoma Coast.

All deed-restricted affordable housing units in the Coastal Zone are in The Sea Ranch and in Bodega Bay. There are 45 affordable rental units that were required as part of a 300-unit expansion of The Sea Ranch development. Harbor View Subdivision in Bodega Bay was also required to provide 14 affordable rental units on one parcel out of the 70-parcel subdivision.

4.1 Goal, Objectives, and Policies

GOAL C-LU-4: Preserve and enhance affordable housing opportunities on the Sonoma County coast.

Objective C-LU-4.1: Protect existing affordable housing units and encourage development of additional affordable housing in urban areas.

Objective C-LU-4.1: Promote the development of affordable housing to meet a range of for-sale and rental housing needs including agricultural employee housing, accessory dwellings, senior housing and accessible units.

Policy C-LU-4a: Continue all existing County and Community Development Commission sponsored funding programs, including but not limited to Community Development Block Grant (CDBG), HOME, Low/Moderate Income Housing Asset Funds (LMIHAF), and County Fund for Housing (CFH) funding programs. Continue to require that at least 30 percent of the units assisted with County funds be affordable to extremely-low income households as defined by HCD. Evaluate these existing programs in view of changing housing needs and policies, and seek opportunities for program expansion and more efficient use of limited resources.

Policy C-LU-4b: Continue the County’s existing density bonus programs, including the state density bonus program and the County’s programs. Continue to evaluate these programs in view of changing housing needs and policies, and expand or modify as needed to increase opportunities for housing.

Policy C-LU-4c: Ensure that design review, development standards, and conditions of approval for affordable housing projects do not result in a reduction of allowable project density or in the number of affordable units, unless the project as proposed would result in adverse impacts, and there is no other feasible method to mitigate the adverse impacts. State density bonus and accessory dwelling unit laws do not supersede the resource protections required by the Coastal Act.

Policy C-LU-4d: Encourage retention and further construction of small rental units such as Accessory and Junior Dwelling Units and single room occupancy units, as well as large rental units with more than 3 bedrooms.

Policy C-LU-4e: Continue to administer the County’s Mobile Home Rent Stabilization Ordinance.

Policy C-LU-4f: Continue to apply state law to Mobile Home Park Conversions to Resident Ownership, including implementation of SB 510 (Jackson 2013), in order to ensure that residents are afforded full consideration and all protections under the law.

Policy C-LU-4g: Accessory Dwelling Units, Junior Accessory Dwelling Units, and structures containing a Junior Accessory Dwelling Unit, or structures with an attached Accessory Dwelling Unit shall not be used as a vacation rental or any other use that is subject to transient occupancy tax.

Policy C-LU-4h: Provide for two types of Housing Opportunity Areas in addition to, and not in lieu of, provisions of state and federal law as follows, and consistent with all other policies of the LCP:

- (1) The Type “A” Rental Housing Opportunity Program allows a density between 12 and 24 units/acre as long as affordability levels are met - at least 40% of total units as affordable to Low or Very Low Income households. Type "A" Rental Housing Opportunity Areas are established on sites which have a Local Coastal Plan medium density residential designation (Urban Residential 6-12 dwelling units/acre) and are zoned R2 (Medium Density Residential). The residential density for a Type “A” project may be increased to 100 percent above the mapped designation to a maximum density of 24 dwelling units/acre. Development standards used for Type “A” housing projects allow increased height, reduced parking requirements, and less stringent setbacks so long as privacy is maintained.

- (2) The Type “C” Ownership Housing Opportunity Program allows a density of 11 units per acre for ownership housing projects as long as affordability levels are met - 20% affordable to Low Income households and 80% affordable to Moderate Income households. Type “C” Housing Opportunity Areas are established on sites which have a Local Coastal Plan low density residential designation (Urban Residential 1-6 dwelling units/acre. The residential density for a Type “C” project may be increased to almost 100 percent above the mapped designation to a maximum density of 11 dwelling units/acre.
- (3) Rental Housing Opportunity Type “A” and Ownership Housing Opportunity Type “C” projects shall comply with all applicable provisions, including development standards and long-term affordability requirements, of Chapter 26C (Coastal Zoning Ordinance) of the Sonoma County Code.
- (4) Housing Opportunity Type “A” and Type “C” programs shall apply to housing development consisting of five or more dwelling units.

Policy C-LU-4i: Encourage a mix of low and moderate income housing units, and rental and sale units. Encourage diverse unit design including visitability and universal design.

Policy C-LU-4j: Continue to encourage affordable “infill” projects on underutilized sites within Urban Service Areas by allowing flexibility in development standards pursuant to state density bonus law [California Government Code Section 65915, including subsection (m)].

Policy C-LU-4k: Require long-term Affordable Housing Agreement for affordable housing units.

Policy C-LU-4l: For parcels located within an area designated Urban Residential 1-6 dwelling units/acre which are large enough in area to permit more than one dwelling but cannot meet subdivision criteria due to shape or other similar constraint, permit clustering of dwelling units consisting of detached single-family dwelling units subject to the density limitations of the Local Coastal Plan Land Use Maps and issuance of a Use Permit.

Policy C-LU-4m: Concentrate housing production efforts in areas where public sewer and water service are available.

C-LU-4u: Encourage service providers to retain adequate sewer and water service capacities for housing units affordable to Moderate and Low Income households.

Policy C-LU-4n: Continue to permit transitional and permanent supportive housing in all residential land use categories. The construction of new dwelling units for such purposes shall conform to the Local Coastal Plan densities and to all other applicable provisions of the

Coastal Zoning Ordinance. No standards shall be applied to transitional or supportive housing that do not also apply to other dwelling units within the same zone.

Policy C-LU-4o: Prohibit the demolition of housing for persons of low and moderate income, unless such demolition would be coupled with subsequent reconstruction of replacement housing of comparable rental value. Demolition may be permitted in advance of the replacement housing if the Director determines that the removal of the unit(s) is necessary to protect public health and safety. No eligible person occupying property shall be required to move from a dwelling or to move a business or farm operation, without at least 90 days written notice from the public entity requiring the displacements. Public entities shall notify each individual tenant to be displaced as well as each owner-occupant.

Policy C-LU-4p: Prohibit conversion of rental units currently providing low and moderate income housing opportunities to market rate housing, transient occupancy use, or market rate housing unless the conversion provides a greater affordable housing opportunity.

Policy C-LU-4q: Consistent with state law, the following criteria shall be considered when evaluating an application for condominium conversion:

- (1) The surplus of vacant multifamily residential units offered for rent or lease must be in excess of 5 percent of the available multifamily rental stock in the community in which the proposed project is located.
- (2) At least 30 percent of the units included in the proposed condominium conversion must be reserved for sale to Low and Very Low Income households by means of an Affordable Housing Agreement to ensure that such units remain affordable to Very Low and Low Income households for the maximum period allowed by law.
- (3) Tenants must be granted the right of first refusal concerning the purchase of the units. Tenants who are 60 years or older should be offered lifetime leases. Tenants not qualifying for lifetime leases must be offered a 10-year lease. The subdivider must provide a plan to assist in relocating tenants displaced by the conversion to comparable rental housing.

Policy C-LU-4r: Allow Accessory Dwelling Units consistent with the standards in Government Code Section 65852.2 consistent with coastal resource protections of Chapter 3 of the Coastal Act as implemented in the Sonoma County Local Coastal Plan. Implement an administrative review process that includes sufficient safeguards for coastal resources.

Policy C-LU-4s: Changes in use or closure of a mobile home park shall comply with state law and require a Use Permit.

Policy C-LU-4t Require service providers to retain adequate sewer and water service capacities for Local Priority Uses including affordable dwelling units for extremely low, very low, low-income households, and accessory dwelling units.

4.2 Program

Program C-LU-4-P1: Draft an ordinance to allow workforce/employee housing in the coastal zone. The ordinance is intended to support coastal priority land uses including commercial fishing, resource dependent uses, recreation, and visitor serving commercial uses. Ensure that workforce/employee housing supports priority uses, is scaled and located appropriately for the size of the supported use and surrounding neighborhood, protects coastal resources and scenic views, has adequate water and waste management, supports reduction of greenhouse gas emissions, and is not vulnerable to climate change related impacts including coastal bluff erosion and sea level rise for the life of the project and is consistent with all the policies of this chapter.

4.3 Initiatives

Initiative C-LU-4-I1: Encourage development of employer provided or subsidized affordable housing for employees.

Initiative C-LU-4-I2: Consider increasing funding priority for the acquisition of affordable units and rehabilitation and maintenance of existing affordable units.

Initiative C-LU-4-I3: Conserve the existing affordable housing stock by providing funding through the Community Development Commission to nonprofit organizations to subsidize the acquisition of at-risk properties where those units will be restricted to long-term occupancy by low, very-low and extremely-low income households.

5. VISITOR-SERVING COMMERCIAL

Recreational uses require support facilities such as motels, restaurants, grocery stores, auto service stations, and public restrooms. This section contains an inventory of existing visitor-serving and local-serving facilities, identifies areas suitable for their development, and recommends the type of and location for these facilities.

The California Coastal Act of 1976 encourages providing support facilities for visitors to the coast, especially those available to the public at a moderate cost.

Existing Visitor-Serving Commercial Facilities

Below are the definitions of visitor-serving versus local-serving commercial facilities:

- (1) Visitor-serving commercial facilities or uses include development that provides basic support services for visitors such as motels, campgrounds, restaurants, grocery stores, auto service

stations, and public restrooms. Most of these facilities on the Sonoma County coast are both visitor-serving and local-serving.

- (2) Local-serving commercial facilities or uses include all other private commercial development that provides for the needs of the local population such as professional offices, utilities, banks, and fishing industry support services.

Visitor-serving and local-serving commercial facilities accessible to the Sonoma County coast are concentrated primarily in The Sea Ranch, Bodega Bay, and Gualala in Mendocino County. These areas are the most suitable for expanding visitor-serving commercial facilities due to the availability of public services and existing development. Other small service centers are scattered along the Sonoma County coast and just inland. Jenner and Duncans Mills on the North Coast and Valley Ford on the South Coast are secondary locations along the coast with isolated services (i.e., spot commercial services such as single grocery stores).

Three visitor centers serve the North Coast: Redwood Coasts Chamber of Commerce in Gualala; Russian River Chamber of Commerce and Visitor Center in Guerneville; and Jenner Visitors' Center in Jenner. The South Coast is served by the Sonoma Coast Visitor Center in Bodega Bay. As of summer of 2022 an estimated 600 vacation rentals are operating in the Coastal Zone with the majority located in the Sea Ranch and Bodega Harbour subdivision. **Tables C-LU-1 and C-LU-1** provide summaries of visitor serving overnight accommodations, other than vacation rentals, in the Coastal Zone. It should be noted that campgrounds provide 1,083 spaces, which represents more than half of all overnight accommodations in the Sonoma Coast.

Table C-LU-4 North Coast Overnight Accommodations

<i>Facility</i>	<i>Hotel/Motel Rooms</i>	<i>Campground Spaces</i>
Gualala Point Regional Park		24
Salt Point State Park		160 ²
Ocean Cove - private campground		175
Sea Ranch Lodge	19	
Ocean Cove Lodge Bar & Grill	16	
Stillwater Cover Regional Park		23
Timber Cove - private campground		25
Timber Cove Lodge	42	
Fort Ross State Historic Park Unit		21
Fort Ross Reef Campground		21
Fort Ross Lodge	22	
Duncans Mills Campground		125
Inn at Duncans Mills	5	
River's End	5	
Jenner Inn & Cottages	21	
Seacliff Motel ¹	16	
Surf Motel ¹	20	
Breakers Inn ¹	28	
Gualala Country Inn ¹	19	
Gualala River Redwood Park ¹		111
Total in North Coast	130	527

Notes:

¹ Located in Mendocino County's Coastal Zone, within 1.5 miles of the Sonoma-Mendocino county line.

² Includes 20 overflow campground spaces.

Table C-LU-5. South Coast Overnight Accommodations

Facility	Hotel/Motel Rooms	Campground Spaces
Bay Hill Mansion	5	
Bodega Bay Inn	5	
Bodega Bay Lodge	83	
Bodega Bay Coast Inn & Suites	44	
The Inn at the Tides	85	
Bodega Harbor Inn	16	
Casini Family Ranch- Private campground		225
Sonoma Coast State Park Unit – Willow Creek Campground		11
Sonoma Coast State Park Unit – Wrights Beach Campground		27
Sonoma Coast State Park Unit – Pomo Canyon Campground		20
Sonoma Coast State Park Unit – Bodega Dunes Campground		98
Westside Regional Park		47
Doran Beach Regional Park		139
Valley Ford Hotel	6	
Total in South Coast	244	556

5.1 Goal, Objective, and Policies

GOAL C-LU-5: Encourage Public Access and visitor-serving uses in the Coastal Zone and establish adequate commercial services for visitors on the Sonoma County coast where such development can be accommodated with minimal impacts on views and natural resources.

Objective C-LU-5.1: Identify and develop new or expand existing commercial services for visitors in urban service areas and rural communities.

Planning and Reviewing Visitor-Serving Development

Policy C-LU-5a: Encourage the development and expansion of visitor- and local-serving commercial uses within urban service areas and rural community boundaries where water supply and wastewater disposal requirements can be met.

Policy C-LU-5b: Limit new visitor-serving commercial development to areas within designated urban service areas and rural community boundaries except for the lowest intensity development (i.e., guest ranches, and bed and breakfast inns, vacation rentals, and agricultural farmstays).

Policy C-LU-5c: Provide public restrooms and drinking water facilities where needed and appropriate as part of visitor- and local-serving commercial development.

Encouraging Visitor-Serving Development

Policy C-LU-5d: Allow limited expansion of existing visitor- and local-serving commercial uses outside of urban service areas and rural community boundaries where water supply and wastewater disposal requirements can be met and where expansion is found to have no impact on coastal environmental resources.

Policy C-LU-5e: Encourage the provision of modest scale overnight accommodations that have minimal impacts on the coastal environment, including campgrounds, bed and breakfast accommodations in existing homes, guest ranches, inns, and motels. Guest ranches in agricultural areas shall be compatible with continued ranch operations and be limited to the allowable residential density.

Policy C-LU-5f: Allow campgrounds, subject to a coastal development permit, in all agricultural, resource, and commercial land use categories where campgrounds will not interfere with the principally permitted use, are compatible with surrounding land uses, and will not have a significant adverse impact on coastal natural resources.

Specific Visitor-Serving Uses

Policy C-LU-5g : Ensure that expansion of overnight accommodations, visitor-serving commercial uses, and local-serving commercial uses on Annapolis Road are consistent with the historic nature and character of this rural, agricultural, and forest community.

Policy C-LU 5h: Ensure any development of limited visitor- and local-serving commercial uses at Stewarts Point complements the historic character of the community.

Policy C-LU-5i : The visitor-serving area of Ocean Cove Resort and Ocean Cove Store is challenged by the combination of high-speed vehicular traffic and need for pedestrian visitors to cross State Highway 1. Any development proposals should include provisions for pedestrian safety on State Highway 1 as well as erosion control measures and restoration of the degraded bluffs at the cove, taking into account projected sea level rise. If needed to improve coastal access, additional parking may be provided. Development west of State Highway 1 at the Ocean Cove resort is limited to a day use area, campground, and adaptive reuse of the historic barn with the intention of concentrating visitor services and activities on the same side of the highway. Limited expansion of existing commercial uses east of State Highway 1 could include overnight accommodations and equestrian facilities.

Policy C-LU-5j: Limit expansion at the Timber Cove Inn to improved parking and public access facilities.

Policy C-LU-5k: Encourage provision of screening and other design improvements at the Timber Cove Boat Landing.

Policy C-LU-5l: Limited new or expansion of existing visitor-and local-serving commercial uses in the vicinity of the Fort Ross Store shall preserve the area’s scenic character.

Policy C-LU-5m: Modest infill of visitor-and local-serving commercial development in Jenner may only be permitted if water supply and wastewater treatment and disposal requirements can be met.

Policy C-LU-5n: In recognition of the potential of sea level rise to eliminate existing campground space over time, provisions of overnight accommodations of the modest scale and cost and expansion of other visitor- and local-serving commercial services uses at Duncans Mills is encouraged if water supply and wastewater treatment and disposal requirements can be met. Development must be consistent with the historic nature of the community. No exemption from state policies governing shoreline armoring in response to sea level rise or other natural forces is granted at this location.

Policy C-LU-5o: Any expansion of public access to the Bridgehaven Resort, including adding boat rentals and launching and day use facilities, would be subject to design review and require public access as a condition of approval. No exemption from formal state policies governing shoreline armoring in response to sea level rise or other natural forces is granted at this location.

Policy C-LU-5p: Expansion of existing commercial uses and new commercial development in Bodega Bay must be consistent with the community’s historic character. As the commercial hub for the southern Sonoma Coast with a history of commercial fishing and processing, fishing related facilities should be prioritized.

Policy C-LU-5q: Allow for new and for the expansion of existing visitor-serving uses at Chanslor Ranch consistent with continued agricultural use if water supply and wastewater treatment and disposal requirements can be met.

Policy C-LU-5u: Modest expansion of commercial uses in Valley Ford is contingent on the availability of adequate water supply and wastewater treatment. Any commercial expansion must be consistent with the community’s historic character and scale.

5.2 Program

Program C-LU-5-1P: Establish performance standards for the use of existing residences for vacation rentals and hosted rentals. In developing standards consider: requirements for designated property managers, safety, parking, noise, and number of guests allowed for day time and nighttime occupancy. In addition to performance standards, identify areas where high concentration of vacation rental would impact environmentally sensitive habitat areas, water quality, housing stock and affordability, community character, or coastal access and develop land use policy to avoid these impacts.

5.3 Initiatives

Initiative C-LU-5-I1: Encourage development of employer provided or subsidized affordable housing for employees.

Initiative C-LU-5-I2: Increase funding priority for the acquisition of affordable units and rehabilitation and maintenance of existing affordable units.

Initiative C-LU-5-I3: Conserve the existing affordable housing stock by providing funding through the Community Development Commission to nonprofit organizations to subsidize the acquisition of at-risk properties where those units will be restricted to long-term occupancy by low-, very-low and extremely-low income households.

6. COMMUNITIES

Adequate housing and commercial development are needed to serve the resident population and visitors but must be consistent with continued resource uses for agricultural production, commercial fishing, and timber, as well as, the protection of sensitive coastal resources and available services.

Most new residential development is planned in Bodega Bay, where a full range of public services can be efficiently provided. The present alignment of State Highway 1 through this area is a major development constraint due to traffic congestion.

Increased tourism on the Sonoma County coast may result in an imbalance between local and tourist oriented commercial development. Visitor-serving uses, particularly lodging, are often located near scenic resources and overconcentration will likely degrade visual quality of the area.

Land use policy and regulation within The Sea Ranch is subject to the provisions of Public Resources Code Section 30610.6 (e) ("Bane Bill"), Exclusion Orders E-82-2 and E-82-2-A, and the Sea Ranch Amended Precise Development Plan Policy Statement, which establish building locations, bulk standards, view management, public access, and limits to the total number of lots within each unit of The Sea Ranch subdivision.

This policy framework delegates review authority for most development to The Sea Ranch Association and their committees, which must review and approve development applications before permits can be issued by Sonoma County. Development that has been approved by The Sea Ranch Association is excluded from needing a Coastal Development Permit.

6.1 Goal, Objectives, and Policies

GOAL C-LU-6: **Protect the natural and scenic resources and the unique character and qualities of the Sonoma County coast by focusing new residential and commercial development in Bodega Bay, The Sea Ranch, and Rural Communities.**

Objective C-LU-6.1: Concentrate new housing within the Bodega Bay Urban Service Area. Provide additional residential development in rural areas at very low densities to maintain local resources.

Objective C-LU-6.2: Balance residential and commercial development in Bodega Bay where adequate public services allow for residential and commercial expansion. Encourage a mix of price and rent levels.

Objective C-LU-6.3: Designate Bodega Bay as the major retail and service center for the coast. Permit limited opportunities for new commercial activities in the communities of The Sea Ranch, Duncans Mills, Jenner, and Stewarts Point, in keeping with their size and character.

Objective C-LU-6.4: Limit the scale of any new visitor- and tourist-oriented uses and confine them to existing communities and locations that are designated for such uses. Assure that they are compatible with and protect the area's natural, undeveloped scenic character.

Objective C-LU-6.5: Limit new industrial development to resource related uses, primarily to the fishing and other marine industries in Bodega Bay and to the timber industry near Stewart's Point.

Objective C-LU-6.6: Maintain very low residential densities on resource lands outside existing communities due to the lack of public services and importance of resource protection.

Objective C-LU-6.7: Regulate land use and approve development at The Sea Ranch consistent with Public Resources Code Section 30610.6 (e) (Bane Bill), adopted Exclusion Orders, and the Sea Ranch Precise Development Plan Policy Statement.

Policy C-LU-6a: The Urban Residential land use category shall be applied only within the Urban Service Boundary of Bodega Bay. Densities of one unit per acre or lower shall be maintained in other communities.

Policy C-LU-6b: Encourage construction of new housing for low- and moderate-income households under the Density Bonus or Housing Opportunity Area Programs outlined in the Coastal Zoning Ordinance. Increased density shall be allowed where the increase in density does not have impacts on coastal environmental resources beyond impacts that would result from development at base residential density.

Policy C-LU-6c: The Commercial Services land use category shall be used for existing and any needed new local commercial uses in Bodega Bay and The Sea Ranch. Outside these communities, the Commercial Services designation shall be applied only to existing uses and limit their expansion.

Policy C-LU-6d: Development projects in any commercial land use categories shall be designed in harmony with the natural and scenic qualities of the local area. Natural landscapes shall be given precedence over manmade features.

Policy C-LU-6e: In the Bodega Bay area, the Commercial Fishing land use category shall be used to support the commercial fishing industry, including storage and processing facilities.

Policy C-LU-6f: Fishing related industrial uses that require public services shall be located near Bodega Bay. Other fishing related commercial and industrial uses shall be considered coastal dependent uses.

Policy C-LU-6g: Notwithstanding the provisions of the Public Facilities and Services Element, connection of sewer service to the Bodega Bay Public Utilities District shall be allowed for uses that directly relate to and support the fishing industry in Bodega Bay and that cannot be located within the Urban Service Area. An out-of-service area agreement shall be used in such cases.

Policy C-LU-6h: Barns and similar agricultural support structures within the 200-foot State Scenic Highway 116 corridor shall be subject to design review.

Policy C-LU-6i: Identify Urban Service Area Boundaries on the Land Use Maps for The Sea Ranch North (**Figure C-LU-1a**), The Sea Ranch South (**Figure C-LU-1b**), and Bodega Bay (**Figure C-LU-1j**).

Policy C-LU-6j: Designate the following areas as Rural Communities (listed from north to south):

- Stewarts Point
- Timber Cove and Timber Cove Resort, including developed areas adjacent to the subdivision south to and including the Fort Ross Store
- Jenner
- Duncans Mills
- Rancho del Paradiso
- West Beach
- Sereno del Mar
- Carmet
- Salmon Creek
- Valley Ford

Policy C-LU-6k: Water and sewer service extensions to public parklands outside of Urban Service Areas may be allowed only where consistent with the Public Facilities and Services and Public Access Elements. An out-of-service area agreement shall be used in such cases.

Policy C-LU-6l: Restrict commercial development to designated Urban Service Areas and Rural Community boundaries, except where development proposed for areas beyond these boundaries would be consistent with the Public Facilities and Services and Public Access Elements.

Policy C-LU-6m: Processing of permits for development or land use with The Sea Ranch shall be consistent with and follow the provisions of Public Resources Code Section 30610.6 (e) (Bane Bill), adopted Exclusion Orders, and the Sea Ranch Precise Development Plan Policy Statement.

Policy C-LU-6n: Applications for development permits, including, but not limited to residential construction, subdivision, lot merger, or lot line adjustment that are subject to design review by The Sea Ranch Design Committee shall not be accepted without final approval from The Sea Ranch Design Committee.

Policy C-LU-6o: Rehabilitation and adequate maintenance of Sea Ranch Apartments shall be supported to the maximum extent feasible, including identification of sustainable funding to maintain these affordable dwelling units.

Programs

Program C-LU-6-P1: Develop a parking management program for Bodega Bay commercial areas.

Program C-LU-6-P2: Develop a comprehensive manual outlining policies and procedures for processing permit applications within The Sea Ranch. The manual will outline the roles, responsibilities, and authorities of The Sea Ranch Association, Sonoma County, North Coast Regional Water Quality Control Board, and California Coastal Commission, and provide clear direction for both landowners and agencies when processing applications within The Sea Ranch.

6.2 Initiatives

Initiative C-LU-I1: Continue to process development applications within the Bodega Harbour subdivision consistent with the 1977 Settlement Agreement and existing exclusion orders.

Agricultural Resources Element: Table of Contents

Agricultural Resources Element	2
Introduction	2
Purpose	2
Relationship to Other Elements	2
Relationship to California Coastal Act	2
Section 30222.5 Oceanfront lands; aquaculture facilities; priority	2
Section 30241 Prime agricultural land; maintenance in agricultural production	3
Section 30241.5 Agricultural land; determination of viability of uses; economic feasibility evaluation	3
Section 30242 Lands suitable for agricultural use; conversion	4
Section 30250 Location; existing developed area	4
1. Protection of Agricultural Lands	4
Farmland in the Coastal Zone	5
Impacts of Climate Change	6
1.1 Goal, Objectives, and Policies	7
1.2 Program	10
1.3 Initiatives	10
2. Agricultural Support Uses	11
Agricultural Processing and Agricultural Services	11
Agricultural Visitor-Serving Uses (Agricultural Tourism)	11
2.1 Goal, Objectives, and Policies	12
3. Farmworker Housing	14
3.1 Goal, Objectives, and Policies	15
4. Aquaculture and Fishing	15
4.1 Goal, Objectives, and Policies	16

Agricultural Resources Element

INTRODUCTION

PURPOSE

The purpose of the Agricultural Resources Element is to establish policies to ensure the protection and maintenance of agriculture for its economic, environmental, and social values. The Element is intended to provide clear guidelines for decisions in the two agricultural zones within the Coastal Zone—Diverse Agriculture (DA) and Land Extensive Agriculture (LEA)—as well as areas where agricultural land uses exist in the Resources and Rural Development (RRD) and Agricultural Residential (AR) zones.

The California Coastal Act protects productive resource lands, including agricultural lands, and, establishes agriculture as a priority use while emphasizing the retention of agricultural land in production.

In this Local Coastal Plan, agriculture is defined as the production and processing of food, fiber, and plant materials; and includes the raising and maintaining of farm animals including horses, donkeys, mules, and similar livestock.

RELATIONSHIP TO OTHER ELEMENTS

General policy direction for land use decisions in agricultural areas is expressed in the Land Use Element under the Land Extensive Agriculture and Diverse Agriculture land use categories. Other policies related to resource values for Biotic Resources and Scenic Resources are found in the Open Space and Resource Conservation Element. The Public Facilities Element includes policy that protects commercial fishing facilities. The Water Resources Element includes policies related to water quality and quantity, and the impact that sea level rise and climate change will have on groundwater resources.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

The following California Coastal Act policies inform and guide goals, objectives, policies, programs, and initiatives of the Sonoma County Local Coastal Plan Agricultural Resources Element:

Section 30222.5 Oceanfront lands; aquaculture facilities; priority

Oceanfront land that is suitable for coastal dependent aquaculture shall be protected for that use, and proposals for aquaculture facilities located on those sites shall be given priority, except over other coastal dependent developments or uses.

Section 3024I Prime agricultural land; maintenance in agricultural production

The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

- (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.
- (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.
- (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.
- (d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.
- (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.
- (f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.

Section 3024I.5 Agricultural land; determination of viability of uses; economic feasibility evaluation

(a) If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 3024I as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation containing at least both of the following elements:

- (1) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.
- (2) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of the filing of a proposed local coastal program or an amendment to any local coastal program.

For purposes of this subdivision, "area" means a geographic area of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for those lands included

in the local coastal program or in the proposed amendment to a certified local coastal program.

(b) The economic feasibility evaluation required by subdivision (a) shall be submitted to the commission, by the local government, as part of its submittal of a local coastal program or an amendment to any local coastal program. If the local government determines that it does not have the staff with the necessary expertise to conduct the economic feasibility evaluation, the evaluation may be conducted under agreement with the local government by a consultant selected jointly by local government and the executive director of the commission.

Section 30242 Lands suitable for agricultural use; conversion

All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Section 30250 Location; existing developed area

(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

(b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.

(c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

I. PROTECTION OF AGRICULTURAL LANDS

As with farmland around the State of California, agricultural lands in the Coastal Zone are subject to pressure to conversion to other uses.

While public access is the highest priority use in the Coastal Zone, agriculture is also a high-priority use (refer to the Land Use Element for a discussion of the priority of land uses in the Coastal Zone). Open space acquisitions by the California Coastal Conservancy, the Sonoma Land Trust, the Sonoma County Agricultural Preservation and Open Space District, and the California Department of Parks and Recreation have taken some agricultural lands out of production, but in many cases, land managers have demonstrated that working farms and ranches are compatible with recreational use and retaining the agricultural use on site can be a significant benefit for environmental resource management and cultural interpretation.

Economic pressure can also result in farmlands being taken out of production and converted to residential development or other urban uses. Reducing intrusion of urban uses into agricultural areas and providing economic incentives for farmers to keep land in agricultural protection is critical to preserving and protecting agricultural land.

Complaints about noise, odors, flies, spraying of pesticides, and similar nuisances related to agricultural practices may discourage and sometimes prevent farmers from managing their operations in an efficient and economic manner. Large lot sizes can reduce conflicts between agricultural and non-agricultural land uses by allowing for buffers between the two. Appendix C, the Right to Farm Ordinance (referenced below in **Policy C-AR-1h**), also reduces the potential for such conflicts by requiring property owners to acknowledge the agricultural use of land in the area.

Together with the Land Use Element, the Agricultural Resources Element establishes policies that maintain large parcel sizes in agricultural areas, and support the needs and practices of agriculture as the highest priority in areas designated for agricultural use.

Farmland in the Coastal Zone

There are about 28,000 acres of land with agricultural land use designations (Land Extensive Agriculture and Diverse Agriculture) in the Coastal Zone. The Land Use Element contains a detailed explanation of the agricultural land use designations.

The California Department of Conservation Farmland Mapping and Monitoring Program¹ establishes ratings for agricultural land based on soil quality and irrigation status. In the Coastal Zone, there is none of the highest-rated land, but there are lands designated as Grazing Land and Farmland of Local Importance². Farmland of Local Importance is land that is not Prime Farmland, Farmland of Statewide Importance, or Unique Farmland but is important to the local agricultural economy due to its productivity or value. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the Sonoma County Board of Supervisors.

Grazing Land makes up nearly half of all the land in the Coastal Zone (see **Table C-AR-1a**, below). Grazing Land means “land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock” (Gov. Code Section 65560) and includes land used for sheep and cattle grazing and dairies. The cool, moist climate of western Sonoma County generally produces better rangeland than inland, reducing the need for supplemental feed and irrigated pasture. Grazing Land occurs in all subareas except The Sea Ranch North. The largest acreage and highest percentage of Grazing Land are in the Bodega Bay and Valley Ford Subareas, respectively. Grazing lands are mostly in the northern coast, while dairies are prevalent in the Valley Ford subarea.

Farmland of Local Importance makes up only about four percent of all land in the Coastal Zone, and is located in nine of the ten subareas. The largest acreage and highest percentage of Farmland of Local Importance are in the Salt Point and The Sea Ranch North subareas, respectively.

¹ <https://www.conservation.ca.gov/dlrp/fmmp>

² As defined in Government Code Section 65560.

Table C-AR-1a: Acreage of Important Farmlands by subarea on the Sonoma County Coast

Subarea	Grazing Land (acres)	Farmland of Local Importance (acres)	Total Land (acres)
1 – The Sea Ranch North	0	381	2,962
2 – The Sea Ranch South	40	323	2,792
3 – Stewarts Point/Horse-shoe Cove	775	83	3,158
4 – Salt Point	88	492	5,859
5 – Timber Cove/Fort Ross	2,595	159	7,659
6 – High Cliffs/ Muniz-Jenner	2,081	143	3,401
7 – Duncans Mills	780	32	1,290
8 – Pacific View/Willow Creek	7,164	99	11,875
9 – Bodega Bay	7,519	0	10,156
10 – Valley Ford	4,871	485	5,465
Total	25,913	2,196	54,617
Percent of Total	47%	4%	100%

Figures C-AR-1a through C-AR-1k show the Agricultural Resources in the ten subareas of the Sonoma County coast.

Impacts of Climate Change

Climate change will impact agriculture on the Sonoma County coast. Agriculture is highly dependent on specific climate conditions, and understanding the overall effect of climate change on agriculture can be difficult. Changes in the frequency and severity of droughts and floods could pose challenges for farmers and ranchers. Changes in temperature, amount of carbon dioxide in the atmosphere, and the frequency and intensity of extreme weather could have significant impacts on crop yields.

Agriculture in the coastal zone is dependent on rainfall and local groundwater supplies. The location of water-bearing bedrock is difficult to predict, so water availability is uncertain as rainwater often runs off into creeks and streams and then to the ocean for lack of storage space in most of the underlying rock. Additionally, groundwater will become increasingly brackish as sea level rise forces salt water into coastal aquifers. Policies addressing groundwater impacts due to sea level rise and climate change are found in the Water Resources Element.

Climate change could affect animals both directly and indirectly. Extreme heat events, which are projected to increase under climate change, could directly threaten livestock. Drought may threaten pasture and feed supplies and reduce water availability for livestock. Climate change may increase the prevalence of parasites and diseases that affect livestock. Increases in atmospheric carbon dioxide may increase the productivity of pastures, but may also decrease their quality.

Overall, climate change and the impact of sea level rise are likely to make it more difficult to grow crops and raise animals in the same ways and same places as in the past. The effects of climate change, especially impacts to groundwater supplies as a consequence of sea level rise and changes in rainfall must be considered along with other evolving factors that affect agricultural production, such as changes in farming practices and technology.

I.1 Goal, Objectives, and Policies

GOAL C-AR-I: Preserve agriculture as a long term economically viable land use by protecting agricultural production from intrusion of urban development on agricultural land, and allowing farmers to manage their operations without conflict from non-agricultural land uses, consistent with protection of coastal resources. Maintain the maximum amount of agricultural land in parcel sizes that are large enough to sustain a viable commercial agricultural operation.

Objective C-AR-I.1: Avoid the conversion of agricultural lands to residential or non-agricultural commercial uses.

Objective C-AR-I.2: In the Land Extensive Agriculture and Diverse Agriculture land use categories, maintain the largest land area for agricultural use. Limit the number of cluster lots in any one area to avoid the potential conflicts associated with residential intrusion.

Objective C-AR-I.3: Limit intrusion of urban development in agricultural areas.

Objective C-AR-I.4: Maintain the Bodega Bay Urban Service Area Boundary and Rural Community Boundaries to protect agricultural land for continued agricultural production.

Objective C-AR-I.5: Limit extension of sewer and other urban services beyond the Bodega Bay Urban Service Area Boundary and Rural Community Boundaries.

Objective C-AR-I.6: Apply the Land Extensive Agriculture and Diverse Agriculture land use categories only to areas or parcels capable of the commercial production of food, fiber, and plant material; or the raising and maintaining of farm animals. Establish agricultural production as the highest priority use in these areas or parcels.

Objective C-AR-I.7: Continue participation in the Land Conservation Act and Farmland Security Zone programs under the Williamson Act.

Objective C-AR-I.8: Formulate programs and evaluate alternative funding sources which offer financial incentives to the farm owner to reduce reliance on subdivision and sale of land to raise operating capital.

Policy C-AR-1a: The following criteria shall be used for approval of subdivisions on land within the Land Extensive Agriculture or Diverse Agriculture land use:

- (1) Shall be consistent with California Coastal Act which requires that:
 - (a) The maximum amount of agricultural land shall be maintained in agricultural production,
 - (b) Agricultural conversions shall be limited and evaluated on a case-by-case basis, and
- (2) It does not diminish the productivity of the agricultural land.

(3) The resulting parcels for agricultural use shall each be of a size that can support a viable agricultural operation per California Coastal Act Section 30241.5.

(4) Local Coastal Plan land use designation shall not be changed to facilitate subdivision of agricultural lands.

Policy C-AR-1b: Subdivisions on designated resource and agricultural lands shall be permitted only for development related to the pursuit of either agriculture or forestry, as appropriate; and only with mechanisms such as open space or agricultural easements to ensure the long-term protection of agriculture and resource production.

Policy C-AR-1c: Agricultural compatibility and productivity shall be the primary considerations in parcel design and siting of development for subdivisions on lands designated Land Extensive Agriculture or Diverse Agriculture.

Policy C-AR-1d: Amendments of the Land Use Map from an agricultural to a non-agricultural use category for the purpose of allowing increased residential density which may conflict with agricultural production are prohibited.

Policy C-AR-1e: Implement minimum parcel sizes and other zoning standards to promote the productive and wise use of resources in Land Extensive Agriculture and Diverse Agriculture Zones, as shown in **Table C-AR-1b**. Minimum Parcel Size and Maximum Residential Density by Agricultural Land Use Category.

Table C-AR-1b: Minimum Parcel Size and Maximum Residential Density by Agricultural Land Use Category

<i>Zone</i>	<i>Applicable Land Use Category</i>	<i>Minimum Parcel Size</i>	<i>Maximum No. of Dwelling Units per Parcel¹</i>	<i>Maximum Permitted Residential Density (ac/unit)²</i>
LEA	Land Extensive Agriculture	640 acres	4	160
DA	Diverse Agriculture	160 acres	4	40

Notes:

¹ Applies to all types of dwelling units including single-family dwellings consistent with the residential density, farm family dwellings, full-time agricultural employee units, seasonal and year-round farmworker housing, and accessory dwelling units.

² Density does not apply to farm family dwellings, (LEA only), full-time agricultural employee units, seasonal and year-round farmworker housing, and accessory dwelling units

Policy C-AR-1f: Agricultural production shall be defined as the production of food, fiber, and plant materials including, but not limited to, growing, harvesting, crop storage, milking, etc.; and the raising and maintaining of farm animals for the purpose of farm operations. Commercial agricultural support uses, commercial equestrian uses, and commercial cannabis cultivation are not considered agricultural production uses in this context.

Policy C-AR-1g: The Land Extensive Agriculture and Diverse Agriculture land use categories shall be applied based on the capability of the land to produce agricultural products.

Policy C-AR-1h: The primary use of any parcel designated Land Extensive Agriculture or Diverse Agriculture shall be agricultural operations. Residential uses in these zoning districts shall record a “Declaration Acknowledging Right to Farm” consistent with the Sonoma County Right to Farm Ordinance found in Appendix C acknowledging that properly conducted agricultural operation on agricultural land will not be considered a nuisance for purposes of the Sonoma County Code or County regulations, and that residents or users of nearby property should be prepared to accept such inconvenience or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.

Policy C-AR-1i: Protect agricultural operations by establishing a buffer between an agricultural use on land in the Land Extensive Agriculture or Diverse Agriculture land use categories and residential development, except for caretaker, ~~agricultural employee~~farmworker, and farm related units. The buffer shall occur on the parcel to be occupied by the residential development and may include one or more of the following: a physical separation of 100 to 200 feet, landscaped berm, topographic feature, substantial tree stand, water course, or similar feature. The type, design, and location of the buffer shall be based on the type, size, and characteristics of the adjacent agricultural operations so as to protect the maximum feasible amount of agricultural land.

Policy C-AR-1j: Development on properties that are under a Land Conservation (“Williamson Act”) contract is limited to those listed as compatible uses under the most recent “Uniform Rules for Agricultural Preserves and Farmland Security Zones”.

Policy C-AR-1k: Subdivision of any Land Conservation Act contracted lands shall not result in creation of a parcel or designated remainder that is inconsistent with the most recent revision of the “Sonoma County Uniform Rules for Agricultural Preserves and Farmland Security Zones”. Recording individual contracts for new parcels and, if applicable, the designated remainder shall be required as a condition of approval to be met prior to recording the map.

Policy C-AR-1l: Encourage and support owners of farms, ranches, and public lands with agricultural operations that are seeking to implement programs that increase the sustainability of resources, improve climate change resiliency, reduce carbon emissions,

Land Conservation Contracts

Many landowners on the Sonoma County coast have demonstrated a commitment to agriculture by entering into Land Conservation contracts. The California Land Conservation Act of 1965 (also known as the Williamson Act) allows counties to establish agricultural preserves and thereby give tax reductions to landowners engaged in commercial agricultural operations. About 78 parcels totaling over 18,400 acres in the Coastal Zone are under Land Conservation contracts, primarily in the Bodega Bay and Valley Ford subareas. The Sonoma County Uniform Rules for Agricultural Preserves and Farmland Security Zones establish limits for non-agricultural use on contracted lands.

protect water and soil, increase the viability of diverse family farms, and improve housing opportunities for farmworkers.

I.2 Program

Program C-AR-1-1P: Update the agricultural zoning districts to be consistent with the policies of the Agricultural Resources Element.

I.3 Initiatives

Initiative C-AR-1-I1: Encourage the Sonoma County Agricultural Preservation and Open Space District and other agencies to sponsor a variety of ongoing educational programs that assist the farmer in financial planning and to provide technical assistance where appropriate.

Initiative C-AR-1-I2: Work with the California Department of Parks and Recreation, Sonoma County Regional Parks, Sonoma County Open Space and Agricultural Preservation, and other government non-profits, to take the following actions regarding managing agricultural land in State Park Units:

- (1) Prepare a long-term plan for managing grazing lands and use the plan as a basis for grazing leases;
- (2) Retain in agricultural production land not needed for public use that is compatible with and protective of the resource values and recreation uses;
- (3) Grant long-term grazing leases which are protective of sensitive habitats and include incentives to improve range quality; and
- (4) Monitor grazing and improve range management practices in cooperation with ranchers and the Natural Resource Conservation Service.

Initiative C-AR-1-I3: Work with California State Parks and Sonoma County Regional Parks, Sonoma County Agricultural Preservation and Open Space District, and other government and non-profit partners to minimize conversion of agricultural land to incompatible uses, and to address impacts to and protection of agricultural lands.

Initiative C-AR-1-I4: Work with local Resource Conservation Districts and agricultural associations to encourage and promote sustainable agricultural and land management practices that conserve energy and protect water and soil, reduce pesticide use, and supports locally grown and processed agricultural products, to help ensure the long-term use and conservation of coastal resources.

2. AGRICULTURAL SUPPORT USES

Agricultural support uses include agricultural processing and agricultural services, and agricultural visitor-serving uses (or agricultural tourism). This Agricultural Resources Element includes policies that promote the County's coastal agricultural industry by allowing limited visitor-serving uses that are directly related to agricultural production in the Coastal Zone.

Agricultural Processing and Agricultural Services

Agricultural processing is the act of changing an agricultural product from its natural state to a different form, including bottling, canning, packaging, and storing agricultural products (e.g., grapes to wine, apples to juice or sauce, etc.). Agricultural services include the maintenance and repair of farm machinery and equipment, veterinary clinics, custom farming services, agricultural waste handling and disposal, and other similar related services.

The determination of which support uses belong on agricultural lands in the Coastal Zone involves their connection to agriculture; potential for conflicts; the size, scale, and adaptability of the use; and the amount of land lost to farming. Policies are needed to permit agricultural support uses without adversely affecting production of agricultural products in the area and impacting community character. Policies for agricultural support uses should also balance the need for such uses with the continued preservation of the rural character of the Coast, and should support agricultural products produced on the Sonoma County coast over those produced elsewhere.

Agricultural Visitor-Serving Uses (Agricultural Tourism)

Agricultural visitor-serving uses, or agricultural tourism, are any visitor-serving uses on agricultural land that supports and enhances agricultural activity. Examples of these uses are farmstays, farmstands, and retail sales of products grown onsite. Wineries and tasting rooms are not considered visitor-serving uses and are instead considered agricultural processing or commercial activity, respectively. Special events are also limited to commercial areas of the Coastal Zone.

Tourism is a major economic driver in the Coastal Zone and agricultural tourism could support the Coastal agricultural industry economically, provided that agricultural tourism directly promotes the sale of agricultural products grown onsite. Agriculture is a higher-priority land use than visitor-serving uses of any kind; therefore, agricultural visitor-serving uses must supplement agricultural production, and not displace it, and the economic benefits of agricultural tourism must be balanced against existing constraints such as limited public services, water supply, sensitive resource areas, and the potential impacts of increased traffic on public safety.

Vineyards and Wineries in the Coastal Zone

Vineyards dominate the agricultural landscape of the inland areas of the County, but grape production and processing in the Coastal Zone is limited due to the Coastal Zone's thin soils, steep slopes, and lack of year-round water supply. Vineyards require a Coastal Development permit, and are therefore more restricted than in the inland area. There are less than 5 acres of vineyards currently planted in the Coastal Zone.

A winery is considered to be an agricultural processing facility only if the facility is not open to the public, including by appointment, and does not include any visitor serving uses such as tasting rooms and events.

As of 2022, there are no wineries located in the Coastal Zone, although two are located within a mile of the inland Coastal Zone boundary.

In the Land Extensive Agricultural areas, some conflicts between visitors and agricultural practices would be less severe due to the larger lot sizes that serve to separate the activities. In these areas, small scale visitor-serving uses that are directly related to the agricultural operation, such as farmstays, hosted rentals, farm stands, farm retail sales, and some outdoor recreational uses, may be compatible with the agricultural operation. These small-scale uses may promote the agricultural activity and provide a secondary income source for the farmer or rancher without hindering the primary agricultural use of the land.

2.1 Goal, Objectives, and Policies

GOAL C-AR-2: Facilitate agricultural production by allowing related agricultural support uses (agricultural processing and agricultural services), to be conveniently and accessibly located in agricultural production areas when related to the primary agricultural production in the area.

Objective C-AR-2.1: Facilitate local agricultural production by allowing, subject to a use permit, agricultural processing on agricultural lands where subordinate to and compatible with an existing agriculture use.

Objective C-AR-2.2: Facilitate local agricultural production by allowing with a use permit on agricultural lands limited agricultural support uses which support local agricultural activities and are not detrimental to the long-term agricultural uses in the area.

Objective C-AR-2.3: Ensure that agricultural support uses allowed on agricultural lands are only allowed when demonstrated to be necessary for, and proportional to, agricultural production on-site.

Policy C-AR-2a: Agricultural Resources Element **Table C-AR-2** establishes the agricultural uses allowed and planning permits required on agricultural lands in the Coastal Zone.

Table C-AR-2: Agricultural Uses and Support Uses Allowed and Permit Thresholds

Use	Planning Permits Required	Permit Type ⁴
Allowed		
Grazing, Row Crops	Principally Permitted ³ ~~“By Right” Coastal Permit⁴~~	~~Discretionary²~~ none required
Vineyard, Orchard	Principally Permitted ³ Coastal Permit ⁴	Discretionary ²
Commercial cannabis cultivation (e.g. cultivation exceeding personal cultivation limits of Sonoma County Code Section 26-88-258)	Prohibited: Commercial cannabis cultivation not allowed in agricultural land use	N/A
Aquaculture	Use Permit Coastal Permit ⁴	Discretionary ²
Agricultural Processing (e.g., creamery, winery [no tasting or events])	Use Permit Coastal Permit ⁴ See Policy C-AR-2c below	Discretionary ²
Agricultural Services	Use Permit	Discretionary ²

Use	Planning Permits Required	Permit Type ⁴
(e.g., farm equipment, veterinarian)	Coastal Permit ⁴	
Small-Scale Farm Retail Sales	Coastal Permit ⁴	Discretionary ²
Farm Stand	Principally Permitted ³ “By Right”	~~none required~~ <u>Discretionary</u>
Non Agricultural Uses		
Tasting Rooms	Discretionary ² , Only allowed in commercial zones	
Other Visitor-Serving Use (e.g., agricultural promotional event, restaurant)	Discretionary ² , Only allowed in commercial zones	

Notes:

¹ VESCO permit also required from Sonoma County Agricultural Commissioner

² May be appealable to California Coastal Commission if within ~~their jurisdiction or~~ the mapped appealable area (per map on file at Permit Sonoma) or if otherwise appealable per the PPU criterion

³ See Land Use Element for definition and description of Principally Permitted Use.

⁴ Permits are not required for any activities that meet the terms and conditions of exclusion order E-81-5 (adopted 1981), or if not excluded legally established ongoing agricultural activities, which are defined as the cultivation and tillage of the soil, dairying, the production, irrigation, frost protection, cultivation, growing, harvesting, processing, and storing of any agricultural commodity, including viticulture, horticulture, timber, or apiculture, the raising of livestock, fur bearing animals, fish, or poultry, and any commercial agricultural practices performed incident to or in conjunction with such operations, including preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market..

The following types of activities are not considered ongoing agriculture:

- Development of new water sources (such as construction of a new or expanded well or surface impoundment)
- Installation of new irrigation systems or the extension of existing irrigation systems,
- Terracing of land for agricultural production
- Preparation or planting of land for viticulture
- Preparation or planting of land with an average slope exceeding 15%
- Other agricultural production activities that the Director of CDA determines will have significant impacts to coastal resources.

A Coastal Development Permit will not be required if the County determines the activity qualifies for a de minimis waiver pursuant to the requirements Section 22.68.070, or is categorically excluded pursuant to Categorical Exclusion Order 81-2 or 81-6.

Policy C-AR-2b: Storage facilities shall be permitted for agricultural products grown, prepared, or processed on-site. Facilities shall be sized to accommodate but not exceed the agricultural operation, and shall be designed to be compatible with and not adversely impact surrounding land uses.

Policy C-AR-2c: Only allow agricultural support uses, including agricultural processing and agricultural services uses that clearly support local agricultural production consistent with the specific requirements of each of the two agricultural land use categories. Ensure that such uses are clearly subordinate to on-site agricultural production and do not adversely affect agricultural production in the area. The following criteria shall be used for approval of agricultural processing or service uses:

- (1) The use is subordinate to on-site agricultural production based on the following considerations:

- a. The area of the parcel devoted to the agricultural support use is not more than 10% of the parcel area in agricultural production.
 - b. The size and number of structures needed for the agricultural support use in relation to agricultural production.
 - c. The relative number of employees devoted to the agricultural support use in comparison to that needed for agricultural production.
 - d. The types of agricultural production on the site in the past and present.
 - e. The potential for the agricultural support use to be converted to non-agricultural uses due to its location and access.
- (2) The use will not require the extension of sewer or water.
- (3) The use would not convert agricultural lands inconsistent with Coastal Act Sections 30241 and 30242.
- (4) The use does not substantially detract from agricultural production on-site.
- (5) The use does not create a concentration of commercial uses in the immediate area.
- (6) The use is compatible with and does not adversely impact surrounding residential neighborhoods.

Policy C-AR-2d: Local concentrations of agricultural services or agricultural processing (e.g., cheese, wineries), that are detrimental to the primary use of the land for the agricultural production, rural character, traffic, or water resources shall be avoided, even if related to surrounding agricultural activities.

3. FARMWORKER HOUSING

Successful agricultural production requires adequate numbers of seasonal and full-time farmworkers. A limited supply of expensive housing creates a serious barrier to attracting and retaining these essential workers. Providing adequate housing for seasonal employees, permanent employees, and the families of permanent employees is critical to the success of agriculture in the Coastal Zone. While housing is generally a low-priority use in the Coastal Zone, farmworker housing is integral to agriculture and shares the same high priority as agriculture.

3.1 Goal, Objectives, and Policies

GOAL C-AR-3: Support efficient management of local agricultural production activities by the development of adequate amounts of housing for farmworkers and farm family members engaged in the farming operation in agricultural areas.

Objective C-AR-3.1: Encourage farm operators to provide suitable on-site housing for seasonal and agricultural farmworkers and family members engaged in farming operations to maintain agricultural production activities, in accordance with allowable residential density.

Policy C-AR-3a: ~~Agricultural worker~~ farmworker housing shall be commensurate with the demonstrated need by an agricultural operation, or related nearby agricultural operations. Housing for ~~agricultural~~ farmworkers and their households shall not be included in the calculation of residential density in the Land Extensive Agriculture and Diverse Agriculture zoning districts. Approval of ~~agricultural~~ farmworker housing shall require recording a restrictive covenant running with the land for the benefit of the County ensuring that the agricultural worker housing will continuously be maintained as such as long as an agricultural use requiring agricultural workers exists on the parcel. In the event that the agricultural use is terminated, the ~~agricultural~~ farmworker housing shall become a legal nonconforming residential use subject to the nonconforming use provisions of the Coastal Zoning Code.

Policy C-AR-3b: Housing for seasonal workers as needed to serve the agricultural industries of the area shall be permitted if it does not necessitate the extension of sewer or water service inconsistent with the Public Facilities and Services Element. This housing may be constructed to the minimum standards acceptable under State law and as allowed under the Public Facilities and Services Element.

Policy C-AR-3c: Allow up to four residential units per agricultural parcel, consistent with the maximum residential density, for the purpose of housing farm family members. All housing units should be grouped together on the parcel to maximize environmental protections and promote efficient agricultural operations.

4. AQUACULTURE AND FISHING

Aquaculture includes on-shore cultivation and subsequent harvesting of marine aquatic plants and animals, as well as off-shore cultivation of marine organisms for food and other products in the open ocean, or an enclosed section of the ocean. Examples of aquaculture include farming of marine fish, shellfish such as oysters, or seaweed in saltwater ponds. Production of non-food products such as fish meal, nutrient agar, jewelries (e.g. cultured pearls), and cosmetics is not considered aquaculture for the purpose of Local Coastal Plan policy.

Well-managed and operated aquaculture can serve as a resource-efficient food source, but aquaculture also has potential for adverse impacts to the marine environment, such as discharge of concentrated waste, escape of non-native species, transmission of disease outbreaks in aquaculture

environments to wild fish stocks, genetic disruption of marine environments, and algae blooms. Because of the need for careful evaluation of aquaculture development, it is not considered a principally permitted use in agricultural land use categories, and requires a use permit and coastal development permit for approval.

Commercial fishing is the activity of catching fish and other seafood for commercial profit from wild fisheries. Commercial fishing is a coastal-dependent activity, requiring on-shore facilities such as processing, storage, and land transportation of fish, as well as marina facilities, storage of fishing gear, and boatyard services. While commercial fishing is a coastal-dependent use producing food, it is different from other forms of agriculture in that commercial fishing consists of harvesting and processing, but not cultivating food.

4.1 Goal, Objectives, and Policies

Goal C-AR-4: Support development of sustainable aquaculture practices and provide adequate support facilities for marine-based food production, including commercial fishing.

Objective C-AR-4.1: Allow aquaculture and related on-shore facilities and activities in agricultural areas, subject to a Use Permit and Coastal Development Permit.

Objective C-AR-4.2: Provide opportunities for development of support facilities for the fishing industry in Bodega Bay.

Objective C-AR-4.3: Promote products of the fishing industry and aquaculture in the same manner as agricultural products.

Policy C-AR-4a: Outdoor aquaculture shall be permitted in agricultural zoning subject to a Use Permit and Coastal Development Permit.

Policy C-AR-4b: Support facilities for the fishing industry, including but not limited to equipment storage, processing facilities, and canneries may be allowed on lands designated for agricultural land use adjacent to the Urban Service Boundary of Bodega Bay. If the facility or use requires urban services, extension of such services on lands adjacent to the Urban Service Boundary may only be permitted for that purpose.

Policy C-AR-4c: The following criteria shall be used for approval of aquaculture processing or service uses to ensure that such uses are clearly subordinate to on-site aquaculture production and do not adversely affect agricultural production in the area:

- (1) The use is subordinate to on-site aquaculture and agriculture production based on the following considerations:
 - a. The portion of the site devoted to the support use in relation to production.
 - b. The size and number of structures needed for the support use in relation to production.

- c. The relative number of employees devoted to the support use in comparison to that needed for production.
 - d. The uses on the site in the past and present.
 - e. The potential for the support use to be converted to non-agricultural uses due to its location and access.
- (2) The use would not convert agricultural lands inconsistent with Coastal Act Sections 30241.5 and 30242.
- (3) The use does not substantially detract from agricultural production on-site.
- (4) The use does not create a concentration of commercial uses in the immediate area.
- (5) The use is compatible with and does not adversely impact surrounding residential neighborhoods.

Open Space and Resource Conservation Element:

Table of Contents

Open Space and Resource Conservation Element	4
Introduction.....	4
Purpose.....	4
Relationship to Other Elements	4
Relationship to the California Coastal Act	5
Section 30001.2 Legislative findings and declarations; economic development	5
Section 30107.5 Environmentally sensitive area	5
Section 30108 Feasible	5
Section 30230 Marine resources; maintenance	5
Section 30231 Biological productivity; water quality	5
Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients.....	5
Section 30234 Commercial fishing and recreational boating facilities	7
Section 30234.5 Economic, commercial, and recreational importance of fishing.....	7
Section 30240 Environmentally sensitive habitat areas; adjacent developments.....	7
Section 30243 Productivity of soils and timberlands; conversions	7
Section 30251 Scenic and visual qualities	7
Section 30703 Protection of commercial fishing harbor space.....	7
1. Scenic Resources	8
Scenic Landscape Units and Vista Points.....	8
Scenic Corridors	8
1.1 Goal, Objectives, and Policies.....	9
1.2 Programs	11
2. Outdoor Lighting.....	11
2.1 Goal, Objectives, and Policies.....	12
3. Community Character and Design	13

Urban Service Areas.....	13
Rural Communities	13
Landforms.....	15
Vegetation management	16
3.1 Goal, Objectives, and Policies.....	16
4. Streams and Riparian Corridors.....	17
4.1 Goal, Objective, and Policies	18
4.2 Programs	20
4.3 Initiative.....	21
5. Wetlands	21
5.1 Goal, Objective, and Policies	22
6. Marine Habitats	25
6.1 Goal, Objectives, and Policies.....	25
6.2 Program.....	28
6.3 Initiatives	29
7. Terrestrial Habitats	29
7.1 Goals, Objectives, and Policies	30
7.2 Initiatives	34
8. Environmentally Sensitive Habitat Areas.....	35
8.1 Goal, Objective, and Policies	35
8.2 Program.....	39
8.3 Initiatives	39
9. Commercial Fishing, Support Facilities, and Harbor	40
Section 30234 Commercial fishing and recreational boating facilities	40
Section 30234.5 Economic, commercial, and recreational importance of fishing.....	40
Climate Change	40
Offshore Marine Protected Areas.....	41
Greater Farallones National Marine Sanctuary	41
Cordell Bank National Marine Sanctuary	41

California Coastal National Monument	41
Oil Exploration and Development	41
Bodega Bay and Harbor	41
Bodega Harbor Maintenance Dredging	42
Marine Debris.....	43
9.1 Goal, Objectives, and Policies.....	44
9.2 Program.....	47
10. Soil Resources	47
10.1 Goal, Objectives, and Policies.....	48
10.2 Initiative.....	49
11. Timber Resources	49
Timberland Resources.....	49
Timberland Regulations.....	50
Timberland Production (Preserve) Zones.....	50
Timberland Environmental Impacts	51
11.1 Goal, Objectives and Policies.....	51
11.2 Programs	53
11.3 Initiative.....	53
12. Mineral Resources	53
12.1 Goal, Objectives and Policies.....	54
13. Energy Resources Policy	54
Climate Change	55
Water Availability and Energy.....	55
Temperature, Energy Demand, and Energy Supply.....	55
Sea Level Rise, Storm Surge, and Extreme Events.....	56
13.1 Goal, Objectives, and Policies.....	56
13.2 Program.....	57
14. Air Resources Policy.....	58
14.1 Goal, Objectives and Policies.....	59
Open Space and Resource Conservation Element References	59

Open Space and Resource Conservation Element

INTRODUCTION

The Open Space and Resource Conservation Element is a policy framework for the preservation of open space and conservation of natural resources, mapping of these resources, and policies that will protect, preserve, and improved these resources.

The OSRC Element establishes goals, objectives, and policies to protect and sustainably manage Sonoma County's natural and cultural coastal resources. Programs needed to implement proposed policies are also identified. In addition, the Element identifies ongoing or potential future County initiatives, referred to as Initiatives, which support sound resource management and planning, and promote inter-agency and community collaboration.

PURPOSE

State law recognizes that open space land is a limited and valuable resource which must be conserved wherever possible. The Open Space and Resource Conservation (OSRC) Element of the Local Coastal Plan must address open space for the preservation of natural resources; for the managed production of resources; for outdoor recreation; for public health and safety; and for the preservation of archaeological, historical, and cultural resources.

The purpose of the Open Space and Resource Conservation Element is to preserve the natural and scenic resources which contribute to the general welfare and quality of life for the residents of the Sonoma County coast and to the maintenance of its tourism industry. This Element provides the guidelines for making necessary consistency findings and includes an implementation program, as required by law.

RELATIONSHIP TO OTHER ELEMENTS

The Open Space and Resource Conservation Element is coordinated with the Public Safety, Public Facilities and Services, Agricultural Resources, Water Resources, Land Use, and Public Access Elements. Policies in this element protecting natural resources and regulating development guide policies in all other elements.

RELATIONSHIP TO THE CALIFORNIA COASTAL ACT

Section 30001.2 Legislative findings and declarations; economic development

The Legislature further finds and declares that, notwithstanding the fact electrical generating facilities, refineries, and coastal-dependent developments, including ports and commercial fishing facilities, offshore petroleum and gas development, and liquefied natural gas facilities, may have significant adverse effects on coastal resources or coastal access, it may be necessary to locate such developments in the coastal zone in order to ensure that inland as well as coastal resources are preserved and that orderly economic development proceeds within the state.

Section 30107.5 Environmentally sensitive area

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Section 30108 Feasible

"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Section 30230 Marine resources; maintenance

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 Biological productivity; water quality

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
- (4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
- (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
- (6) Restoration purposes.
- (7) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30234 Commercial fishing and recreational boating facilities

Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

Section 30234.5 Economic, commercial, and recreational importance of fishing

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Section 30240 Environmentally sensitive habitat areas; adjacent developments

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30243 Productivity of soils and timberlands; conversions

The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30703 Protection of commercial fishing harbor space

The California commercial fishing industry is important to the State of California; therefore, ports shall not eliminate or reduce existing commercial fishing harbor space, unless the demand for commercial fishing facilities no longer exists or adequate alternative space has been provided. Proposed recreational boating facilities within port areas shall, to the extent it is feasible to do so, be

designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

I. SCENIC RESOURCES

Scenic Landscape Units and Vista Points

A Scenic Landscape Unit is a landscape of special scenic importance in Sonoma County which provides important visual relief from urban densities. The Coastal Zone is an exceptionally attractive landscape that has benefited from almost 50 years of protection and controlled development. The entire Coastal Zone outside of developed communities is designated as a Scenic Landscape Unit. Major Views ~~are~~ include long views of unique visual interest, focus, or variety. Major Views are located throughout the Coastal Zone and include islands, rock headlands, coves, lagoons, estuaries, rivers, expansive beaches, white water, coastal hills, and historic settings. Refer to Figures C-OSRC-1a-k for locations of identified major views (where views are not identified, there can still be major views if they meet the above criteria).

Vista Points differ from Major Views as they include roadside areas suitable for parking. Because a Vista Point provides an opportunity for the public to stop and enjoy the view for longer periods of time, a Vista Point is can often be more visually sensitive than a Major View that lacks parking or trail access. Designated Vista Points shall be developed with safe ingress and egress, parking areas, interpretive signs, and restrooms where these facilities do not have an adverse impact on Environmentally Sensitive Habitat Areas, or on any other coastal resource. Although there are a number of less developed Vista Points throughout the coastal zone, designated Vista Points are located in three SubAreas of the Coast (# of Vista Points per SubArea) - High Cliffs/Muniz/Jenner (2), Pacific View/Willow Creek (2), and State Beach/Bodega Bay (1) (**Figures C-OSRC-1f, C-OSRC-1h, and C-OSRC-1i**, respectively).

Scenic Corridors

The primary impression of ~~any many areas area~~ on the Sonoma Coast comes from what is seen while driving, cycling, or hiking along a roadway, including prominently Highway 1. One of the most effective methods of protecting visual resources is to protect scenic corridors along a system of scenic roads. Designated Scenic Corridors on the Sonoma Coast are State Highway 1, Stewarts Point-Skaggs Springs Road, State Highway 116, Coleman Valley Road, Petaluma-Valley Ford Road, Bodega Highway, Fort Ross Road, Meyers Grade/Seaview Road, Bay Hill Road, and a paved portion of Willow Creek Road. Along Scenic Corridors, all development shall be set back 30 percent of the depth of the lot to a maximum of 200 feet.

Scenic View Easements exist along Highway 1 at The Sea Ranch and are different from the designated Scenic Corridors. A Scenic View Easement is an easement at a specific location west of the highway established for the purpose of allowing ongoing management and removal of trees in order to restore and preserve scenic views from State Highway 1 (**Appendix D-1**).

I.1 Goal, Objectives, and Policies

GOAL C-OSRC-1: Retain the largely open, scenic character of Scenic Landscape Units and views from Vista Points and preserve visual quality of roadside landscapes.

Objective C-OSRC-1.1: Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development.

Objective C-OSRC-1.2: Protect the ridges and crests of hills in Scenic Landscape Units and views from Vista Points from the silhouetting of structures against the skyline.

Objective C-OSRC-1.3: Protect hills and ridges in Scenic Landscape Units and views from Vista Points from visible cuts, fills, and vegetation removal.

Objective C-OSRC-1.4: Provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to communities.

Objective C-OSRC-1.5: Ensure future land uses, development, and roadway construction are compatible with preserving scenic values along designated Scenic Corridors.

The following policies, in addition to those of the Land Use Element, shall be used to achieve these objectives:

Policy C-OSRC-1a: Apply the Scenic Resources Combining Zoning District to the entire Coastal Zone.

Policy C-OSRC-1b: Development which will significantly degrade the scenic qualities of Scenic Landscape Units and views and from Vista Points and Scenic Corridors shall be prohibited. Allow an exception for transportation or public safety facilities where no feasible alternatives to the project can be identified, project impact is reduced to the maximum extent feasible, and an opportunity is identified to restore or improve an existing view that will fully mitigate the project impact.

Policy C-OSRC-1c: Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development shall be visually subordinate to the character of its setting.

Policy C-OSRC- 1d: Development (including buildings, structures, fences, paved areas, signs, and landscaping) shall be prohibited from obstructing views of the coastline from coastal roads, bikeways, Vista Points, recreation areas, and beaches Allow an exception for:

- (1) Replacement in kind of the same type, material, scope/intensity/size, and location as necessary to support an existing and proposed agricultural operation.

- (2) Installation of new fencing necessary to support an existing and proposed agricultural operation. Fencing must minimize visual impacts to the maximum extent possible, consistent with providing effective containment of livestock and/or protection from predators.
- (3) Transportation or public safety facilities where no feasible alternatives to the project can be identified, and visual impacts are reduced to the maximum extent feasible, and visual impacts that cannot be reduced are fully mitigated.

Policy C-OSRC-1d: Residential density in Scenic Landscape Units shall be one unit per 10 acres or greater.

Policy C-OSRC-1e: Commercial or industrial uses in Scenic Landscape Units, other than those which are permitted by the agricultural or resource land use categories, is prohibited.

Policy C-OSRC-1f: Development within Scenic Landscape Units, Major Views, ~~and~~ views from Vista Points, and Scenic Corridors shall be required to meet the Appendix D-2 Scenic View Guidelines in addition to all other applicable design guidelines. In the case of conflict, the most restrictive design standards shall apply.

Policy C-OSRC-1g: The following standards shall be used in addition to those of **Policy C-OSRC-1f** for new subdivisions within Scenic Landscape Units, other Major Views, and views from Vista Points:

- (1) All maps must designate building envelopes to be located in the least visually sensitive areas, and with height limitations as a note on the map if necessary to adequately mitigate visual impacts.
- (2) Lots shall be clustered to reduce visual impacts where consistent with the Land Use Element.
- (3) Building sites and roads are to be constructed to preserve tree stands with average diameter at breast height 6 inches or greater.
- (4) Driveways and access roads shall be hidden from view from public roads and other public use areas where practical.

Policy C-OSRC-1h: Continue to apply the Scenic Resources Combining Zoning District to those portions of properties within Scenic Corridor setbacks.

Policy C-OSRC-1i: Continue to protect the unique scenic qualities of Highway 116 as outlined in the September 1988 *116 Scenic Highway Corridor Study*.

Policy C-OSRC-1j: Outside of rural communities and urban service areas, the minimum setback of a new structure from a Scenic Corridor shall be 30 percent of the depth of the lot to a maximum of 200 feet from the centerline of the road.

Policy C-OSRC-1k: For development on parcels located both within a Scenic Landscape Unit and adjacent to a Scenic Corridor, the more restrictive siting and setback policies shall be applied to preserve visual quality.

Policy C-OSRC-1l: Prohibit billboards and offsite signs along Scenic Corridors.

Policy C-OSRC-1m: Public works projects shall be designed to minimize damage and removal of trees along Scenic Corridors except where necessary to maintain Scenic View Easements in The Sea Ranch. Where trees must be removed along highways, replanting programs shall be designed so as to accommodate ultimate planned highway improvements. Replanting and revegetation shall be required following grading and road cuts.

1.2 Programs

Program C-OSRC-1-P1: Request official State Scenic Highway designation for State Highway 1 throughout the Sonoma Coast.

2. OUTDOOR LIGHTING

Night time views of both the landscape and sky can be significantly degraded by excessive and unnecessary levels of light which increase sky glow around urban areas, make the man-made environment prominent, and result in visual clutter at night. Appropriate light levels for varying uses should be balanced with a desire to maintain Sonoma County's rural character and preserve views of the night time skies for residents and visitors.

2.1 Goal, Objectives, and Policies

GOAL C-OSRC-2: Preserve and maintain views of the night time skies and visual character of urban, rural, and natural areas, while allowing for night time lighting levels appropriate to the use and location.

Objective C-OSRC-2.1: Maintain night time lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve night time skies and the night time character of urban, rural, and natural areas.

Objective C-OSRC-2.2: Ensure that night time lighting for new development is designed to avoid light spillage offsite or upward into the sky.

The following policies shall be used to achieve these objectives:

Policy C-OSRC-2a: In addition to standards of Policy C-LU-1i, artificial night lighting shall use light sources that are no more than the minimum height and power necessary to adequately light the proposed use. Illumination of signs shall only be approved where illumination is maintained at the minimum level necessary for sign visibility. Internally illuminated signs are prohibited, including signs using LED or similar light sources that directly face the viewer.

Policy C-OSRC-2b: Continuous all night exterior lighting in rural areas, unless it is demonstrated to the decision-making body that such lighting is necessary for security or operational purposes, or that it is necessary for agricultural production or processing on a seasonal basis is prohibited. Where lighting is necessary for the above purposes, glare onto adjacent properties and into the night sky shall be reduced to the maximum amount feasible.

Policy C-OSRC-2c: Artificial night lighting that increases existing ambient light levels in Environmentally Sensitive Habitat Areas is prohibited.

Policy C-OSRC-2d: In evaluating proposed development, the potential impact of any proposed artificial night lighting on the coastal ecosystem should be considered using the best available science. Any Proposed artificial night lighting that is determined by the best available science to have a negative impact on coastal ecosystems shall be prohibited.

Impacts of artificial night lighting

Artificial night lighting impacts biological resources. Natural patterns of darkness and light are essential to the functioning of ecosystems.

Artificial night lighting affects the natural behavior of many flora and fauna species. It can disturb development; feeding, mating, resting, migration, and other activity patterns; and hormone-regulated processes, such as internal clock mechanism.

Illuminance, the amount of light incident per unit area, is the most commonly used measurement of ecological light pollution. It is expressed in lux, the intensity of light per unit area of the source. How bright these sources appear to organisms depends on ambient conditions; in dark conditions a dim light appears very bright, whereas it could be practically invisible in daylight.

3. COMMUNITY CHARACTER AND DESIGN

Land use policies of the Local Coastal Plan direct development towards Urban Service Areas, which are geographical areas where public sewer and water are available, most parcels are developed, and a variety of commercial and visitor service uses exist. Urban Service areas perform a function similar to urban growth boundaries for unincorporated communities. The Coastal Zone contains two Urban Service Areas: Bodega Bay and The Sea Ranch. Designation of Urban Service Areas also serves to carry out provisions of the Coastal Act that require new development to be focused into existing communities with adequate public facilities and services. This pattern of compact development and community-centered growth preserves open space, agriculture, and coastal resources.

Design guidelines and standards specific to the communities of The Sea Ranch, Timber Cove, Bodega Harbour, Taylor Tract, and Sereno del Mar have been adopted. Compliance with these guidelines are reviewed as part of processing permits for development in these communities. Changes to the local design standards must first be approved by the Sonoma County Design Review Committee prior to amending the Local Coastal Program. These community-specific policies in this section are intended to be used in addition to the Coastal Design Guidelines. In the case of conflict, the most restrictive standards shall apply.

The character of Coastal Zone communities is diverse, and design policies must recognize this diversity and preserve local character. The major community design issues on the Coast are preservation of coastal views and the visual quality and compatibility of new development with the natural landscape and existing development.

Urban Service Areas

The Sea Ranch. The Sea Ranch is a low-density residential community developed with shared values known as The Sea Ranch Concept that embodies the principle of living lightly on the land and developing in harmony with the natural environment. The Sea Ranch has municipal wastewater treatment available in the northern and central areas, with the southern area being served by septic systems which are managed by The Sea Ranch Association Onsite Wastewater Management Zone. The Sea Ranch Urban Service Area encompasses all residential land use within The Sea Ranch and is shown in figures C-LU-1a and C-LU-1b.

Bodega Bay. Bodega Bay consists of a core area of visitor serving commercial uses and small homes on the east side of Bodega Bay. Across the bay is Spud Point marina, which supports a commercial fishing fleet and support services for the fishing industry. The Bodega Harbour subdivision is located south of Doran Beach and consists of newer homes and a golf course. Water and wastewater service is provided by the Bodega Bay Public Utility District. The Bodega Bay Urban Service Area encompasses these areas and is shown in Figure C-LU-1i.

Rural Communities

Stewarts Point. Stewarts Point was founded in 1857 at Fisherman's Bay by A.L. Fisk, who established a store and hotel. The community contains simple early Greek Revival buildings, including a store, hotel, one room school, and series of barns and out-buildings, which together illustrate a strong sense of a 19th century coastal town. Stewarts Point does not have community specific design guidelines.

Timber Cove. Timber Cove is a low density subdivision established in the early and middle 1960s with many lots still undeveloped. Water is supplied by the Timber Cove County Water District and all homes rely on septic systems for wastewater disposal. Most of the subdivision is heavily forested and the majority of the lots are east of Highway 1 and not visible from the highway. A smaller number of lots are west of Highway 1 and have a higher visual sensitivity. The Timber Cove Architectural Guidelines, are in the CC&Rs for the subdivision and applied by the Timber Cove Homes Association.

Jenner. Jenner was originally a second home development platted in 1914. The town has grown slowly over the last century, but development is constrained by restrictions on water system connections and the limited area for septic systems on the small lots. Jenner does not have community specific design guidelines, but is highly visible from Highway 1 and consideration should be given to the scale, design, and landscaping of new development.

Rancho del Paradiso. Located along the south side of the Russian River, Rancho del Paradiso is a development on small lots platted in the 1930s. New development is constrained by restrictions on water system connections and the limited area for septic systems on the small lots adjacent to the Russian River estuary. The community is not highly visible from State Highway 116. Rancho del Paradiso does not have community specific design guidelines.

Bridgehaven Resort. Bridgehaven Resort is located on the south bank of the Russian River near the junction of State Highways 1 and 116, and is visible from Vista Points on Highways 1 and 116 as well as from the Russian River estuary. The resort included summer cabins, a store and café, and a trailer park with permanent residents. The campground is no longer in use, and the trailer park is not screened from view. Additional development is constrained by inadequate water supply, and close proximity to the Russian River, which limits septic system development. Future modifications to existing development should include design and landscaping improvements.

Duncans Mills. Duncans Mills, a County Historic District, was a railroad depot and commercial center established in the 1880s. The western false front commercial buildings have been preserved, and several new buildings of similar design have been constructed to serve the community and visitors. Water is supplied by private wells and a small public system and existing development relies on septic systems for wastewater disposal. Commercial uses have been developed by private interests that continue to build in the old west theme. Duncans Mills does not have community specific design guidelines.

Sereno Del Mar. Sereno Del Mar, platted between 1970 and 1972, is a residential subdivision north of Bodega Bay. More than one-half of the 173 lots have been developed. Water is supplied by the Sereno Del Mar Water Company, and all homes rely on septic systems for wastewater disposal. Homes are large on large lots and are generally one to one and one-half stories high due to a 16 foot height limitation. The Sereno del Mar design guidelines are included in the CC&Rs for the subdivision and are applied by the Sereno del Mar Design Review Committee.

Carmet. Carmet is a residential subdivision of 60 lots developed in the late 1940s located south of and adjacent to Sereno Del Mar. Water is supplied by the Sereno Del Mar Water Company, and all homes rely on septic systems for wastewater disposal. Homes are generally one-story with flat gravel roofs and painted wood exteriors. Landscaping is suburban with lawns, flowers, and a few trees. New

development should be compatible with existing homes as there is a distinct design unity to the subdivision. Carmet does not have community specific design guidelines.

Salmon Creek. Salmon Creek is a compact subdivision developed in the 1920s and 1930s. New development is constrained by restrictions on water system connections and the limited area for septic systems on the small lots located on coastal dunes. Vacation home use still predominates, but many dwellings are occupied by full time residents. Homes generally have painted wood exteriors and gable roofs. Homes near the Salmon Creek lagoon are highly visible, and the design and scale of new development should be compatible with the existing character of the community as well as to the area's very sensitive natural features. Salmon Creek does not have community specific design guidelines.

Valley Ford. Valley Ford received its name from the old Indian and Spanish ford across the Estero Americano. This small, historic community has evolved over the years and has no distinct architectural theme. Styles include Greek Revival, Queen Anne, Western Falsefront, Italianate, and bungalow. Many of the existing buildings date to the 1870s and 1880s. Water is supplied by the Valley Ford Water Association and all development relies on septic systems for wastewater disposal. Valley Ford does not have community specific design guidelines.

Landforms

The landforms of the Coastal Zone are classified into the following eight types: Beaches, Dunes, Bluffs, Terraces, Hillsides, Ridgelines, Wetlands, and Inland Valleys. Each landform has readily recognizable characteristics upon which recommendations for future development can be established. Beaches, Dunes, and Wetlands are addressed in more detail in Section 3, Biotic Resources.

Terraces. Coastal terraces are the broad, level areas between coastal hills and bluffs. They are generally covered with grasses and sometimes dotted with trees or divided by tree windbreaks, comprised predominantly of cypress trees. Lines are horizontal except where trees create a vertical influence and break up the open landscape. Terraces are particularly visually sensitive.

Hillsides. Coastal hillsides are the interfaces between the coastal terraces and the ridgelines. Many of Sonoma County's hillsides begin east of State Highway 1, have few trees and shrubs, and are highly visible. Other coastal hillsides are forested, particularly on the North Coast. These forested hillsides are not as visually sensitive as are terraces and non-forested hillsides. Hillsides are especially sensitive to grading activities that do not conform to natural land contours.

Ridgelines. Ridgelines are the most visually sensitive of the landforms on the Sonoma County coast. Ridgelines are often seen from great distances. The contrast between the land and the sky makes structural intrusions very obvious. The high locations of ridgelines cause any alterations to be seen from a wide area and may affect many viewsheds. A primary example of the sensitivity of ridgelines is the Muniz Ranch subdivision east of Russian Gulch. While driving up State Highway 1 from Russian Gulch to the high bluffs, it is apparent that the spectacular views to the east have been significantly degraded by the ridgetop development.

Inland Valleys. The two inland valleys on the Sonoma County coast are at Duncans Mills and Valley Ford. They are characterized by historic villages surrounded by agricultural land.

Vegetation management

Prairie grassland is the characteristic landscape along State Highway 1, with forested areas in the eastern hills north of the Russian River. Planting of trees over the last century for windbreaks adds visual complexity to the view, but planting of non-native species can detract from the natural coastline landscape, and the planting of certain tree varieties west of State Highway 1 may block views to the coastline

A large scale vegetation management program has been implemented by The Sea Ranch Association promote and enhance native plants while controlling and removing invasive non-native plants at The Sea Ranch. This program also includes a fire fuel management to thin trees and graze sheep to reduce fuel load.

3.1 Goal, Objectives, and Policies

GOAL C-OSRC-3: Preserve, retain, and enhance the unique character of each of the communities on the Sonoma County coast, while accommodating projected growth and housing needs.

Objective C-OSRC-3.1: Establish community character as a primary criterion for review of projects in coastal communities.

Objective C-OSRC-3.2: Protect and preserve community character by Coastal Design Guidelines which call for development that preserves existing site features, contributes to community character, sites buildings and development features so they blend in with the surrounding landscape, provides connections to surrounding development, provides opportunities for community interaction and pedestrian activity, provides attractive public views, provides safe and comfortable infrastructure and streetscape improvements for bikes and pedestrians, and maintains or increases public safety.

Policy C-OSRC-3a: Design review shall be required for all new development outside of Urban Service Areas and Rural Community Boundaries. The Director of Permit Sonoma may waive this requirement on parcels not visible from and east of State Highway 1.

Policy C-OSRC-3b: The Coastal Design Guidelines (**Appendix A-1**) shall be used for new development throughout the coast except where more restrictive community design guidelines have been adopted.

Policy C-OSRC-3c: Existing tree windbreaks which are oriented predominantly east-west and do not block or interrupt views to the coast shall be retained; and development of new tree windbreaks which would block or interrupt views to the coast shall be discouraged.

Policy C-OSRC-3d: New development located within Bodega Bay outside of the Bodega Bay Core Area shall be consistent with the following Bodega Bay Non-Core Design Guidelines (**Appendix A-2**) in addition to the Coastal Design Guidelines (**Appendix A-1**). In the case of conflict, these community specific guidelines shall supersede the Coast Community Design Guidelines:

- (1) The exterior of structures shall be designed to reflect the nautical character of the harbor with wooden exteriors, stained or painted white or subdued earth colors.
- (2) For heavy commercial structures, textured metal in subdued colors with proper architectural detailing and landscaping shall be encouraged to add visual interest and soften building lines.

Policy C-OSRC-3e: New development located within the Bodega Bay Core Area shall be consistent with the Bodega Bay Core Design Guidelines in addition to the Coastal Design Guidelines (**Appendix A-2**). In the case of conflict, the Bodega Bay Core Area Design Guidelines shall supersede the Coast Community Design Guidelines.

Policy C-OSRC-3f: Development shall follow applicable community-specific design guidelines for The Sea Ranch, Timber Cove, Bodega Harbour, and Sereno del Mar in addition to the Coastal Design Guidelines (**Appendix A**). In the case of conflict, community specific design guidelines shall supersede the Coastal Design Guidelines. Development in Bodega Harbour shall be consistent with the 1977 Settlement Agreement between Transcentury Properties and the California Conservation Commission (**Appendix L**)

4. STREAMS AND RIPARIAN CORRIDORS

Many rivers and creeks drain into the Pacific Ocean along the Sonoma Coast. Most of these rivers and creeks support riparian vegetation and provide important habitat and movement corridors for fish and wildlife species. Riparian areas are typically dominated by trees such as alders and willows and shrubs such as California blackberry, but contain a wide diversity of plants. Riparian areas and creeks have been altered and managed by humans including development of roads, bridges, and other structures adjacent to and through riparian areas. This development has reduced water quality and habitat connectivity, narrowed riparian corridors, and altered stream flows. Current and past management and alteration of stream and riparian areas provides a challenge and opportunity to restore and enhance these systems to provide improved habitat for fish and wildlife. Rivers and creeks and their associated riparian corridors are generally considered to be sensitive especially valuable habitats under the definition of environmentally sensitive habitat [ESHA] (see **Figures C-OSRC-2a through 2k**).

Major waterways along the coast include Salmon Creek, Russian River, and Gualala River. These rivers and their tributaries, along with other cold-water creeks provide habitat to Coho salmon, Chinook salmon, and Steelhead trout. Most of the coastal rivers and creeks in Sonoma County that provide potential habitat for salmonids have been identified by the federal government as critical habitat, or habitat that is essential for the health of these species. Other native fish also depend on rivers and creeks in Sonoma County, including the federally listed tidewater goby. The tidewater goby lives in freshwater to brackish lagoons created by coastal streams; the federal government has identified portions of Salmon Creek and Estero Americano as critical habitat.

Coastal rivers and streams in Sonoma County provide habitat for several special-status and countless native wildlife species. The California giant salamander lives in many different coastal creeks and

streams, while the California freshwater shrimp is known to occur only within Salmon Creek within the coastal region of Sonoma County. Two other special-status species, the California red-legged frog and foothill yellow-legged frog, also live in coastal creeks and rivers. The California red-legged frog occurs in several streams within southern Sonoma County, including Salmon Creek. Foothill yellow-legged frog is found in rocky streams and occurs within several Sonoma County coastal creeks from Gualala River in the north to Russian Gulch in the south. Riparian corridors also provide excellent foraging and roosting habitat for bird and bat species and habitat for mammals such as bobcat, gray and red fox, and dusky-footed woodrat.

4.1 Goal, Objective, and Policies

GOAL C-OSRC-4: Enhance and protect coastal waterways, riparian vegetation, and biotic resources associated with these areas.

Objective C-OSRC-4.1: Identifying riparian corridors, lagoons, and estuaries and establish criteria to protect these resources.

Policy C-OSRC-4a: Designate streams shown on maps created by USGS in the National Hydrography dataset as Riparian Corridors, and establish streamside conservation areas along these designated corridors.

Policy C-OSRC-4b: Along both sides of riparian corridors, as defined in this Local Coastal Program, establish streamside conservation areas measured on each side of the channel as: ~~a) within riparian habitat as determined by the Permit Sonoma or a qualified professional, b)~~ 100 feet from the landward edge of riparian vegetation as defined by Permit Sonoma or a qualified professional, or ~~eb)~~ 100 feet (200 feet for the Russian River) out from the top of the bank on each side of the stream, whichever is farthest from the channel centerline. Where there is more than one bank on a side of the stream and the top-of-bank measurement approach is used, the measurement shall be from the top of the higher bank on that side.

Policy C-OSRC-4c: Allowable uses and development within any streamside conservation area or Riparian Corridor shall be evaluated consistent with the Habitat Development Guidelines criteria. Construction, operation, and maintenance, or development shall not result in any significant, ~~long-term~~ adverse impacts on the functions and values of the riparian habitat.

Policy C-OSRC-4d: Where not excluded, fencing or walls shall be prohibited within riparian habitat and on bluffs, except where necessary for public safety, ~~wildfire risk abatement,~~ habitat protection or restoration, or when necessary to support an existing agricultural operation. ~~Replacement and repair of existing fencing which does not result in an addition to, or enlargement or expansion of the fence may be excluded.~~

Policy C-OSRC-4e: Channelizations, dams, or other substantial alterations of rivers and streams shall be prohibited except for: (1) necessary water supply projects, (2) flood control

projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat. Any channelization or stream alteration permitted for one of these three purposes shall minimize impacts to coastal resources, including the depletion of groundwater, and shall include measures sufficient to appropriately mitigate unavoidable impacts. Alternatives that incorporate a biotechnical component to river or stream bank stabilization (e.g., pocket planting and joint planting, vegetated crib walls, vegetated slope gratings, etc.) shall be encouraged over alternatives that employ strictly hard solutions (e.g., concrete wall or riprap banks) so long as the alternatives are consistent with all other applicable provisions of this LCP, including the avoidance and minimization of adverse impacts to the maximum extent feasible. Where there is conflict the more specific permissible use provisions of this policy shall control over the more general use provisions for ~~other types of~~ ESHA identified by policies found in Subsection 8. “Environmentally Sensitive Habitat Areas”.

Policy C-OSRC-4f: To protect fishery resources and minimize impacts on water supply, projects which would limit in-stream flows shall comply with State Water Resources Control Board’s Policy for Maintaining Instream Flows in Northern California Coastal Streams, adopted under Resolution 2013-0035, effective February 4, 2014 (23 CCR Section 2921).

Policy C-OSRC-4g: In Anadromous Fish Streams (Chinook and ~~C~~coho ~~S~~salmon ~~H~~habitat), the following uses and activities shall be prohibited:

- (1) Dredging.
- (2) Dams and other structures which would prevent upstream migration of anadromous fish unless other measures are used to allow fish to bypass these structures.

Policy C-OSRC-4h Carry out the following activities to preserve Chinook and ~~C~~coho ~~S~~salmon ~~H~~habitat (Anadromous Fish Streams):

- (1) In an Anadromous Fish Stream, maintain flow levels 1.5 times the minimum necessary for use of the stream as an anadromous fish spawning area.
- (2) All stream diversions shall be stopped when the stream flow in an Anadromous Fish Stream falls below the minimum flow standard and until the stream flow returns to levels above the minimum flow standard.
- (3) Allow and encourage maintenance of summer base flow in an Anadromous Fish Stream to ensure survival of fish in all life cycle phases

Policy C-OSRC-4i: Maintain and restore the biological productivity and the quality of coastal waters, streams, wetlands, ponds, and estuaries in order to maintain optimum populations of marine organisms and to protect human health.

Policy C-OSRC-4j: Where riparian corridor impacts are permitted in conformity with the Coastal Act and any applicable Local Coastal Plan policies, adverse impacts on riparian vegetation shall be mitigated at a ratio of at least 3:1 to compensate for the temporal and functional loss of affected habitats.

Policy C-OSRC-4k: As part of the environmental review process, refer permit applications near streams and riparian corridors to California Department of Fish and Wildlife and other agencies responsible for natural resource protection.

4.2 Programs

Program C-OSRC-4-P1: Continue to actively participate in the FishNet4C program and work cooperatively with participating agencies to implement recommendations to improve and restore aquatic habitat for listed anadromous fish species and other fishery resources.

Program C-OSRC-4-P2: In coordination with resource agencies, landowners, and the affected public, regularly review Riparian Corridor designations; ephemeral drainage; the requests, approvals, and required mitigation for setback reductions; any cumulative effect of approved reductions; and other protection issues and, if warranted, develop recommendations for County policies that may be needed to ensure appropriate protection of Riparian Corridors.

Program C-OSRC-4-P3: In coordination with resource agencies, landowners, and the affected public, conduct a comprehensive study of Riparian Corridors in grazing areas and, if warranted, develop recommendations for County policies that may be needed to ensure appropriate protection of such corridors. Consider the potential application of inland Riparian Corridor regulations, existing best management practices, range management practices, and opportunities to protect Riparian Corridors.

Program C-OSRC-4-P4: Support mapping by the Sonoma County Water Agency and other entities of all stream channels with “bed-and-banks”. As this information becomes available, initiate rezoning to the BR Combining District for these streams, including corresponding General Plan Amendments necessary to designate them as Riparian Corridors.

Program C-OSRC-4-P5: Develop a comprehensive program for preservation and restoration of the freshwater, brackish, and tidal marshes in the Coastal Zone. Include mechanisms for preservation and enhancement such as land acquisition; zoning restrictions; public and private conservation easements; regulating filling, grading, or construction; floodwater retention; and wetland restoration.

4.3 Initiative

Initiative C-OSRC-4-I1: Support non-regulatory programs for protection of streams and riparian functions, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

5. WETLANDS

Wetlands provide wildlife habitat and protection from flooding along the Sonoma Coast. Coastal brackish marsh, coastal and valley freshwater marsh, ~~and ponds, and seasonal wetlands~~ are all sensitive wetland communities found along the Sonoma Coast. Wetlands are usually dominated by herbaceous species and generally do not contain trees. Much of the wetland habitat found along the coast occurs near Bodega Bay. The Coastal Commission's definition of wetlands is a single-parameter delineation that requires evidence of only one of three wetland indicators (hydrophytic vegetation, hydric soils, or saturated substrate), while the US army corps of engineers requires all three. This LCP adheres to the Coastal Act, and thus follows the single-parameter definition of wetlands. See California Code of Regulations, title 14, section 13577(b). Salt and brackish marsh occurs in only a

few areas along the coast. These include coastal brackish lagoons and estuaries including around Penny Island and the shore at the mouth of Russian River, the mouth of Salmon Creek (just north of Bodega Bay), within Bodega Harbor, and along Estero Americano (see **Figures C-OSRC-2h** through **2k**). These brackish marshes contain herbaceous plants, such as pickleweed, alkali bulrush, gumweed, and other dominant salt and brackish marsh species. At the mouth of the Gualala River, a small brackish marsh occurs that contains salt grass and salt rush (see **Figure C-OSRC-2a**). Brackish marshes provide food, cover, nesting, and roosting habitat for a variety of birds and mammals. Salt and brackish marshes have been greatly reduced from their historical extent and are important habitat to protect and restore, where feasible. Invasive plant species, existing surrounding development, and projected sea level rise provide challenges in managing and restoring salt and brackish marshes.

Freshwater marshes generally occur more inland or upriver of brackish marshes. Freshwater marshes contain mostly emergent plants such as rushes, cattails, and sedges. Freshwater marshes can provide habitat for California red-legged frog and western pond turtle as well as for many species of birds. Small seeps and ponds also occur intermittently throughout the coast and many of these form seasonally or permanently wet conditions. Some ponds or reservoirs have been man-made or have been significantly altered by humans, but still provide important habitat and water resource for wildlife. Management challenges include invasive wildlife such as the American bull frog, invasive plants species, and altered hydrologic regimes.

California Code of Regulations §13577(b):

“Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats.”

5.1 Goal, Objective, and Policies

GOAL C-OSRC-5: Protect and preserve coastal wetlands and biotic resources associated with these areas.

Objective C-OSRC-5.1: Establish criteria for identifying and evaluating coastal wetlands and provide a policy framework for protecting coastal wetlands.

Policy C-OSRC-5a: Wetlands shall be defined and delineated consistent with the definitions of the Coastal Act, the Coastal Commission Regulations, and this Local Coastal Plan, as applicable. Wetlands include any area where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Wetlands are here defined to include marshes, ponds, seeps, and reservoirs as well as seasonal features. The upland limit (~~encompassing the greatest extent~~) of a wetland is designated as 1) the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover; 2) the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric; 3) in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time each year and land that is not, encompassing the greatest extent of any combination of these. Typical wetland vegetation includes, but is not limited to: pickleweed, cordgrass, Jaumea, salt grass, rushes, bulrushes, sedges, cattails, tule, marsh rosemary, and marsh grindelia. A comprehensive list of wetland vegetation can be found in the most up-to-date version of the U.S. Army Corps of Engineers “*National Wetland Plant List*”. Any unmapped areas that meet these criteria are considered wetlands and shall be accorded all of the protections provided for wetlands in the Local Coastal Plan. A delineation report prepared for wetlands within the Coastal Zone shall reference and describe for the property in question any wetlands information documented in the National Wetlands Inventory, include delineation data sheets, and provide for their interpretation.

Policy C-OSRC-5b: Wetland extents shall be determined in conformance with the direction provided in **Appendix E-4**. The Coastal Act definition of wetland (Section 30121) does not distinguish between wetlands according to their quality, function or value. Thus, poorly functioning or degraded areas that meet the definition of wetlands are subject to the wetland protection policies of this Local Coastal Plan.

Policy C-OSRC-5c: Where the required initial site inventory indicates the presence or potential for wetland species or indicators, the County shall require the submittal of a detailed biological study of the site, consistent with the requirements of Policy C-OSRC-7e, including a delineation of all wetland areas on the project site. Wetland extents shall be determined in conformance with the direction provided in Appendix E-4.

Policy C-OSRC-5d: Establish and maintain buffer areas, a minimum of 100 feet, in a natural, undeveloped, condition along the periphery of all wetlands. Wetland buffers shall be developed in accordance with **Appendix E-3**. Development within the buffer area is prohibited unless a study prepared by a qualified professional and reviewed by the Permit Sonoma Natural Resources Section determines that ~~the proposed development will have no potential for an adverse impact on the wetland.~~ there is no alternative site, size, or design feasible; the proposed development is compatible with the continued viability of the adjacent wetland resources, including protection of any sensitive communities or species; and project siting and design incorporates any necessary features to further protect the resources, as conclusively demonstrated to the satisfaction of the County and all jurisdictional agencies. However, wetland buffers may not, under any circumstances, be reduced any further than as established by the following and reductions shall be limited to the minimum amount necessary to achieve development requirements:

- (1) where the only development site is located entirely within the required buffer, the buffer may be reduced to no less than 30 feet; and
- (2) where the only building site is located partially within the required buffer, the buffer may be reduced to no less than 50 feet.

Policy C-OSRC-5e: Diking, filling, draining, and dredging of coastal waters, wetlands, and estuaries shall be permitted only in accordance with other applicable provisions of this Local Coastal Program and only when consistent with Coastal Act, Section 30233., where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to uses and methods described in Habitat Protection Guidelines, **Appendix E-5**. The more specific permissible use provisions of this policy shall control over the more general use provisions for other types of ESHA identified in Subsection 8. “Environmentally Sensitive Habitat Areas”.

Policy C-OSRC-5f: In coastal wetlands and the Bodega Harbor tideflats, the following uses and activities shall be prohibited:

- (1) Motor vehicles.
- (2) Dredging and filling, except within Bodega Harbor tideflats in accordance with policies found in Subsection 9 “Commercial Fishing, Support Facilities, and Harbor”.
- (3) Discharge of stormwater or wastewater unless it maintains or enhances wetland function and receiving water quality.
- (4) Agricultural activities, including grazing.

- (5) Removal of vegetation except where necessary to maintain plant, fish and wildlife habitat.
- (6) Construction of agricultural, commercial, industrial, and residential structures within the buffer area unless an environmental assessment ~~or~~ by a qualified professional that has been reviewed by the Permit Sonoma Natural Resources Section determines that the proposed development will have no potential for an adverse impact on the wetland.
- (7) New water diversions from streams which feed wetlands.
- (8) Discharge of effluent, including those of land- and boat-based origins.
- (9) Domestic animals off leash.

Policy C-OSRC-5g: In cooperation with resource agencies, require landowners to erect wildlife-passable fencing around springs, seeps, seasonal wetlands, and ponds located on grazing land as a condition of permit approval and to develop watering areas outside of wetlands and riparian corridors.

Policy C-OSRC-5h No net losses shall occur in wetland acreage, functions, or values. This includes both direct impacts on wetlands and ~~essential~~ their buffers, and consideration of potential indirect effects of development due to changes in available surface water and nonpoint source water quality degradation. Detailed review of the adequacy of a proposed mitigation plan shall be performed as part of any environmental and permit review of the proposed development project to allow for a thorough evaluation of the anticipated loss, as well as the replacement acreage, functions, and values.

Policy C-OSRC-5i: Where wetlands fill or development impacts are permitted in conformity with the Coastal Act and any applicable Local Coastal Plan policies, require mitigation ~~measures~~ to compensate for the temporal and functional loss of affected wetlands and associated habitat. Mitigation must meet the criteria in the Habitat Protection Guidelines, found in Appendix E-5. ~~E-Section 5.3~~ In order of preference, compensatory mitigation may include on-site restoration of degraded wetlands, off-site restoration of degraded wetlands, acquisition of offsite areas of equal or greater biological productivity, or creation of ~~tidal~~ wetlands. Adverse impacts shall be mitigated at a ratio of at least 4:1 for all types of wetlands. If no appropriate restoration site is available, wetland mitigation credit may be proposed for purchased, prior to disturbing wetlands, at a resource agency-approved mitigation bank whose service area includes Sonoma County's coastal zone.¹

¹ The U.S. Army Corps of Engineers maintains an index of approved wetland mitigation banks. The index is available via the agency's San Francisco District website at: <http://www.spn.usace.army.mil/Missions/Regulatory/Mitigation-Banks/Approved-Banks-for-the-San-Francisco-Regulatory-Di/>

6. MARINE HABITATS

The Sonoma County coast contains a wide variety of marine habitats including offshore rocks, kelp forests, eelgrass beds, tidal flats, rocky intertidal shoreline, and sandy beaches.

Offshore of the Sonoma coast, coastal waters provide habitat to a large number of fish and invertebrate species, resident and migratory marine mammal species, and seabirds. While offshore waters provide foraging habitat for seabirds, offshore rocks provide roosting and nesting areas for seabird species such as Brandt's cormorant, pelagic cormorant, brown pelican, and pigeon guillemot. Kelp forests are commonly found in nearshore coastal waters north of the Russian River (see **Figures C-OSRC-2a** through **2f**). Kelp forests provide refuge from ocean predators, relief from currents, and a source of food and essential habitat for invertebrates, fish, and marine animals. Management challenges to marine habitats include overfishing, water quality, human disturbance, and climate change.

Eelgrass beds are found within the protected subtidal waters of Bodega Harbor and Estero Americano in southern Sonoma County (see **Figures C-OSRC-2i** through **2k**). These productive ecosystems not only provide food, shelter, and nursery habitat for commercially and recreationally fished species, but also reduce erosion. Bodega Harbor and Estero Americano also contain exposed tidal mudflats at low tide which provide an important invertebrate food source for shorebirds.

Rocky intertidal habitat and sandy beaches occur in narrow bands over much of the Sonoma Coast and provide great foraging grounds for shorebirds and gulls. Rocky intertidal shores are exposed during low tide and covered by seawater during high tide. The plants (~~likely limited to eelgrass~~), invertebrates, and algae that live in the rocky intertidal zone create a biologically diverse and productive community.

Stellar sea lions and other pinnipeds haul out on offshore intertidal areas that become exposed at low tides. Seals and sea lions use intertidal areas and sandy beaches, spits, and bars to haul out and rest. Harbor seals specifically use sandy beaches including the beaches at Sonoma Coast Sea Ranch, Jenner, and Bodega Bay to rest, molt, give birth, and nurse their pups. California sea lions and northern elephant seals are occasionally observed at these harbor seal haul out locations.

6.1 Goal, Objectives, and Policies

GOAL C-OSRC-6: Protect, preserve, and enhance coastal marine habitats by preventing development and human activity from having an adverse impact on coastal marine resources and habitat as well as impacts to offshore resources.

Objective C-OSRC-6.1: Identify areas where marine environmental resources are at risk from development, sea level rise, and climate change. Establish criteria protecting resources from these risks.

Objective C-OSRC-6.2: Protect marine mammal haul out areas and seal nurseries from disturbance associated with development or other human activity.

Objective C-OSRC-6.3: Support protection, restoration, and appropriate identification of Marine Protected Areas.

Policy C-OSRC-6a: Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms for long-term commercial, recreational, scientific, and educational purposes. Mitigation for impacts to marine habitats shall be provided at a minimum ratio of 4:1. The more specific mitigation requirements shall control over the more general mitigation requirements of this Local Coastal Plan and shall consider the cumulative impacts of sea level rise and climate change as well as immediate impacts of the proposed development.

Policy C-OSRC-6b: At rocky intertidal coastline, the following uses and activities shall be prohibited:

- (1) Motor vehicles.
- (2) Development of groins, breakwaters, piers, sea walls, pipelines, or other structures that alter natural shoreline processes. Existing structures causing water pollution or fish mortality shall be phased-out or upgraded where feasible.

Policy C-OSRC-6c: Public access to ~~O~~ffshore ~~R~~ocks and onshore nesting/rookery areas used by seabirds to breed or nest or which provide habitat for seals and sea lions shall be prohibited.

Policy C-OSRC-6d: On sandy beaches, spits, or bars, the following uses and activities shall be prohibited:

- (1) Motor vehicles, except for those required for management or emergency use.
- (2) Removal of sand.
- (3) Opening of sand bars, except where necessary for maintenance of tidal flow to ensure the continued biological productivity of streams and associated wetlands and to prevent flooding. Applications for allowable opening shall include a plan, prepared in consultation with and reviewed by applicable resource agencies (e.g., National Marine Fisheries Service and California Department of Fish and Wildlife) that describes measures that will be implemented to avoid and/or minimize impacts on special status species affected by the proposed action. Sand bars shall not be breached until there is sufficient in-stream flow to preserve anadromous fish runs.

Policy C-OSRC-6e: Disturbance of marine mammal haul-out grounds shall be prohibited and recreational activities near these areas shall be limited to passive recreation. Public access to may be temporarily prohibited in nursery areas during seal pupping season. Disturbance or development of areas used by harbor seals and sea lions shall is prohibited.

Policy C-OSRC-6f: Encourage the California Department of Fish and Wildlife to monitor Marine Mammal Haul-Out Grounds on an annual basis to determine their condition and level of use by marine mammals; and to incorporate this information into its management plan for marine mammals.

Policy C-OSRC-6g: Encourage the pertinent state and federal agencies to carry-out the following activities to preserve kelp beds:

- (1) Monitor the size and viability of the kelp beds for all ecological functions and values including fish habitat;
- (2) Regulate and monitor activities such as sewage disposal, dredging, and renewable energy development, and other projects which could degrade nearshore marine water quality and hence have an adverse impact on kelp habitat;
- (3) Prohibit petroleum and other forms of energy development which may have a significant impact on kelp beds as a result of normal operations or accidents (e.g., oil spills and well blow-outs); and
- (4) ~~Limit kelp may only be harvested for~~ Limit kelp may only be harvested for to the purposes of scientific research. Onshore facilities that support commercial kelp harvesting, including the transfer of kelp to land-based transportation, are prohibited until the Board determines that the kelp beds have recovered to their historic range and vitality on the Sonoma Coast.
- (5) Identify locations and opportunities to collaborate with local, state, and Federal agencies, Tribal government, and key stakeholders to reintroduce sea otters to the Sonoma Coast and ~~collaborate~~ collaborate on the development of a comprehensive program for reintroduction.

Policy C-OSRC-6h: Research projects conducted by the University of California Bodega Marine Lab (BML) that involve development, as defined by the Coastal Act, shall only be subject to a streamlined and programmatic coastal development permit that includes the following requirements:

- (1) The research activities shall be consistent with the California Coastal Act and other relevant state and federal laws and regulations.
- (2) The BML shall submit an annual report the California Coastal Commission outlining the research activities conducted, including any potential impacts on the coastal resources and the steps taken to minimize such impacts.
- (3) The BML shall provide the California Coastal Commission with at least 30 days' notice prior to the initiation of any new research activities and shall work with the

Commission to ensure that the activities are consistent with the Coastal Act and other relevant laws and regulations.

- (4) The BML shall make its research findings and education materials available to the public, in order to increase understanding and appreciation of the coastal zone and to inform coastal management decisions.
- (5) The BML shall, in case of any coastal damage or negative impact caused by their activities, take immediate steps to mitigate such damage and take all necessary measures to prevent recurrence of the same.

6.2 Program

Program C-OSRC-6-P1: Request that the State Department of Parks and Recreation carry-out the following activities to preserve rocky intertidal coastline:

- (1) Designate important rocky intertidal areas as a Marine Reserve or Ecological Reserve, and encourage public agencies or private groups to maintain these areas.
- (2) Designate the mouth and banks of the Estero Americano and its offshore area as an Ecological Reserve, representative of the coastal estuarine environment of Northern California; and
- (3) Encourage use of the public shoreline at Salt Point State Park, Kruse Ranch, and the non-historic areas of Fort Ross State Park to reduce pressure on the marine resources at Stillwater Cove Regional Park.

Program C-OSRC-6-P2: Working with local, state, and Federal agencies, Tribal government, and key stakeholders, evaluate the biological and socioeconomic feasibility of reintroducing sea otters to the Sonoma Coast. This evaluation shall:

- (1) Develop criteria for site-level evaluation of biological success.
- (2) Identify sites for piloting reintroduction.
- (3) Conduct socioeconomic study on the benefits of species reintroduction that includes, but is not limited to, tourism, ecosystem services, finfish fisheries, and shellfish fisheries.
- (4) Identify funding sources for costs associated with reintroduction of sea otters and to offset impacts to the fishing community that may result from reintroduction.
- (5) Identify education opportunities associated with reintroduction.

6.3 Initiatives

Initiative C-OSRC-6-I1: Recommend that the California Department of Fish and Wildlife carry-out the following activities to preserve Bodega Harbor Tideflats:

- (1) Establish a system in which sections of the tideflats on the west side of Bodega Harbor are open to shellfish harvesting on a rotating basis of every three to five years; and
- (2) Establish more restrictive bag and possession limits and gear restrictions for ghost shrimp (*Callinassa californiensis*), mud shrimp (*Upogebia pugettensis*), and blood worms (*Urechis caupo*).

Initiative C-OSRC-6-I2: Support the Marine Debris Programs of the National Oceanic and Atmospheric Administration (NOAA) and California Coastal Commission, including California Coastal Cleanup Day and Adopt-A-Beach Program. Use NOAA's Marine Debris Clearinghouse to identify best practices for preventing and reducing marine debris. Consider implementation of these best practices on the Sonoma County coast.

7. TERRESTRIAL HABITATS

A wide range of terrestrial habitats occur throughout the coastal areas of Sonoma County. Terrestrial habitats include coastal dunes, coastal prairie, coastal scrub, woodlands and forests, and urban and residential areas which contain habitats.

Coastal dunes frame many beaches along the coast and support a hardy ground cover of native shrubs, grasses and wildflowers. Many coastal dune areas have been invaded by non-native plants such as European beach grass and iceplant, which outcompete and threaten the survival of many native dune plant species. These non-native plants change the ecosystem of the coastal dunes, their resilience, and also threaten the nesting habitat of the western snowy plover. Coastal dunes are most commonly found in State and regional parks along the coast as these areas are protected from development.

Coastal prairie and grassland support a rich assemblage of native plants on coastal terraces and bluffs in Sonoma County. More than 90 percent of coastal prairie habitat has been lost, but it is still found sporadically along the Pacific coast of California, including Sonoma County (see **Figures C-OSRC-2e** and **2h**). Due to the drastic habitat loss and great diversity of these grasslands, coastal prairies are considered sensitive habitats. Following conversion from native bunch-grass and herb dominated communities to vegetation dominated by non-native grasses and herbs, much of Sonoma County's historic coastal grasslands are now

Disruption of habitat functions and values is defined as the physical removal, destruction, damage, disturbance, fragmentation, or contamination of air, land, water, soil, and vegetation of an area which cause the plant and animal habitats in the area to be removed, replaced by other habitats, or degraded to the point where the habitats are functionally unable to support the characteristic native plant and animal species originally present and communities.

considered non-native annual grasslands after undergoing substantial conversion. Many of these grasslands are managed by grazing, which reduces the leaf litter caused by the larger and more aggressive non-native vegetation. Coastal prairies that are not grazed, or have been undisturbed from fire for long periods of time, often develop into coastal scrub habitat dominated by native shrubs such as bush lupine and coyote bush. Coastal prairie and scrub habitat occurs mostly on protected lands including Wright Hill Ranch, Salt Point State Park, Jenner Headlands Preserve, and Sonoma Coast State Park.

7.1 Goals, Objectives, and Policies

GOAL C-OSRC-7: Protect and enhance the native habitats and diverse ecological communities on the Sonoma County Coast.

Objective C-OSRC-7.1: Identify and protect native vegetation and wildlife, particularly ~~occurrences of~~ habitat supporting special status species, wetlands, sensitive ~~native~~ natural communities, and areas of essential habitat connectivity.

Objective C-OSRC-7.2: Establish standards, programs, and development guidelines to protect, restore, and enhance biotic resources, including designated Environmentally Sensitive Habitat Areas, and assure that their quality is protected and maintained.

Objective C-OSRC-7.3: Establish standards and programs to protect native trees and ~~plant~~ vegetation communities.

Objective C-OSRC-7.4: Support use of native plant species and removal of invasive exotic plant species.

Objective C-OSRC-7.5: Encourage voluntary efforts to restore and enhance biotic habitat.

Objective C-OSRC-7.6: Preserve and restore major wetlands (including marshes).

Objective C-OSRC-7.7: Promote production of native marine and shoreline plant and animal habitats.

Objective C-OSRC-7.8: Support regulatory efforts by other agencies to protect biotic habitats.

Objective C-OSRC-7.9: Maintain and enhance connectivity between natural habitat areas.

Objective C-OSRC-7.10: Balance the need for agricultural production, development, timber and mining operations, and other land uses with the preservation of biotic resources.

Policy C-OSRC-7a: Permit applications for development which could have an impact on biological resources shall be accompanied by a biological resources assessment, as required in Subsection 8. “Environmentally Sensitive Habitat Areas”. Biological resources include, but are not limited to, special status plant or animal species and their habitats, coastal dunes, beaches, tidepools, wetlands, estuaries, lagoons, streams and creeks, riparian habitat, oak and other native tree woodlands, and native grasslands.

Policy C-OSRC-7b: Require buffers around sensitive biological resources to protect them from impacts of development encroachment consistent with the specific buffer provisions of this Local Coastal Program.

Policy C-OSRC-7c: Except as permitted pursuant to this provision or **Policy C-OSRC-7e**, development that involves the use of pesticides or any other similar toxic chemical substances, shall be prohibited in cases where the application of such substances would have the potential to significantly degrade Environmentally Sensitive Habitat Areas or coastal water quality or harm wildlife. ~~Pesticides~~ Herbicides may be used for the control and eradication of invasive state or federal quarantined pest species ~~or in the course of~~ habitat restoration, but only if the use of non-chemical methods for prevention and management such as physical, mechanical, cultural, and biological controls are infeasible. ~~Pesticides~~ Herbicides shall be restricted to the least toxic product and method, and to the maximum extent feasible, shall be biodegradable, derived from natural sources, and used for a limited time. ~~When permitted and to the extent feasible, application of such pesticides shall not take place during the winter season, when rain is predicted within 48 hours of application, or when wind is predicted above 5 mph.~~ The County will identify non-toxic and earth-friendly management techniques for controlling pests and will conduct public outreach to promote the use of such techniques on property with the County.

Policy C-OSRC-7d: The use of insecticides, herbicides, or other toxic substances by County employees and contractors in construction and maintenance of County facilities, including public roads, shall be minimized.

Policy C-OSRC-7e: Mosquito abatement within or adjacent to ESHA shall be limited to the implementation of the minimum measures necessary to protect human health, and shall minimize adverse impacts to Environmentally Sensitive Habitat Areas.

Policy C-OSRC-7f: Proposals for exterior nighttime lighting shall minimize impacts on biotic resources through adherence to Local Coastal Plan **Policies C-OSRC-2a through C-OSRC-2e**.

Policy C-OSRC-7g: The use of native plant species in landscaping shall be encouraged. The use of native or compatible non-native, non-invasive species for landscaping where consistent with fire safety shall be required. The use of invasive exotic plant species shall be prohibited.

Policy C-OSRC-7h: Project applicants shall provide evidence of permits and clearances required by state and federal agencies before Permit Sonoma issues coastal development permits, or building or grading permits.

Policy C-OSRC-7i: A Restoration and Monitoring Plan shall be required for any project requiring habitat mitigation or restoration. The Restoration and Monitoring Plan shall consist of a stand-alone document that specifies performance standards, success criteria, adaptive management, and monitoring requirements as described in **Appendix E-1**.

Policy C-OSRC-7j: On dunes/coastal strand, the following uses and activities shall be prohibited:

- (1) Uses other than resource-dependent, scientific, educational, and passive recreational uses including support facilities.
- (2) Public access during the breeding and nesting seasons of special status animals present.
- (3) Motorized vehicles, except those required for management or emergency use.
- (4) Disturbance, damage, or removal of dune vegetation except as required for park construction or maintenance projects for which revegetation or removal of non-natives is a condition of project approval.
- (5) Removal of sand except where required for construction of parks and support facilities.

Policy C-OSRC-7k: On dunes/coastal strand, carry-out the following activities to preserve native vegetation:

- (1) Limit public access in areas of ~~plant~~ sensitive natural communities.
- (2) Post signs which explain the importance of limiting public access to protect ~~plant~~ sensitive natural communities.
- (3) Where public access is allowed, develop and use well-defined footpaths or raised boardwalks and provide interpretive signage to facilitate resource protection.

Policy C-OSRC-7l: The following guidelines shall be used for developing public access on Coastal Bluffs:

- (1) Steps, trails, and paths shall be sited and designed so as to minimize erosion and disruption to native vegetation.
- (2) In areas of heavy recreational use, surfaced steps, trails, and paths shall be constructed.
- (3) In areas of moderate recreational use, to the extent available and consistent with the resource protection policies of this Local Coastal Plan, local materials (obtained from the site) shall be used to construct steps, trails, and paths.

Policy C-OSRC-7m: At coastal bluffs, the following uses and activities shall be prohibited:

- (1) Removal of sand or rock except that necessary for road maintenance.
- (2) Public access off established steps, trails, or paths; and motor vehicles. Equestrian use shall be restricted to areas where ground compaction and erosion from use of horses would not have an adverse impact on bluff stability.

Policy C-OSRC-7n: Carry-out the following activities to preserve coastal terrace prairie:

- a) At Bodega Head and Stump Beach, sites shall be developed for the public to observe cormorants and other seabirds; and
- b) At Stillwater Cove County Park, use of the upland area for habitat education activities shall be encouraged.

Policy C-OSRC-7o: The identification of native trees and woodlands through site assessment, and their preservation and protection ~~of native trees and woodlands~~ shall be required. To the maximum extent practicable, the removal of native trees and fragmentation of woodlands and forests shall be minimized; any trees removed shall be replaced, preferably on the site at a greater than 1:1 ratio (and at a greater than 3:1 ratio for riparian trees); and permanent protection of other existing woodlands and forests shall be provided where replacement planting does not provide adequate mitigation. ~~This policy shall not apply to fire risk reduction projects, restoration projects, or forestry projects overseen by a Registered Professional Forester.~~

Policy C-OSRC-7p: Identify ~~important~~ oak woodlands; and assess current protection of oak woodlands; identify options to provide greater enhanced protections ~~of oak woodlands~~, including identification and removal of trees infected with *Phytophthora ramorum*; ~~and their~~ Where they occur, consider the oak woodland's role in connectivity, water quality, and scenic resources; and develop recommendations for regulatory protection and voluntary programs to protect and enhance oak woodlands through education, technical assistance, easements, and incentives.

Policy C-OSRC-7q: In the Mendocino Cypress Pygmy Forest, the following uses and activities shall be prohibited:

- (1) Motor vehicles, except for those required for management or emergency use.
- (2) Construction of permanent structures, except where necessary for scientific and educational uses.

Policy C-OSRC-7r: At, around, and near osprey nest sites, the following shall be prohibited:

- (1) Removal of osprey nests.

(2) Removal of snags and dead tops of live trees.

(3) Development of new structures and roads.

Recreational activities shall be limited to low-intensity passive recreation. ~~As these areas are particularly vulnerable during the period of egg incubation, in May to July and activities should be further limited during this time (typically May through July).~~

Osprey nest sites located adjacent to Willow Creek, Freezeout Creek, and Russian River shall be protected from disturbance by timber harvesting activities.

Policy C-OSCR-7s: For development in locations known, or determined by environmental review, to potentially have breeding or nesting sensitive bird species, no more than two weeks prior to any scheduled development, a qualified professional shall conduct a preconstruction survey of the site and within 500 feet of the project site. For purposes of this provision, sensitive bird species are those species designated threatened or endangered by state or federal agencies, California Species of Special Concern, California Fully Protected Species, raptors, and large wading birds. In addition, surveys must be conducted every two weeks for sensitive nesting birds during the breeding season. If nesting sensitive birds are detected at any time during the breeding season, the California Department of Fish and Wildlife shall be notified and an appropriate disturbance set-back will be determined and imposed until the young-of-the-year are no longer reliant upon the nest. In no cases shall the buffer be less than 100 feet.

Policy C-OSRC-7t: At offshore rocky and intertidal egret or heron rookeries, the following uses and activities shall be prohibited:

(1) Public access.

(2) Construction of structures or roads within 600 feet.

(3) On Penny Island, uses other than low intensity scientific and educational uses, managed so as not to interfere with nesting activity (February to mid-July).

Policy C-OSRC-7u: On coastal bluffs, public access in areas used by birds for nesting or resting, and removal of native plant species shall be minimized.

7.2 Initiatives

Initiative C-OSRC-7-I1: In coordination with resource agencies, landowners, and the affected public, conduct a comprehensive study of the cumulative impacts of habitat fragmentation and connectivity loss and the effects of exclusionary fencing on wildlife movement. If warranted, identify essential habitat connectivity corridors and develop

recommendations or policies to protect essential habitat corridors and linkages and to restore and improve opportunities for native plant and animal dispersal.

Initiative C-OSRC-7-I2: Support voluntary programs for habitat restoration and enhancement, hazardous fuel management, removal and control of invasive exotics, native plant revegetation, treatment of woodlands affected by sudden oak death, use of fencerows and hedgerows, and management of biotic habitat.

Initiative C-OSRC-7-I3: Promote and enhance the use of locally native plants and reduce non-native invasive plants in common areas and on private lots. Support property owners in their efforts to identify and eradicate non-native invasive plants and planting locally native plants.

8. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Environmentally Sensitive Habitat Area (ESHA) are areas in which plant or animal life or their habitats are either rare or especially valuable because of their ~~specific~~ special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activities and developments. Potential ESHAs are presented on **Figures C-OSRC-2a** through **2k**. These figures are not an inventory of ESHA or intended to be an exhaustive compilation of the habitat areas that may meet the ESHA definition. Any area not identified as a potential ESHA on **Figures C-OSRC-2a** through **2k** but that meets the ESHA criteria is ESHA, and shall be accorded all the protection provided for ESHAs in the Local Coastal Program.

While ESHA maps can serve as an illustrative tool to help identify the presence of potential resources, it is the actual presence of ESHA on the site that dictates whether ESHA policies apply. The Local Coastal Plan's ESHA policies will generally not apply to marine habitats which are protected separately. Under the Coastal Act, ESHAs are governed by Section 30240, while marine resources are governed by Section 30230 and 30231.

8.1 Goal, Objective, and Policies

GOAL C-OSRC-8: Protect and enhance the native habitats and diverse ecological communities on the Sonoma County Coast.

Objective C-OSRC-8.1: Designate Environmentally Sensitive Habitat Areas and update designations every five years, or sooner if significant new information is available, using credible data sources, improvements in identifying ESHA, scientific discovery, and regulatory changes including decisions and guidance from the California Coastal Commission.

Policy C-OSRC-8a: Mapping shown in **Figures C-OSRC-2a** through **2k** is not a comprehensive inventory of ESHA due to changing habitats, future improvements in identifying ESHA, regulatory changes, and scientific discovery. The following areas shall be considered ESHA, unless there is compelling site-specific evidence to the contrary.

- (1) Any habitat area that is rare or especially valuable from a local, regional, or statewide perspective.
- (2) Areas that contribute to the viability of plant or animal species designated as rare, threatened, or endangered under State or Federal law.
- (3) Areas that contribute to the viability of species designated as Fully Protected or Species of Special Concern under State law or regulations.
- (4) Areas that contribute to the viability of plant and animal ~~species~~ life for which there is compelling evidence of rarity, or a species or habitat that is considered to have a special nature or role in the ecosystem.
- (5) Old growth Redwood and Douglas fir trees and associated forest habitat. Because of their rarity and biological importance, isolated old growth Redwood and Douglas fir trees shall be protected as well as intact old growth forest habitat.

Policy C-OSRC-8b: The following criteria shall be considered when determining whether an area should be designated ESHA:

- (1) The potential ESHAs presented on **Figures C-OSRC-2a through 2k**
- (2) Federally-listed Rare, Threatened, & Endangered Species
- (3) State-listed Rare, Threatened & Endangered Species
- (4) Federal and State Proposed/Candidate Species
- (5) California Native Plant Society “1B” and “2” Listed Species
- (6) California Department of Fish and Wildlife Global and State 1 - 3 Ranked Vegetation Communities (i.e. G1, G2, G3, S1, S2, S3)
- (7) California Department of Fish and Wildlife Global and State 1 - 3 Ranked Plant and Animal Species
- (8) California Species of Special Concern
- (9) California Fully Protected Species
- (10) Habitats that Support Listed Species (i.e., those in 2 & 3)
- (11) Tree stands that support raptor nesting, ~~or~~ monarch populations, and rookeries
- (12) Genetically special populations, including those at the edges of species’ ranges
- (13) Habitat corridors or other ecological linkages

(14) Provision or support of critical ecosystem services

Policy C-OSRC-8c: A biological resource assessment performed by a qualified professional shall be required for any project which could impact biological resources and shall meet the following criteria:

1. To identify and analyze the potential biological impacts of the proposed development and distinguish between time (permanent vs. temporary impacts) and/or or space (e.g., maintenance of large habitat areas vs. habitat fragmentation. The duration of temporary impacts must be specified. Possible cumulative biological impacts must also be discussed.
2. A discussion of all field methods actually employed, including the methods for formal protocol surveys. The detailed survey protocols for particular sensitive habitats or species may be placed in an appendix, but should not just be referenced to in a separate document.
3. The determination of when to visit a site shall be specified by Permit Sonoma Natural Resources Section staff in consultation with the applicant's biologist.
4. The impacts that sea level rise and climate change may have on the resources, and impacts to resources that may result from the development projects need to adapt to sea level rise and climate change.
4. All report content specified in Appendix E-2 "Biological Resource Assessment Requirements".

Policy C-OSRC-8d: ESHAs shall be protected against any significant disruption of habitat functions and values, which ~~is~~ are the ecological processes and importance of various habitat types and conditions in sustaining socially or ecologically significant ~~wildlife~~ populations and biological diversity. Uses allowed within ESHAs shall be limited to those that are dependent on and compatible with maintaining the habitat functions and values within ESHA and those that are otherwise specifically provided for in Subsection 8, Policies C-OSRC-8a through 8j, "Environmentally Sensitive Habitat Areas" and **Appendix E-3**. Proposed development in areas adjacent to ESHAs and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and must be compatible with the continuance of such habitat areas.

Policy C-OSRC-8e: Establish buffers around ESHA to protect it from development impacts. ESHA buffers shall be developed in accordance with **Appendix E-3**. All buffers around ESHA shall be ~~a minimum of~~ no less than 100 feet in width; ~~a lesser width under specified circumstances, buffer reductions~~ may be approved by the County as addressed in Subsection 8, Policy C-OSRC-8g, "Environmentally Sensitive Habitat Areas" and **Appendix E-3**. Generally, a 600-foot buffer is required for heron rookeries; a 500-foot buffer for occupied raptor nests, which includes owls and burrowing owl burrows; and a 300-foot buffer for

~~passerines any occupied burrow of a burrowing owl.~~ However, these buffers may be reduced, to a minimum of 100ft, in consultation with resource agencies and with the recommended mitigation and monitoring for impacts. Only developments consistent with Subsection 8, Policies C-OSRC-8a through 8l, “Environmentally Sensitive Habitat Areas” shall be allowed in ESHA buffers. Buffers shall take into account reasonably foreseeable effects of sea level rise and climate change.

Policy C-OSRC-8f: Low intensity ~~p~~Public access-ways and trails are considered resource dependent uses. New low intensity public access-ways and trails located within or adjacent to ESHA shall be sited to minimize impacts to ESHA to the maximum extent feasible. Measures, including but not limited to signage, placement of boardwalks, and limited fencing shall be implemented as necessary to protect ESHA.

Policy C-OSRC-8g: In some cases, smaller buffers around ESHA ~~and other biotic resources~~ may be appropriate, when conditions of the site as demonstrated in a site-specific biological assessment, the nature of the proposed development, and appropriate mitigation, show that a smaller buffer would provide adequate protection. In such cases, the County must find that a reduced buffer is appropriate and that the development could not be feasibly constructed without a reduced buffer. Reductions shall be limited to the minimum amount necessary to achieve development requirements and in ~~In~~ no case shall the buffer be less than 50 feet.

Policy C-OSRC-8h: ~~If proposed development is a permissible use and there is no feasible alternative, including the no project alternative, that can~~ If an allowed resource-dependent use avoid significant impacts to in ESHA might lead to significant adverse impacts to that ESHA, then the alternative project permutation that would both (a) result in the fewest or least significant such impacts, and (b) result in no significant disruption of ESHA habitat values, shall be selected. Any r~~Residual~~ adverse impacts to ESHA shall be fully mitigated in-kind, with priority given to on-site habitat mitigation. Off-site habitat mitigation measures shall only be approved when it is not feasible to fully mitigate impacts on-site or where off-site habitat mitigation is more protective, as documented in a biological resource assessment prepared by a qualified professional and approved by Permit Sonoma staff. Any determination that it is infeasible to mitigate impacts onsite should be supported by written findings. Mitigation may not be used as a substitute for implementation of the feasible project permutation alternative that would avoid impacts to meet the ESHA tests stipulated here. Mitigation for impacts to ESHAs ~~other than marine habitats~~ shall be provided at a minimum ratio of 3:1 2:1, other than marine habitats which shall use a minimum mitigation ratio of 4:1. ~~The more specific mitigation requirements as required by regulatory agencies or the County shall control over the more general mitigation requirements of this Local Coastal Plan.~~

Policy C-OSRC-8i: Adjacent to ESHA, the use of compatible locally native, non-invasive plant species for landscaping shall be required as a condition of coastal development permit

approval. The use of invasive ~~exotic~~ plant species shall be prohibited. No landscaping shall adversely affect or extend into ESHA.

Policy C-OSRC-8j: If the application of the policies and standards contained in this Local Coastal Plan regarding use of property designated as ESHA or ESHA buffer, including the restriction of ESHA to only resource-dependent use, would likely constitute a taking of private property without just compensation, then a use that is not consistent with the ESHA provisions of the Local Coastal Plan may be allowed on the property, provided such use is consistent with all other applicable policies of the Local Coastal Plan, the approved project is the alternative that would result in the fewest or least significant impacts, and it is the minimum amount of development necessary to avoid a taking of private property without just compensation. In such a case, mitigation for impacts on ESHA shall be required in accordance with applicable Local Coastal Plan policies.

Policy C-OSRC-8k: Land divisions, including subdivisions, lot splits, and lot line adjustments involving lots containing or within proximity to wetlands, watercourses, or other ESHA for which protective buffers are required, may be approved only if findings are made to support that the resulting parcels contain adequate land area to place all improvements (e.g., buildings, sewage disposal where applicable, and appurtenant structures and features such as detention/retention ponds and biofiltration swales) outside of areas required for wetlands, watercourses, and ESHA buffer protection.

Policy C-OSRC-8l: Encourage preservation of remaining old growth Redwood and Douglas Fir trees and associated forest habitat in private ownership. Old growth forests are ecosystems distinguished by old trees (at least 150 years old) and related structural attributes that may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function. Because of their rarity and biological importance, these trees and forests should be made priorities for protection through conservation easements, fee title purchase, or other mechanisms.

8.2 Program

Program C-OSRC-8-P1: Reviewing and updating **Figures C-OSRC-2a** through **2k** every five years to reflect documented occurrences or changes in such habitats. Review and update more frequently if there are significant changes in data or new scientific understanding of Coastal Resources

8.3 Initiatives

Initiative C-OSRC-8-I1: Support acquisition of conservation easements or fee title by the Sonoma County Agricultural Preservation and Open Space District of designated Environmentally Sensitive Habitat Areas.

Initiative C-OSRC-8-I2: Encourage landowners to voluntarily participate in a program that protects officially designated individual trees or groves that either have historical interest or significance or have outstanding size, age, rarity, shape or location.

9. COMMERCIAL FISHING, SUPPORT FACILITIES, AND HARBOR

Sonoma County contains marine and inland fisheries and a growing aquaculture industry. Bodega Harbor is the home of a major commercial fishing fleet with berths, boat launching ramps, fish receiving piers, a navigation channel, and a marina. Commercial and sport fishing net salmon, crab, herring, halibut, shark, and bottom fish. This section carries out the following sections of the California Coastal Act:

Section 30234 Commercial fishing and recreational boating facilities

Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

Section 30234.5 Economic, commercial, and recreational importance of fishing

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Climate Change

Climate change will impact fisheries on and off the Sonoma County coast, as fisheries are highly dependent on specific climate conditions. Warmer water temperatures will shift habitat ranges of many fish and shellfish species, which will in turn have a disruptive effect on marine ecosystems. Many marine species have certain temperature ranges at which they can survive. Many aquatic species can find colder areas of streams and lakes or move northward along the coast or in the ocean. However, moving into new areas may put these species into competition with other species over food and other resources. Some diseases that affect aquatic life may become more prevalent in warm water. Changes in temperature and seasons could affect the timing of reproduction and migration.

In addition to warming, the world's oceans are gradually becoming more acidic due to increases in atmospheric carbon dioxide (CO₂). Increasing acidity could harm shellfish by weakening their shells, which are created from calcium and are vulnerable to increasing acidity. Acidification may also threaten the structures of sensitive ecosystems upon which some fish and shellfish rely and affect organismal development at various stages of life.

Overall, climate change could make it more difficult to catch fish in the same ways and same places as we have done in the past. Many fisheries already face multiple stresses, including overfishing and water pollution. Climate change may worsen these stresses. In particular, changes in water temperature could lead to significant impacts on fisheries. It is not possible to predict with any accuracy the impacts of climate change on fisheries along the Sonoma County coast in the next 20 years; however, change itself may be anticipated.

Offshore Marine Protected Areas

While offshore areas are beyond the County's Local Coastal Program jurisdiction, there are a number of notable and important natural areas offshore of the Sonoma County coast. In particular, there are two National Marine Sanctuaries managed by the National Oceanic and Atmospheric Administration (NOAA), Greater Farallones National Marine Sanctuary and Cordell Bank National Marine Sanctuary, and one national monument, the California Coastal National Monument, which is managed along the entire California coastline by the United States Bureau of Land Management (BLM). Together, these three areas represent major coastal national resources for the County and the State. Various Federal and State restrictions on fishing and other commercial and recreational activities apply within these areas.

Greater Farallones National Marine Sanctuary. The Greater Farallones National Marine Sanctuary is a 3,295 square mile conservation area covering the entire Sonoma coast and extending from south of Bolinas Lagoon in Marin County to the Point Arena Lighthouse in Mendocino County. NOAA has identified the area as containing exceptional natural resources worthy of special recognition, protection, and designation as a National Marine Sanctuary. The latest management plan for this sanctuary and the Cordell Bank National Marine Sanctuary was published in March of 2015 as part of the expansion of these sanctuaries to their current size.

Cordell Bank National Marine Sanctuary. The Cordell Bank National Marine Sanctuary covers 1,286 square miles of the Pacific Ocean, west of the Greater Farallones National Marine Sanctuary. This sanctuary contains unique oceanic conditions and topography, as it features substantial variations water depth along its western boundary, ranging from 115 below the sea surface at Cordell Bank to 6,000 feet below the sea at the bottom of Bodega Canyon. These steep and sudden pinnacles and ridges in the sea make for complex sediment distribution and biodiversity.

California Coastal National Monument. The California Coastal Monument is a major, statewide national monument that spans the entire coastline of the state of California, extending 12 miles offshore, and contains 20,000 rocks and islands (but not major islands, such as the Channel Islands, Farallon Islands, or islands within the San Francisco Bay) and 1,100 miles of total coastline. Portions of the Coastal National Monument overlap with the Greater Farallones and Cordell Bank National Marine Sanctuaries.

Oil Exploration and Development

Oil exploration and development on the Sonoma County coast may adversely affect sensitive areas identified in the Local Coastal Plan. See the Outer Continental Shelf Development Policy section of the Land Use Element for information and policy on oil exploration and development on the Sonoma County coast.

Bodega Bay and Harbor

Bodega Bay is the largest harbor in Sonoma County and is about 58 miles north of the entrance to San Francisco Bay. Bodega Bay is well protected from the open ocean and prevailing winds by Bodega Bay and Doran Beach and provides shelter for a large fleet of commercial and pleasure boats. Bodega Harbor is located in the northeastern portion of Bodega Bay and serves as the largest fishing port between San Francisco and Fort Bragg. Existing fishing industry facilities at the harbor include two

berth installations, three boat launch ramps, commercial fish receiving piers, and a federal navigation channel maintained by the U.S. Army Corps of Engineers (**Table C-OSRC-1**).

Table C-OSRC-1. Existing Dock and Berth Facilities for the Commercial Fishing Industry in Bodega Harbor

<i>Facility</i>	<i>Number</i>
Berths	210
Tie-ups	45-50
Moorings (dock or marina)	30-35 (year round)
Boats anchored in outer bay during salmon season	10-50
Boat size range	18-65 feet
Unloading docks	5
Fuel docks	3
Ice and blower stations	4
Haul-out areas	1 (under 40 feet)
Dry docks	1
Repair areas	3 (small)
Launch ramps	1 private (small), 2 public

Public dock and berth facilities are provided at Doran County Park, Westside County Park, and Bodega Bay Dunes State Beach. Other facilities at Bodega Bay include The Tides Wharf and Lucas Wharf, multifaceted facilities with a hotel, restaurant, and fish market where hundreds of vessels offload their catch each year; a U.S. Coast Guard Search and Rescue Base on the navigation channel; and the University of California Bodega Marine Life Reserve on the west side of the harbor.

The Rivers and Harbors Act of 1938 authorized the federal project improvements in Bodega Harbor. Completed in 1943, these federal improvements provided a bulkhead to retain the sand spit; an entrance channel 100 feet wide and 12 feet deep protected by two jetties; a navigation channel of the same dimensions about 16,020 feet long to the town of Bodega Bay that continues southeast about 4,200 feet along the shore; and three turning basins. Additional federal projects authorized in 1965 and completed in 1975 provided a concrete pile breakwater at Spud Point and an access channel from the existing federal navigation channel to a proposed local marina. The Sonoma County Regional Parks Department (County Regional Parks) completed Spud Point Marina in 1985 that created the existing berthing facilities, laundromat, restrooms, and showers.

County Regional Parks) operates three County facilities at Bodega Bay: Spud Point Marina, Mason's Marina, and the Sport Fishing Center. The commercial fishing industry has been in decline for over a decade, and the loss of berthing revenue and other fees has resulted in deferred maintenance at these facilities.

Bodega Harbor Maintenance Dredging

Continued use and expansion of the existing facilities in Bodega Harbor depend on future maintenance dredging of the federal navigation and local channels and marinas. Under the Rivers and Harbors Act of 1938, the United States Army Corps of Engineers (Corps of Engineers) is authorized to continue operations and maintenance dredging of the federal navigation channel in Bodega Harbor. The Operations and Maintenance Dredging Program of the Corps of Engineers is responsible for maintaining safe federal navigation channels and harbors, thus is responsible for maintaining the federal projects described above.

Dredge Spoils Disposal Sites. A variety of sites have been used or evaluated for disposal of dredge spoils from Bodega Harbor, including the Old Airport Disposal Site, Westside Park, Doran Spit, outer Bodega Bay, and just north of Bodega Harbor.

In 2017 the Corps selected the San Francisco Deep Ocean Disposal Site located about 65 nautical miles offshore from Bodega Harbor. The current capacity of the SF-DODS far exceeds Bodega Bay Harbor's current and estimated future disposal needs for the next 25 years.

Marine Debris

Marine debris is trash found in the oceans or along its shores. The source of marine debris can be classified as either ocean-based or land-based depending on where it enters the water. Ocean-based marine debris is waste that is disposed of in the ocean by ships, recreational boats, and petroleum rigs and platforms. Land-based debris is debris that blows, washes, or is discharged into the water from land. Studies estimate that about two thirds of marine debris enters the water from land. Contributors include recreational beach users, people who drop litter on sidewalks and streets, plastics manufacturers and transporters, inadequate sewage treatment operations, and illegal dumping.

Debris in the marine environment means hazards for humans and wildlife. It endangers the safety of beach visitors and scuba divers and endangers the safety and livelihood of fishermen and recreational boaters. Beach visitors have required stitches from stepping on broken pieces of glass and metal buried in the sand, and scuba divers have become entangled in lost fishing gear. Nets and monofilament fishing line can obstruct boat propellers and plastic sheeting and bags can block boat engine cooling intakes. Such damage is hazardous and costly in terms of repair and lost fishing time.

State and Federal Programs. The California Coastal Commission and NOAA have Marine Debris Programs. The NOAA Marine Debris Program supports national and international efforts to research, prevent, and reduce the impacts of marine debris. It serves as a centralized capability within NOAA, coordinating and supporting activities within NOAA and with other federal agencies, as well as using partnerships to support projects carried out by state and local agencies, tribes, non-governmental organizations, academia, and industry. The NOAA Marine Debris Program has launched the Marine Debris Clearinghouse, a new online tool for tracking and researching marine debris projects and resources. Currently this database allows users to browse or search records of past, current, and future projects which are funded by the Marine Debris Program and focus on marine debris removal, research, and outreach. NOAA plans to expand this database to include information from federal partners and the broader marine debris community. The site will grow to include a library of best practices, regional action plans, technical documents, and papers that reflect the state of knowledge of a given topic area within the study of marine debris.

The California Coastal Commission Marine Debris Program consists of California Coastal Cleanup Day, the Adopt-A-Beach program, public education about marine debris, and collaboration with state and regional agencies on developing new programs and policies to help prevent and reduce marine debris. Every year on the third Saturday in September, people join together at sites all over California to take part in the State's largest volunteer event, California Coastal Cleanup Day, organized by the California Coastal Commission and Coastwalk. Families, friends, coworkers, scout troops, school groups, service clubs, and individuals come together to celebrate and share their appreciation of

California's beautiful coast and waterways. California Coastal Cleanup Day is part of the larger International Coastal Cleanup, the largest volunteer event on the planet.

9.1 Goal, Objectives, and Policies

GOAL C-OSRC-9: Support the commercial fishing industry in Bodega Bay. Protect and conserve the quality of ocean, marine, and estuarine environments for their scenic, economic, and environmental values.

Objective C-OSRC-9.1: Provide adequate facilities and services to serve the commercial fishing industry in Bodega Bay.

Objective C-OSRC-9.2: Conduct dredging in a manner that minimizes impacts on the ocean, marine, and estuarine environments.

Objective C-OSRC-9.3: Conduct the disposal of dredged material in a manner that minimizes impacts on the ocean, marine, estuarine, and terrestrial environments; and minimizes impacts to groundwater and water supply.

Objective C-OSRC-9.4: Support the Marine Debris Programs of the National Oceanic and Atmospheric Administration and California Coastal Commission.

Policy C-OSRC-9a: Encourage the development of support facilities and the provision of support services for the commercial fishing industry, including fish processing, in areas designated Marine Industrial on the Land Use Plan Map.

Policy C-OSRC-9b: Marina development in Bodega Bay will be reviewed based on the following: 1) a review of the Bodega Harbor operations, with special emphasis on whether activities that do not depend on a harbor location can be relocated to preclude or minimize the need for additional dredging and filling; and 2) an assessment of the adequacy of the fisheries resources to support such expansion; and 3) that the resources would not be harmed by increasing the availability of berths for the commercial fishing industry.

Policy C-OSRC-9c: Encourage the development of additional support facilities and the provision of additional support services at Spud Point Marina necessary to adequately serve the commercial fishing industry.

Policy C-OSRC-9d: Dredging shall be required to occur only in the winter, when most marine and estuarine animals are not migrating or spawning and are least sensitive to turbidity.

Policy C-OSRC-9e: The deposition of fill or dredge spoils in Bodega Harbor shall be prohibited, except according to Section 30233 of the California Coastal Act:

Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area."

Policy C-OSRC-9f: The deposition of dredge spoils shall be prohibited outside Bodega Harbor in Bodega Bay east of the line extending from the tip of Tomales Point, to the tip of Bodega Head.

Policy C-OSRC-9g: Approval of a detailed reclamation plan shall be required for a dredge spoils disposal site prior to commencing any dredging that would generate dredge spoils to be disposed of at that site.

Policy C-OSRC-9h: Consider sea level rise adaptation strategies when evaluating dredge disposal options and evaluate the feasibility of using dredge material for beach sand augmentation and dune restoration.

Policy C-OSRC-9i: Any onshore dredge spoils disposal project shall be designed and implemented to protect groundwater resources and existing and potential domestic water supplies, and to be consistent with all policies of this Local Coastal Plan for protection of wetlands and ~~other~~ Environmentally Sensitive Habitat Areas (ESHA).

Policy C-OSRC-9j: Route the dredge spoils conveyance pipeline to upland disposal sites from Bodega Harbor along the right-of-way of existing roads, where possible.

Policy C-OSRC-9k: Riparian corridors at dredge disposal sites shall be protected. Diked ponds for disposal of dredge spoils shall be sited and designed to avoid ~~the~~ any riparian area, such that no dredge spoils would be deposited in the drainage and no runoff would enter the drainage or the freshwater wetland; and to be consistent with all policies of this Local Coastal Plan for protection of wetland and ~~other~~ Environmentally Sensitive Habitat Areas (ESHAs).

Policy C-OSRC-9l: At upland disposal sites, the operation of construction equipment across drainages between dredge spoils disposal ponds shall be limited to one haul road. Following the disposal of dredge spoils and consistent with all policies of this Local Coastal Plan for protection of wetland and ~~other~~ Environmentally Sensitive Habitat Areas (ESHAs), the road shall be removed, the area shall be regraded to natural drainage contours, and native vegetation shall be re-established.

Policy C-OSRC-9m: A reclamation plan shall be implemented for any upland disposal site which assures rapid re-establishment of native vegetation, minimizes visual impacts, and improves wildlife habitat, consistent with all policies of this Local Coastal Plan for protection of wetland and ~~other~~ Environmentally Sensitive Habitat Areas (ESHAs).

Policy C-OSRC-9n: Prior to approval of a plan for a large, one-time dredge spoils disposal at the Old Airport Disposal Site, a full evaluation shall be required of the potential visual, water quality, and reclamation issues associated with raising the dikes to accommodate the dredge spoils.

Policy C-OSRC-9o: ~~The~~ Any rare plants or other sensitive coastal resources in the marsh south of the Old Airport Disposal Site shall be protected during the course of any construction on the site.

Policy C-OSRC-9p: The Old Airport Disposal Site shall be reclaimed and restored to the maximum extent feasible following each maintenance dredging event.

9.2 Program

Program C-OSRC-9-P1: Develop a mooring plan for Bodega Harbor.

10. SOIL RESOURCES

Soil resources ~~policy is~~ policies aim to maintain soil productivity and prevent lands with productive soils from converting to non-resource uses, and to promote soil management and conservation practices that will maintain productivity of those lands.

Important farmland soils on the Sonoma County coast include grassland suitable for sheep and cattle grazing along the coastal terrace and lower slopes on the North Coast and throughout the County coast south of Jenner. Soil, climate, topography, and water combine to make these lands highly productive agricultural areas. Important timberland soils on the County coast are located primarily north of Russian Gulch and in the Willow Creek watershed.

Although some types of soils are more susceptible to erosion, all soils benefit from conservation practices. Erosion results in the loss of topsoil which may reduce crop yields and cause sedimentation problems downstream. Sediment can fill reservoirs and stream channels, reduce water quality and storage capacity, and damage fish and wildlife habitats. Susceptibility to soil erosion is highest in areas with a combination of high rainfall, lack of cover, erodible soils, and steep slopes. Activities

which may increase erosion include urban development, road and general construction activities, logging, mining, agriculture, and recreational activities.

Hillside cultivation and overgrazing are a particular concern in agricultural areas. Measures are needed to reduce erosion. However, erosion protection measures may not always be cost effective for the landowner.

10.1 Goal, Objectives, and Policies

GOAL C-OSRC-10: Encourage the conservation of soil resources to protect their long-term productivity and economic value through soil conservation and management practices that maintain the productivity of soil resources.

Objective C-OSRC-10.1: Preserve lands containing prime agricultural and productive woodland soils and avoid their conversion to incompatible residential, commercial, or industrial uses.

Objective C-OSRC-10.1: Ensure that permitted uses are compatible with reducing potential damage due to soil erosion.

Objective C-OSRC-10.2: Establish ways to prevent soil erosion and restore areas damaged by erosion.

Policy C-OSRC-10a: Apply the Agriculture land use category to areas with productive agricultural soils.

Policy C-OSRC-10b: Apply the Timber land use category to all lands with timberland production zoning.

Policy C-OSRC-10c: Coastal Development Permits shall be subject to the following requirements for reducing erosion and erosion control:

- (1) Projects shall be designed so that structures and roads are not located on steep slopes with an incline greater than 30 percent.
- (2) Erosion control measures shall be incorporated as part of projects involving construction or grading near waterways or on lands with slopes over 10 percent.
- (3) A soil conservation program shall be incorporated as part of projects which could increase erosion of waterways or hillsides.
- (4) New roads and driveways for residential, ranch, and timber harvest uses shall be designed and constructed to retain natural vegetation and topography to the maximum extent feasible.

- (5) Improvements near waterways or in areas with a high risk of erosion as determined by a site specific analysis shall be ~~shall be~~ designed and constructed to retain natural vegetation and topography to the maximum extent feasible.

Policy C-OSRC-10d: Continue to enforce the County Building Code to reduce soil erosion and slope instability problems.

10.2 Initiative

Initiative C-OSRC-10-I1: Encourage agricultural land owners to work closely with the Natural Resource Conservation Service (NRCS) and local Resource Conservation Districts to reduce soil erosion and encourage soil restoration.

11. TIMBER RESOURCES

The following section of the 1976 California Coastal Act applies to timberlands:

***Section 30243.** The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of non-commercial size shall be limited to providing for necessary timber processing and related facilities.*

Timberland Resources

Forests and woodlands provide a number of aesthetic and ecological benefits such as wildlife habitat, watershed protection, scenic views, and recreation. These forest values are important to the quality of the environment and life in the County and are addressed in the Water Resources Element and other sections of this Open Space and Resource Conservation Element.

Forests also provide commercial timber as a renewable resource. Sonoma County is unique among counties in California in having a majority (94 percent) of the timberlands as privately owned. In Sonoma County timberlands are predominantly in the northwest part of the County. There are about 232,000 acres of timberland in the County. About 20,500 acres of the 232,000 acres of timberland in the County are on the County coast. These timberlands are comprised of about 14,000 acres of Site Class IV soils and about 6,500 acres of Site Class I, II, and III soils combined. Site Class is a reference to the productivity of timberland, determined by the interaction of soil fertility and climate; the lower the site class, the greater the timberland productivity.

~~The County coast exhibits the diversity of tree species found throughout the County.~~ Soil, climate, topography, and human activity are the important factors which determine the growth and distribution of tree species. Redwood predominates in the coastal fog belt, with Douglas fir and grand fir constituting the other principal forest trees. Commercial forests on the Coast ~~is~~ are found primarily north of Russian Gulch and in the Willow Creek watershed. ~~Forests~~ These occur generally east of State Highway 1 and in coastal gulches. Commercial hardwood harvesting of tan oaks is becoming more important for Masonite chips, firewood, and the crafts industry. Other native, generally non-commercial trees on the Coast are Bishop pine, oak, madrone, bay, and the southern extent of the pygmy forest in California. Rows of eucalyptus and cypress trees have been planted as a

buffer against the wind, and fast growing Monterey pine screen many homes from the view of State Highway 1. Dense forests of these trees have been planted by the developers of The Sea Ranch and Timber Cove subdivisions.

Both the economic and natural values of coastal woodlands and forests are recognized in the policies and regulatory mechanisms included in the Local Coastal Plan. For purposes of the regulations discussed below, timberlands are generally considered to be those lands which are capable of and available for growing a commercial species of timber such as redwood and Douglas fir.

Timberland Regulations

1973 Forest Practices Act. In 1973 the Z'berg-Nejedly Forest Practices Act was established, setting up the rules for the California Department of Forestry and Fire Protection (CalFire) to follow with respect to timber harvesting. Timber Harvest Plans (THPs) must be filed with CalFire in most instances when trees are logged. CalFire is the lead agency responsible for approving and ensuring compliance of THPs with the Forest Practices Rules and other applicable regulations. A conversion permit must be obtained from CalFire to convert timberland to a non-timber use; approval of conversion permits for the Coastal Zone is very unlikely.

CalFire regulates the silvicultural activities related to THPs. Forest Practice Rules are established for different geographical areas of the State. The Coast Forest District Rules apply to most of Sonoma County. The California Coastal Commission's Special Treatment Area Rules apply to Special Treatment Areas designated within the Coastal Zone. The State Board of Forestry has the authority to amend either the Forest Practice Rules or the geographical districts to which they are applied.

Most THPs filed for the Coastal Zone are for timber harvests of less than 100 acres. CalFire indicates that 52 THPs have been filed for the Sonoma County coast since 1983. Although the number of THPs filed for the Sonoma Coast is not as great as in adjacent Mendocino County, the coastal timber resource is significant locally.

Timberland Production (Preserve) Zones. In 1976 the California Legislature adopted the Forest Taxation Reform Act. That Act required counties to provide for the zoning of parcels used for the growing and harvesting of timber as Timberland Preserve Zones (TPZs). A TPZ restricted the use of the land to the growing and harvesting of timber and compatible uses approved by the County in return for tax assessment benefits. Subsequently in the late 1970s the County designated many parcels TPZ.

In 1982 the California Legislature adopted the California Timberland Productivity Act. That Act required counties to designate and zone lands for the primary use of timber production in order to protect properly conducted timber operations from being prohibited or restricted due to conflict or apparent conflict with surrounding land uses. The County applied local Timberland Production (TP) zoning to all parcels previously placed in the TPZs under the 1976 Forest Taxation Reform Act. There are about 20,500 acres of timberland in the Coastal Zone, of which approximately 11,000 acres are zoned TP, with the remainder zoned RRD (Resources and Rural Development).

Rezoning timberland parcels to TP establishes ten-year use restrictions and the requirement for a forest management plan which should provide for timber harvesting within a reasonable period of time and set timber restocking standards. Sonoma County's implementing TP Ordinance allows parcels of 40 acres or more of Site Class I and II soils, and 80 acres or more of Site Class III and IV

soils to be zoned TP. The annual tax paid on acreage of timberland zoned TP is based on the value of the land without the standing timber and is substantially less than if zoned at fair market value. Taxes on the value of the cut timber are paid at the time of harvest.

Sonoma County's TP Ordinance sets a minimum residential density of one dwelling per 160 acres (with a maximum of four dwellings per parcel where allowed by the 160-acre density). This number is set by the State law on TP zones. Parcels this size are intended to encourage timber management or sale to an owner wishing to manage the land for timber production. Creation and sale of smaller parcels, such as 40 or 80 acres, after the seller has cut as much timber as possible prior to the sale, may make the parcels undesirable for sustained timber management. Smaller parcels are less viable for timber management and encourage greater residential conflicts. The larger the parcel, the better the chance for long-term timber production.

Timberland Environmental Impacts

Pressures on timberland include rural development, agricultural conversions, and increased public scrutiny regarding the potential impacts associated with logging operations, particularly near streams. These issues can affect both the economic feasibility of the timber industry and/or the long term availability of timber resources.

Logging activities, if improperly managed, can be detrimental to the forest environment, including loss of riparian habitat and soil erosion, and a resulting diminishing of all forest values. Sustainable logging practices and forest management should result in a forest resource which regenerates itself and allows for perpetuating related forest values. Keeping forest lands in production and preventing a further incursion of incompatible adjacent lands uses will benefit the public and the timber industry.

State law gives primary regulatory responsibility for timber operations to CalFire, limiting the Local Coastal Plan land use authority. However, the Local Coastal plan does have authority to establish policies that maintain a sustainable supply of timber resources in the future by reducing the potential for converting timberland to incompatible uses.

11.1 Goal, Objectives and Policies

GOAL C-OSRC-11: Preserve, sustain, and restore forestry resources for their economic, conservation, recreation, and open space values.

Objective C-OSRC-11.1: Identify and preserve areas with timber soils and commercial timber stands for timber production. Reduce incompatible uses and the conversion of timberlands to agriculture and other uses which effectively prevent future timber production in these areas.

Objective C-OSRC-11.2: Minimize the potential adverse impacts of timber harvesting on economic, conservation, recreation, and open space values; and restore harvested areas to production for a future yield.

The following policies, in addition to those in the Land Use Element, shall be used to achieve these objectives:

Policy C-OSRC-11a: A Coastal Permit shall not be required for timber harvesting in accordance with a timber harvest plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practices Act of 1973 and regulated by the Forest Practices Act and the California Department of Forestry and Fire Protection.

Policy C-OSRC-11b: Apply the Timber land use category to designate all lands in a Timberland Production Zone and adjacent parcels with timber soils or commercial timber stands.

Policy C-OSRC-11c: Review all timber harvest plans for compatibility with Local Coastal Plan policies and economic viability of the industry.

Policy C-OSRC-11d: Where applicable, comment on timber harvest plans in support of increased protection of Class III streams.

Policy C-OSRC-11e: Review timber harvest plans adjacent to designated Riparian Corridors and request that clear cutting not occur within streamside conservation areas. Where clear cutting along designated Riparian Corridors is approved by the applicable state or federal agency, ensure that at least 50 percent of the overstory canopy and at least 50 percent of the understory vegetation be retained.

Policy C-OSRC-11f: The primary use within the Timber Preserve land use shall be increasing or enhancing timber production. Very low density residential development may be allowed if development does not conflict with the primary use of timber production. A land use amendment shall be required for conversion of timberlands to other uses.

~~**Policy C-OSRC-11g:** Consistent with Public Resources Code section 30106, no coastal development permit shall be required for (1) any timber harvesting permit approved by CALFIRE through the Forest Practice Rules, or (2) vegetation management that does not amount to the removal or harvesting of major vegetation. This includes projects for the treatment of forest cover or vegetation on forested landscapes, together with all the incidental work including, but not limited to, fire hazard abatement and site preparation, as well as removal of vegetation not resulting in type conversion of existing vegetation community.~~

~~**Policy C-OSRC-11h:** Exclude projects undertaken by a Registered Professional Forester that treat the forested cover or vegetation on forested landscapes, together with all incidental work including, but not limited to, timber operations, fire hazard abatement, site preparation, and the removal of vegetation, from the requirements of a Coastal Development Permit.~~

11.2 Programs

Program C-OSRC-11-P1: In cooperation with stakeholders and resource agencies, develop vegetation management guidelines including best practices to improve habitat health and reduce the risk of wildland fire without restricting public access to the coast. ~~Establish~~ Pursue a coastal development permit exclusion or other streamlined process for activities consistent with such guidelines and policies of the Public Safety Element of this Plan, if such exclusion/process can be found consistent with the Coastal Act and LCP coastal resource protection provisions.

Program C-OSRC-11-P2: Revise the zoning districts of the Coastal Zoning Ordinance to reduce the potential for conversion of coastal commercial timberlands in units of commercial size to non-timber uses or their division into units of non-commercial size and implement the Timber land use category to be consistent with California Coastal Act Section 30243 :

“The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.”

11.3 Initiative

Initiative C-OSRC-11-I1: Request that the State Board of Forestry develop and enforce Special Treatment Area stocking and clear cutting standards on all forest lands in the Coastal Zone.

12. MINERAL RESOURCES

Within the Coastal Zone, Bodega Bay Quarry, formerly Cheney Gulch Quarry, was the only mining operation within the coastal zone. This site is located on a sandstone deposit identified by the most recent State Mining and Geology Board Designation Report as regionally significant resource for construction grade aggregate and is classified by the State Mining and Geology Board as a local priority site for aggregate production. This designation requires Sonoma County to manage the conservation and regulate development of identified mineral deposits such as construction grade aggregate.

The existing mine had operated for approximately 60 years, but has been inactive and reclamation was completed in 2021.

The potential impacts of mining activities include, but are not limited to, noise, dust, air emissions, truck traffic, erosion, siltation, and loss of agricultural land. These impacts create potential conflicts with nearby residential, agricultural, and recreational uses and may damage or degrade terrestrial and marine ecosystems in the coastal zone. Reopening the quarry at Cheney Gulch would require these impacts to be fully mitigated as part of the permitting process.

12.1 Goal, Objectives and Policies

GOAL C-OSRC-12: Provide for production of aggregates to meet local needs and contribute the County's share of demand in the North Bay production-consumption region. Manage aggregate resources to avoid needless resource depletion and ensure that extraction results in the fewest environmental impacts.

Objective C-OSRC-12.1: Use the Sonoma County Aggregate Resources Management Plan to establish priority areas for aggregate production and to establish detailed policies, procedures, and standards for mineral extraction.

Objective C-OSRC-12.2: Minimize and mitigate the adverse environmental effects of mineral extraction and reclaim mined lands.

Policy C-OSRC-12a: Consider areas designated by the State Mining and Geology Board as regionally significant for construction grade aggregate as priority sites for aggregate production and mineral extraction. Within the Coastal Zone, this is limited to sandstone deposits located in Cheney Gulch, approximately 2.5 miles east of Bodega Bay in western Sonoma County.² Review requests for designation of additional areas for consistency with the Coastal Act, Surface Mining and Reclamation Act, Sonoma County Local Coastal Plan, and the Sonoma County Aggregate Resources Management (ARM) Plan.

Policy C-OSRC-12b: Review aggregate production projects for impacts coastal resource, including, but not limited to preservation of visual resources, and impacts to natural resources such as topsoil salvage loss, vegetation removal, impacts to terrestrial and marine ecosystems, noise, water quality, maintenance and safety of Highway 1, energy consumption, and air quality. Additionally, the project must demonstrate that an economic need exists for aggregate materials produced at the site and that full reclamation of the site is feasible and that reclamation will fully restore ecological functions and values of the site to that which existed prior to any mining operation.

Policy C-OSRC-12c: Review projects that are on or near sites designated Mineral Resources in the Aggregate Resources Management Plan for compatibility with future mineral extraction.

13. ENERGY RESOURCES POLICY

Residents, visitors, and businesses to the Sonoma Coast consume energy in many forms and for many uses, but primarily oil and gas for transportation due to the reliance on automobiles, lack of public transit, and long distances to destinations.

² This area is identified as Sector Q in the 1987 Department of Conservation, Division of Mines and Geology report, entitled *Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area: Special Report 146, Part 3: Classification of Aggregate Resource Areas: North San Francisco Bay Production-Consumption Region*.

Energy production in Sonoma County is dominated by the electricity generated from geothermal resources at The Geysers. This source generates about 5,000,000 megawatt-hours per year. Additional sources include hydroelectric power, methane gas, and solar photovoltaics. Additional opportunities exist for individual and small scale production from other renewable energy sources such as solar, wind, and biomass, but these sources must be developed in a way that coastal resources are not impacted. Small scale solar energy production has the lowest potential for impacts, as wind energy will impact visual resources and create hazards for bird-avian species among others. Small scale biomass energy generation may offer future potential, but cost and limited local availability of biomass fuels in the Coastal Zone make it uncertain if this energy source is viable in the Coastal Zone.

Climate Change

Changes in temperature, precipitation, sea level, and the frequency and severity of extreme storm events will likely affect how much energy is produced, delivered, and consumed in the United States.

Energy plays an important role in many aspects of our lives. For example, we use electricity for lighting and cooling. We use fuel for transportation, heating, and cooking. Our energy production and use is interconnected with many other aspects of modern life, such as water consumption, use of goods and services, transportation, economic growth, land use, and population growth. Our production and use of energy (most of which comes from fossil fuels) also contributes to climate change, accounting for more than 80 percent of U.S. greenhouse gas emissions.

Temperature, Energy Demand, and Energy Supply. Increases in temperature will likely change how much energy we consume, as well as our ability to produce electricity and deliver it reliably. In a warmer climate, Americans would use more electricity for air conditioning and less natural gas, oil, and wood for heating. Heating demand would decrease the most in the northern United States, and cooling demand would increase.

Water Availability and Energy. Energy is needed to pump, transport, and treat drinking water and wastewater. Rising temperatures, increased evaporation, and drought may increase the need for energy-intensive methods of providing drinking and irrigation water such as desalinization. This process makes ocean water potable by removing salt, but the process consumes significant amounts of energy and disposal of waste salt may disrupt marine ecosystems.

Temperature, Energy Demand, and Energy Supply. Increases in temperature will likely increase energy demand, as well as our ability to produce electricity and deliver it reliably. As the climate warms and California moves towards lower carbon energy sources, electrical demand for heating, cooling, and transportation will increase. Changes in energy demand will likely affect greenhouse gas emissions, but the net effect depends on which energy sources are used for electricity and heating.

Warming is likely to increase summer peak electricity demand in most regions of California, including the Sonoma Coast. While California is moving rapidly towards renewable energy sources, a significant amount of energy in the state is still supplied by fossil fuel and nuclear power plants that rely on large-scale supplies of water for cooling. The colder the water, the more efficient the generator.

Hydroelectricity (electricity produced by running water) is an important source of energy in California. Changes in precipitation, increased risk of drought, reduced snowpack, and changes in the timing of snowmelt in spring will reduce hydroelectric energy production.

Rising temperatures, increased evaporation, and drought will increase the need for energy-intensive methods of providing drinking and irrigation water. For example, desalinization plants can convert salt water into freshwater, but require large amounts of electrical energy.

Sea Level Rise, Storm Surge, and Extreme Events. A large portion of U.S. energy infrastructure is located in coastal areas and therefore sensitive to sea level rise and storm surge. For example, fuel ports and the generation and transmission lines that bring electricity to major urban coastal centers are at risk. Changes in the frequency and severity of storms and other extreme events may also damage energy infrastructure. Disruptions to energy supply due to compromised infrastructure can affect many activities, depending on the destination and final use of the fuel. Disruptions in the supply of oil would affect the production of transportation fuels. Disruptions in natural gas supply could affect electricity generation, residential and commercial heating, and industrial processes. Additional information on the coastal risks to climate and sea level rise related hazards can be found on the Public Safety Element of this Local Coastal Program.

Transportation Impacts. Damage to the road network in the Coastal Zone will increase as sea level rises and storm events become increasingly severe. Wildfire events are increasing in size and frequency. Significant portions of Highway 1 are at risk from sea level rise, wildfire, and landslides. Past efforts to armor and reinforce Highway 1 against the impacts of climate change have proven ineffective, and a program of managed retreat is necessary to protect this critical transportation link.

Wind Speed, Cloud Cover, and Renewable Energy. Climate change could impact wind and solar power, but there is little research in this area. Impacts will depend on how wind and cloud cover patterns change, which are very difficult to project using current climate models.

Energy Conservation and Demand Reduction

Reducing energy demand can be achieved in many ways. Land use strategies include compact development form and promoting mixed uses. Energy used for transportation can be reduced through increased use of pedestrian and bicycle travel, public transit, and renewable energy sources. Other strategies include improved construction standards and agricultural practices, solid waste management, and education.

13.1 Goal, Objectives, and Policies

GOAL C-OSRC-13: Promote energy conservation and increase energy supply by increased reliance on renewable energy sources that will reduce greenhouse gas emissions.

Objective C-OSRC-13.1: Increase energy conservation and improve energy efficiency in government operations, especially facilities that provide coastal access.

Objective C-OSRC-13.2: Encourage residents and businesses to increase energy conservation and improve energy efficiency.

Objective C-OSRC-13.3: Increase the development of renewable energy and distributed energy generation systems and facilities for state and local government operations including, but not limited to state and regional parks, fire stations, and Caltrans maintenance facilities.

Objective C-OSRC-13.4: Promote the use of renewable energy and distributed energy generation systems and facilities in new development.

Objective C-OSRC-13.5: Establish guidelines and standards for development of energy generation systems and facilities.

Objective C-OSRC-13.6: Encourage exploration of the extent and potential use of hot water geothermal resources.

Policy C-OSRC-13a: The latest green building certification standards, such as the CalGreen Tier 1 standards, shall be used for new development, including redevelopment.

Policy C-OSRC-13b: Require the water and wastewater service providers to reduce energy demand from their operations.

Policy C-OSRC-13c: Support project applicants in incorporating cost effective energy efficiency design that exceeds State standards.

Policy C-OSRC-13d: Manage timberlands for their value both in timber production and offsetting greenhouse gas emissions.

Policy C-OSRC-13e: The use of low temperature geothermal resources shall be allowed in all land use designations if it can be demonstrated that it will be compatible with surrounding land uses, not degrade coastal views, not lead to significant landform alteration, and not have an adverse impact on Environmentally Sensitive Habitat Areas.

Policy C-OSRC-13f: Require development of renewable energy and distributed energy generation systems and facilities for state and local government facilities and operations.

Policy C-OSRC-13g: Encourage and promote the use of renewable energy and distributed energy generation systems and facilities that are integral to and contained within existing and new development (e.g., solar thermal installations to provide space and water heating or solar electric installations for small commercial buildings or residences in rural areas, small wind energy systems to provide electricity to agricultural accessory structures, etc.) that do not impact ESHA, public access, or coastal views.

13.2 Program

Program C-OSRC-13-P1: Develop a Greenhouse Gas Emissions Reduction Program to include the following as a high priority:

- (1) A methodology to measure baseline and future Vehicle Miles Traveled (VMT) and greenhouse gas emissions;
- (2) Targets for various sectors including existing development and potential future development of commercial, industrial, residential, transportation, and utility sources;

- (3) Collaboration with local, regional, and State agencies and other community groups to identify effective greenhouse gas reduction policies and programs in compliance with new state and federal standards;
- (4) Adoption of development policies or standards that substantially reduce emissions for new development;
- (5) Creation of a task force of key department and agency staff to develop action plans, including identified capital improvements and other programs to reduce greenhouse gases and a funding mechanism for implementation; and
- (6) Monitoring and annual reporting of progress in meeting emission reduction targets.

14. AIR RESOURCES POLICY

Air pollutants include both gases and particulates. The automobile is the most common source of smog. Particulates come from residential, industrial, and agricultural sources, mainly during grading and construction activities. Wildfires contribute large amounts of air pollutants, but this emission can only be controlled indirectly by fire fuel management and improved fire suppression.

Sources of air pollution are both stationary and mobile. Mobile sources, such as motor vehicles, produce most of the air pollutants in the County. Air pollution from mobile sources is regulated by the State through exhaust emissions standards, but can be reduced by proper management of the transportation system. The Geysers power plants are the largest stationary pollutant source. Other stationary sources include mining operations, industrial and agricultural activities, and lumber mills. Residential wood stoves are a contributor to particulate levels in urban areas in Northern Sonoma County.

Improved air quality and decisions on air quality standards and mitigation measures are balanced with competing interests for production efficiency, energy costs, and ease of transportation while meeting all the requirements of the state and federal Clean Air Acts.

The southern section of the Coastal Zone is within the jurisdiction of the Bay Area Air Quality Management District (Bay Area Air District) and the northern portion of the Coastal Zone is within the Northern Sonoma County Air Pollution Control District (Northern Air District).

The Bay Area Air District is currently designated as a nonattainment area for state and federal ozone standards, the state particulate matter (PM) 10 standard, and the state and federal PM 2.5 standard. The Bay Area Air District has adopted an Ozone Attainment Plan and a Clean Air Plan in compliance with Federal and State Clean Air Acts. These plans include measures to achieve compliance with both ozone standards. The plans deal primarily with emissions of ozone precursors (nitrogen oxides (NO_x) and volatile organic compounds, also referred to as Reactive Organic Gases (ROG)).

The Northern Air District does not have an adopted air quality plan because it is in attainment for all federal and state criteria pollutants, although the District occasionally exceeds state standards for PM₁₀.

14.1 Goal, Objectives and Policies

GOAL C-OSRC-14: Preserve and maintain good air quality and provide for an air quality standard that will protect human health and preclude crop, plant, and property damage in accordance with the requirements of the state and federal Clean Air Acts.

Objective C-OSRC-14.1: Minimize air pollution and greenhouse gas emissions.

Objective C-OSRC-14.2: Encourage reduced motor vehicle use as a means of reducing resultant air pollution.

The following policies, in addition to those of the Circulation and Transit Element, shall be used to achieve these objectives:

Policy C-OSRC-14a: Development projects shall be designed to minimize air pollutant emissions. Direct emissions shall be reduced by using construction techniques that decrease the need for space heating and cooling.

Policy C-OSRC-14b: Proposed changes in land use shall be denied unless they are consistent with projected air quality levels.

Policy C-OSRC-14c: Any proposed new source of toxic air contaminants or odors shall provide adequate buffers to protect sensitive receptors and comply with applicable health standards. Buffering techniques such as landscaping, setbacks, and screening in areas where such land uses abut one another shall be used to promote land use compatibility.

Policy C-OSRC-14d: Residential units may only install fireplaces, woodstoves, or any other residential wood-burning devices that meet the grams-per-hour Environmental Protection Agency or Oregon Department of Environmental Quality wood heater emissions limits (exempt devices are not allowed).

OPEN SPACE AND RESOURCE CONSERVATION ELEMENT REFERENCES

Cinzano, P., F. Falchi, and C.D. Elvidge. 2001. *The first world atlas of the artificial night sky brightness*. Monthly Notice of the Royal Astronomical Society. 328:689-707.

Evans Ogden, L. J. 1996. *Collision course: the hazards of lighted structures and windows to migrating birds*. Special report for World Wildlife Fund Canada and Fatal Light Awareness Program. 53 pp.

Gauthreaux, Sidney A., Jr., and Carroll G. Belser. 2006. *Effects of artificial night lighting on migratory birds*. In: Rich, C. and Longcore, T. (Eds.) *Ecological Consequences of Artificial Night Lighting*. Pp. 67- 93. Island Press, Washington.

- Laist, D. W., 1997. Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records. In: Coe, J. M. and D. B. Rogers (Eds.), *Marine Debris -- Sources, Impacts and Solutions*. Springer-Verlag, New York, pp. 99-139.
- Longcore, T., and C. Rich. 2004. Ecological light pollution. *Frontiers in Ecology and the Environment* 2(4):191–198.
- Moore, C. J., S. L. Moore, M. K. Leecaster, and S. B. Weisberg, 2001. *A comparison of plastic and plankton in the North Pacific Central Gyre*. In: *Marine Pollution Bulletin* 42, 1297-1300.
- Rich, C. and T. Longcore. (eds.). 2006. *Ecological consequences of artificial night lighting*. Island Press, Washington, D.C.
- Sawyer, J. O., T. Keeler-Wolf, and J. Evens. 2009. *A manual of California vegetation*. Second edition. California Native Plant Society, Sacramento CA. 1300 pp.

Public Access Element: Table of Contents

Public Access Element.....	3
Introduction	3
Purpose.....	4
Relationship to Other Elements	4
Relationship to California Constitution.....	4
Article X Water [Section 4]:	4
Relationship to California Coastal Act.....	5
Section 30001.5 Legislative findings and declarations; goals.....	5
Section 30210 Access; recreational opportunities; posting	5
Section 30211 Development not to interfere with access.....	5
Section 30212 New development projects	5
Section 30214 Implementation of public access policies; legislative intent.....	6
Section 30220 Protection of certain water-oriented activities	7
Section 30221 Oceanfront land; protection for recreational use and development	7
Section 30222 Private lands; priority of development purposes	7
Section 30222.5 Oceanfront lands; aquaculture facilities; priority	7
Section 30223 Upland areas	8
Section 30224 Recreational boating use; encouragement; facilities	8
Section 30240 Environmentally sensitive habitat areas; adjacent developments.....	8
Section 30604 Coastal development permit; issuance prior to certification of the local coastal program; finding that development in conformity with public access and public recreation policies; housing opportunities for low and moderate income persons	8
Section 30609.5 State lands between the first public road and the sea; sale or transfer	9
Legal Basis for Public Access	10
Public Trust	10
California Constitution	11
Proposition 20.....	11

California Coastal Act	11
California Coastal Trail	13
Public Access Plan	14
North Coast Access.....	16
South Coast Access	16
Facilities Providing Public Access.....	17
1. Public Access Acquisition	17
1.1 Goal, Objectives, and Policies.....	17
2. California coastal Trail	21
2.1 Goal, Objectives, and Policies.....	21
2.2 Program.....	24
3. Access Planning and Development	24
3.1 Goal, Objectives, and Policies.....	26
3.2 Programs	31
3.3 Initiatives	31
4. Parking	31
4.1 Goal, Objectives, and Policies.....	32
4.2 Programs	33
5. Facility Management and Operation.....	33
5.1 Goal, Objective, and Policies	34
6. Recreational Boating	36
6.1 Goal, Objectives, and Policies.....	36
6.2 Initiatives	36

Public Access Element

INTRODUCTION

One of the highest priorities in the California Coastal Act of 1976 is the mandate to maximize public access to the coast and protect oceanfront land for recreational use where consistent with protection of coastal natural resources. Provisions in Chapter 3 of the Coastal Act (Sections 30210-30214) set forth requirements for the provision of public access along the Sonoma Coast:

Coastal development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization;

Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects;

Public access facilities shall be distributed throughout the Sonoma Coast to prevent overcrowding or overuse.

Throughout this element, "public access" shall mean access to and along the coast and ocean as defined by Chapter 3 of the Coastal Act.

While public access is a high priority use, Coastal Act Section 30240 requires that development is subordinate to protection of environmentally sensitive habitat areas, and that recreation areas shall be compatible with and not adversely impact these resources:

"Section 30240 Environmentally sensitive habitat areas; adjacent developments

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas."

Sonoma County's coastline stretches over fifty-five miles, and its Coastal Zone reaches inland over six miles. More than one-quarter of the land area on the coast is in government ownership, but not all of that land is open to the public with appropriate facilities. The Sonoma County Regional Parks Department (Sonoma County Regional Parks) and the State Department of Parks and Recreation (State Parks) own the majority of the developed facilities and undeveloped land along the coastline. Several other public agencies and private organizations operate facilities open to the public, such as the 5,600 acre Jenner Headlands Preserve.

Summer is the busiest season for coastal parks, especially during weekends and holiday weekends. Most beaches are unimproved and do not charge entry or parking fees, making it difficult to determine how many people visit the Sonoma Coast, but estimates from State and Regional Parks indicate that somewhere between 600,000 and one million people annually, with the highest use in

the area south of the Russian River, including Jenner Visitor Center, Goat Rock Beach, Wright's Beach, Portuguese Beach, Salmon Creek Beach, Bodega Head, and Doran Beach. Bodega Bay is also heavily used for commercial and sport fishing, and the bay itself is a nationally known wind surfing and kite boarding site.

PURPOSE

The purpose of the Public Access Element is to protect and defend the public's constitutionally guaranteed rights of access to and along the Sonoma Coast as well as uphold the requirements of the Coastal Act. The Public Access Element establishes policies to protect existing access areas, and identifies future access areas through the Public Access Plan found in Appendix B.

RELATIONSHIP TO OTHER ELEMENTS

The Public Access Element is coordinated with the Land Use, Open Space and Resource Conservation, Agricultural Resources, Circulation & Transit, and Public Facilities and Services Elements. Following are the relationships among these Elements:

- (1) The Land Use Element identifies how public access and outdoor recreation facilities will relate to land use types, and provides policies for establishing new park and recreation facilities.
- (2) The Open Space and Resource Conservation Element includes design and planning policies addressing Scenic Resources and protection of natural resources that apply to outdoor recreational facility acquisition and development.
- (3) The Public Facilities and Services Element include policies that address public services related to outdoor park and recreation facilities.
- (4) The Agricultural Resources Element identifies policies that address the protection and enhancement of agriculture that apply to surrounding land uses, including outdoor recreation facilities.
- (5) The Circulation & Transit Element identifies transportation policies for accessing recreational facilities as well as bikeways that are critical transportation and recreational features connecting communities and public facilities.

RELATIONSHIP TO CALIFORNIA CONSTITUTION

Article X Water [Section 4]:

No individual, partnership, or corporation, claiming or possessing the frontage or tidal lands of a harbor, bay, inlet, estuary, or other navigable water in this State, shall be permitted to exclude the right of way to such water whenever it is required for any public purpose, nor to destroy or obstruct the free navigation of such water; and the Legislature shall enact such laws as will give the most liberal construction to this provision, so that access to the navigable waters of this State shall be always attainable for the people thereof.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

Section 30001.5 Legislative findings and declarations; goals

The Legislature further finds and declares that the basic goals of the state for the coastal zone are to:

- (a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources.
- (b) Ensure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state.
- (c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.
- (d) Ensure priority for coastal-dependent and coastal-related development over other development on the coast.
- (e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

Section 30210 Access; recreational opportunities; posting

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 Development not to interfere with access

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 New development projects

- (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.
- (b) For purposes of this section, "new development" does not include:
 - (1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.

(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.

(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.

(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

Section 30212.5 Public facilities; distribution

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30213 Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.

Section 30214 Implementation of public access policies; legislative intent

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

(1) Topographic and geologic site characteristics.

- (2) The capacity of the site to sustain use and at what level of intensity.
 - (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.
 - (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.
- (b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.
- (c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

Section 30220 Protection of certain water-oriented activities

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221 Oceanfront land; protection for recreational use and development

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30222 Private lands; priority of development purposes

The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

Section 30222.5 Oceanfront lands; aquaculture facilities; priority

Oceanfront land that is suitable for coastal dependent aquaculture shall be protected for that use, and proposals for aquaculture facilities located on those sites shall be given priority, except over other coastal dependent developments or uses.

Section 30223 Upland areas

Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30224 Recreational boating use; encouragement; facilities

Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

Section 30240 Environmentally sensitive habitat areas; adjacent developments

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30604 Coastal development permit; issuance prior to certification of the local coastal program; finding that development in conformity with public access and public recreation policies; housing opportunities for low and moderate income persons

- (a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with Chapter 3 (commencing with Section 30200) and that the permitted development will not prejudice the ability of the local government to prepare a local coastal program that is in conformity with Chapter 3 (commencing with Section 30200). A denial of a coastal development permit on grounds it would prejudice the ability of the local government to prepare a local coastal program that is in conformity with Chapter 3 (commencing with Section 30200) shall be accompanied by a specific finding which sets forth the basis for that conclusion.
- (b) After certification of the local coastal program, a coastal development permit shall be issued if the issuing agency or the commission on appeal finds that the proposed development is in conformity with the certified local coastal program.
- (c) Every coastal development permit issued for any development between the nearest public road and the sea or the shoreline of any body of water located within the coastal zone shall include a specific finding that the development is in conformity with the public access and public recreation policies of Chapter 3 (commencing with Section 30200).

(d) No development or any portion thereof which is outside the coastal zone shall be subject to the coastal development permit requirements of this division, nor shall anything in this division authorize the denial of a coastal development permit by the commission on the grounds the proposed development within the coastal zone will have an adverse environmental effect outside the coastal zone.

(e) No coastal development permit may be denied under this division on the grounds that a public agency is planning or contemplating to acquire the property on, or property adjacent to the property on, which the proposed development is to be located, unless the public agency has been specifically authorized to acquire the property and there are funds available, or funds which could reasonably be expected to be made available within one year, for the acquisition. If a permit has been denied for that reason and the property has not been acquired by a public agency within a reasonable period of time, a permit may not be denied for the development on grounds that the property, or adjacent property, is to be acquired by a public agency when the application for such a development is resubmitted.

(f) The commission shall encourage housing opportunities for persons of low and moderate income. In reviewing residential development applications for low- and moderate-income housing, as defined in paragraph (3) of subdivision (h) of Section 65589.5 of the Government Code, the issuing agency or the commission, on appeal, may not require measures that reduce residential densities below the density sought by an applicant if the density sought is within the permitted density or range of density established by local zoning plus the additional density permitted under Section 65915 of the Government Code, unless the issuing agency or the commission on appeal makes a finding, based on substantial evidence in the record, that the density sought by the applicant cannot feasibly be accommodated on the site in a manner that is in conformity with Chapter 3 (commencing with Section 30200) or the certified local coastal program.

(g) The Legislature finds and declares that it is important for the commission to encourage the protection of existing and the provision of new affordable housing opportunities for persons of low and moderate income in the coastal zone.

(h) When acting on a coastal development permit, the issuing agency, or the commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state.

Section 30609.5 State lands between the first public road and the sea; sale or transfer

(a) Except as provided in subdivisions (b) and (c), no state land that is located between the first public road and the sea, with an existing or potential public accessway to or from the sea, or that the commission has formally designated as part of the California Coastal Trail, shall be transferred or sold by the state to any private entity unless the state retains a permanent property interest in the land adequate to provide public access to or along the sea. In any transfer or sale of real property by a state agency to a private entity or person pursuant to this section, the instrument of conveyance created by the state shall require that the private entity or person or the entity or person's successors or assigns manage the property in such a way as to ensure that existing or potential public access is not

diminished. The instrument of conveyance shall further require that any violation of this management requirement shall result in the reversion of the real property to the state.

(b) This section shall not apply to the transfer of state land to a non-profit organization that exists for the purposes of preserving lands for public use and enjoyment and meets the requirements of subdivision (b) of Section 831.5 of the Government Code.

(c) Notwithstanding the provisions of subdivision (a), state lands between the first public road and the sea, that are under the possession and control of the Department of Parks and Recreation or the State Coastal Conservancy, may be transferred or sold if the department or the conservancy makes one or more of the following findings at a noticed public hearing relating to the transfer or sale of the property:

- (1) The state has retained or will retain, as a condition of the transfer or sale, permanent property interests on the land providing public access to or along the sea.
- (2) Equivalent or greater public access to the same beach or shoreline area is provided for than would be feasible if the land were to remain in state ownership.
- (3) The land to be transferred or sold is an environmentally sensitive area with natural resources that would be adversely impacted by public use, and the state will retain permanent property interests in the land that may be necessary to protect, or otherwise provide for the permanent protection of, those resources prior to or as a condition of the transfer or sale.
- (4) The land to be transferred or sold has neither existing nor potential public accessway to the sea.

(d) Nothing in this section shall be construed to interfere with the management responsibilities of state resource agencies, including, but not limited to, the responsibilities to ensure public safety and implement the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code).

(e) As used in this section, "state land" means any real property in which the state or any state agency has an ownership interest including, but not limited to, a fee, title, easement, deed restriction, or other interest in land. It does not include land in which a city, county, city and county, or district has an ownership interest.

(f) Nothing in this section is intended to restrict a private property owner's right to sell or transfer private property.

LEGAL BASIS FOR PUBLIC ACCESS

Public Trust

California joined the Union on September 9, 1850 and adopted English Common Law, establishing the public's right to access and use of California's waterways for navigation, fishing, boating, natural habitat protection and other water-oriented activities. Court decisions have broadened these rights to include recreation, preservation of scenic values, and protection of coastal ecosystems. Navigable waterways, tidelands, and submerged lands within 3 miles of the coast are held in public trust by California and administered by the State Lands Commission for the benefit of all people.

California Constitution

The public's right of access to the tidelands is guaranteed by the California Constitution. Article X, Section 4 of the California Constitution provides:

“No individual, partnership, or corporation, claiming or possessing the frontage or tidal lands of a harbor, bay, inlet, estuary, or other navigable water in this State, shall be permitted to exclude the right of way to such water whenever it is required for any public purpose, nor to destroy or obstruct the free navigation of such water; and the Legislature shall enact such laws as will give the most liberal construction to this provision, so that access to the navigable waters of this State shall be always attainable for the people thereof.”

Proposition 20

The California Coastal Zone Conservation Act of 1972 (Proposition 20) was a temporary measure passed by the voters of the state as a ballot initiative. It set up temporary regional Coastal Commissions with permit authority and a directive to prepare a comprehensive coastal plan. The coastal commissions under Proposition 20 lacked the authority to implement the Coastal Plan but were required to submit the Plan to the legislature for “adoption and implementation.” One of the key provisions of Proposition 20 was clarifying the public right to ocean access.

California Coastal Act

In 1976, the California legislature passed the Coastal Act to carry out the provisions of Proposition 20, creating the California Coastal Commission and establishing that development may not interfere with the public's right of access to the sea, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation. Section 30212 requires that new development provide public access and Section 30214 provides guidance identifying and developing public access areas and related recreational facilities.

Section 30212 New development projects

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

(b) For purposes of this section, "new development" does not include:

(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.

(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.

(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.

(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

Section 30214 Implementation of public access policies; legislative intent

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

(1) Topographic and geologic site characteristics.

(2) The capacity of the site to sustain use and at what level of intensity.

(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.

(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

California Coastal Trail

The California Coastal Act required local jurisdictions to identify an alignment a continuous interconnected public trail system along the California coastline. Coastal Act Section 30609.5 states that “no state land that is located between the first public road and the sea, with an existing or potential public accessway to or from the sea, or that the commission has formally designated as part of the California Coastal Trail, shall be transferred or sold by the state to any private entity unless the state retains a permanent property interest in the land adequate to provide public access to or along the sea.

Senate Bill 908 (Chesboro) charged the Coastal Conservancy in 2001 to prepare a plan, in cooperation with the Coastal Commission and State Parks Department, describing how the Coastal Trail can be completed. The plan “Completing the California Trail” was published by the California Coastal Conservancy in 2003 and established the following principles of alignment (Pages 15-16 of the Plan) that apply to all of the different components of the California Coastal Trail:

“Proximity

Wherever feasible, the Coastal Trail should be within sight, sound, or at least the scent of the sea. The traveler should have a persisting awareness of the Pacific Ocean. It is the presence of the ocean that distinguishes the seaside trail from other visitor destinations.

Connectivity

The trail should effectively link starting points to destinations. Like pearls on a string, our parks, ports, communities, schools, trailheads, bus stops, visitor attractions, inns, campgrounds, restaurants, and other recreational assets are strung along the edge of our coast. They are already connected by roads, streets, and highways. Our challenge is to create alternative nonautomotive connections that are sufficiently appealing to draw travelers out of their automobiles.

Integrity

The Coastal Trail should be continuous and separated from motor traffic. Continuity is vitally important: if a chain is missing a link, it is useless. Where such separation is absent, the safety, pleasure, and character of the trail are impaired. Appropriate separation can take many forms. Substantial horizontal distance is generally the most desirable, thus avoiding the sight, sound, and scent of the internal combustion engine. Separation is also possible through vertical displacements of gradient, underpasses, vegetative buffer strips, barrier rails, and other means.

Respect

The trail must be located and designed with a healthy regard for the protection of natural habitats, cultural and archaeological features, private property rights, neighborhoods, and agricultural operations along the way. Manmade features such as boardwalks, guidewires, and fencing can be used to protect wetlands, dunes, archaeological sites, and agricultural fields. Screening fences and vegetative barriers not only protect residential privacy but may also minimize disturbance of sensitive bird habitats.

Respect also requires understanding that this trail will exist in a context of other trail designations, including the Pacific Coast Bike Route, Humboldt Bay Trail, Lost Coast Trail, San Mateo Coastside Trail, Monterey Bay Sanctuary Scenic Trail, Santa Monica Mountains Backbone Trail, Los Angeles South Bay Bicycle Trail, etc. Providing a clear identity for the Coastal Trail on maps, signs, and brochures should not compete with or displace these existing trail identities. Where the Coastal Trail alignment incorporates or is a component of these other trails, the Coastal Trail should be no more than a concurrent designation.

Feasibility

To achieve timely, tangible results with the resources that are available, both interim and long-term alignments of the Coastal Trail will need to be identified.”

In collaboration with the Coastal Conservancy, in this report, the Coastal Commission identified the following criteria for development of the Coastal Trail:

- (1) Provide a continuous walking and hiking trail as close to the ocean as possible;
- (2) Provide maximum access for a variety of non-motorized uses by utilizing parallel trail segments where feasible;
- (3) Maximize connections to existing and proposed local trail systems;
- (4) Ensure that the trail has connections to trailheads, parking areas, transit stops, inland trail segments, etc. at reasonable intervals;
- (5) Maximize ocean views and scenic coastal vistas; and,
- (6) Provide an educational experience where feasible through interpretive programs, kiosks, and other facilities

The intent of the Local Coastal Plan is to provide a continuous braided trail system that contains parallel routes and point access to accommodate a wide range of users. Figures C-PA-1a-k show the existing and proposed segments of the California Coastal Trail.

“Existing” means the trail has been constructed or that significant portions of a segment are open for public use. Figures C-PA-1a-k show these locations in their existing location.

“Proposed” means the approximate location of the trail alignment has been identified as described in the Public Access Plan, or that an alignment between two end points has not been identified or that several alternative alignments need to be evaluated. For illustration purposes, future segments are shown along Highway 1, but the chosen alternative should be as close to the ocean as possible. Figures C-PA-1a-k show the general location of proposed access rather than an exact location to allow flexibility in planning and developing proposed access points.

PUBLIC ACCESS PLAN

The Public Access Plan in **Appendix B** encompasses recommendations from the previous Local Coastal Plan; and State Parks and County Regional Parks General Plans, Master Plans, and Management Plans; and has been supplemented with input from Sonoma County Agriculture and Open Space District, local and national land trusts with holdings in the Coastal Zone, and comments

from public workshops. This information provides the framework for recommending a range of public access areas along the Sonoma Coast, consistent with the mandates of the California Coastal Act.

The Public Access Plan is based on both local and regional needs. Because of the exceptional quality and significance of its natural resources on a local, state, and national level, the Coastal Zone contains a greater proportion of the resource-based recreational facilities and opportunities than found in other areas of Sonoma County. Therefore, the equitable distribution of recreational opportunities and facilities along and between the North and South Coasts is a goal for State Parks and County Regional Parks reflected in the Public Access Plan. The equitable distribution of recreational facilities is influenced less by resident population densities and more by providing the entire County population with a range of recreational experiences without overly impacting any one access area too much.

“Existing” means the trail has been constructed or that portions of a segment are open for public use. “Existing” includes both fully developed access points as well as access points that are in development but provide some level of public access or use while in development. **Figures C-PA-1a-k** show these locations in their existing location.

“Proposed” means the nearest public point to the approximate location of the trail alignment described in the Public Access Plan, or that an alignment between two end points has not been identified or that several alternative alignments need to be evaluated. For illustration purposes, future segments with an undetermined location are shown along Highway 1, but the chosen alternative should be as close to the ocean as possible. Figures C-PA-1a-k show the general location of proposed access rather than an exact location to allow flexibility in planning and developing proposed access points.

State Facilities. The proposed improvements and programs for State facilities identified in the Public Access Plan are driven by a series of California Department of Parks and Recreation programs and planning documents. Criteria for access improvements, along with the involvement of natural and cultural resources, are provided through Division 5 of the State of California Public Resources Code and the California Department of Parks and Recreation’s Operations Manual. Recommendations for access improvements to meet accessibility guidelines are mandated through the Consent Decree from *Tucker v. The State of California Department of Parks and Recreation*. Proposals for specific State facilities are identified based on the need to provide safe and quality public access to facilities and protect park resources.

Proposals identified for Sonoma Coast State Park are an outgrowth of guidance provided in the Sonoma Coast State Park General Plan (2004). Proposals associated with the Carrington Property are contained in the Carrington Property Immediate Public Use Facilities Plan (2008, rev. 2010) and subsequent Mitigated Negative Declaration (2010).

County Facilities. Access areas to be developed by Sonoma County Regional Parks facilities identified in the Public Access Plan are based on the considerations and standards described below under Planning and Development Considerations.

North Coast Access

The availability of public access within the Coastal Zone from Gualala to Jenner is quite varied. Some large sections of the coastline and upland areas of the Coastal Zone are open to the public, including Gualala Point Regional Park, Salt Point State Park, Fort Ross Historic State Park, and North Jenner Beach. At other large sections of the coast public access is limited, including in the area of Stewarts Point, Timber Cove, High Cliffs, and The Sea Ranch community. North Coast public access points and facilities with public access are shown in Figures C-PA-1a-g.

Access to the Russian River estuary between Duncans Mills and the river mouth is limited to certain areas, with the mouth accessible from Jenner and the Goat Rock area. From the Bridgehaven Bridge to Duncans Mills, river access is limited to the Willow Creek Environmental Campground, State Parks visitor center in Jenner, and small informal turnout areas. A public access point, subject to fees, is available in Duncans Mills at the private Cassini Ranch Campground.

There are about 40 miles of trail and over 80 parkland public access points and easements on the North Coast. The use levels tend to drop off from Russian Gulch to the north. Jenner, the southernmost area in California where recreational abalone diving is legal, is a significant recreational draw.

The California Coastal Trail on the North Coast is planned to be a continuous trail alignment extending over 40 miles, connecting Mendocino County with the Russian River estuary. Approximately half of the California Coastal Trail alignment is in public ownership and developed, with numerous gaps in the trail alignment, including the gap between Gualala Point Regional Park and Salt Point State Park.

South Coast Access

There are a large number of public access points along the South Coast, especially in the Bodega Bay area. There are about 21 miles of trails and over 60 parkland public access points and easements on the South Coast. South Coast public access points and facilities with public access are shown in Figures C-PA-1h-k.

The majority of the coastal property from the Russian River estuary to Bodega Head is a part of Sonoma Coast State Park and provides numerous developed and informal access points. Acquisition of the Willow Creek watershed, Wright Hill Ranch, and the Carrington Ranch by public agencies will eventually provide extensive public access to the upland areas north of Salmon Creek in the Coastal Zone. Public access to the Bodega Bay tidelands is available at the County-owned facilities of Spud Point Marina, Westside Park, Bird Walk Coastal Access Trail, and Doran Regional Park. Two public access trails in the Bodega Harbour Subdivision were dedicated to County Regional Parks providing access along the coast and Shorttail Gulch.

Further south, the Sonoma Land Trust and The Wildlands Conservancy own property adjacent to the Estero Americano. At this point access is limited by these organization to tours and interpretive programs.

Facilities Providing Public Access

<i>Type of Facility</i>	<i>Examples</i>	<i>Description/Purpose</i>
State Marine Managed Areas (Marine Reserves and Marine Conservation Areas)	Del Mar Landing, Bodega Bay, Gerstle Cove, Russian River estuary	Support scientific research, education, and recreation.
Open Space Preserves	Jenner Headlands Preserve, Estero Americano Coast Preserve	Lands that support passive recreation
State and County Parks	Doran Beach, Sonoma Coast State Beach,	Provide parking, camping, bathrooms, showers, maintained beaches, and other amenities.
Regional Trails	Kortum Trail, Pomo Canyon, Bodega Head, Bodega Dunes	Trails that provide recreation and transportation connections between protected accessible lands, communities, and/or other points of interest. They provide access and opportunities to experience cultural and natural areas, and generally accommodate non-motorized access for pedestrians, bicycles, equestrians, or multi-use.
Waterway Trails	Russian River estuary, Gualala River estuary, Salmon Creek, Bodega Harbor, and Estero Americano.	Public access to navigable waterways is protected by the State and Public Trust Doctrine. Navigable waterways support recreational use
Coastal Access Trails	Stengel Beach Trail, South Salmon Creek Trail, Miwok Trail, Stillwater Cove Trail	Coastal Access Trails are trails that provide access to the shoreline from roads or other trails. They allow pedestrians, and sometimes equestrians and bicyclists to reach the shoreline. They may have staircases, steps, switchbacks, retaining walls, or other structures to provide safe access.

3. PUBLIC ACCESS ACQUISITION

Acquiring public access can be accomplished in several ways including, but not limited to, purchase or donation of property, dedication of an easement for public access, or establishing that continuous historic public use has established an access easement across private property. Wherever possible the County will achieve acquisition and pursue public access goals through working with willing sellers.

Acquisition location and priority are established by the Public Access Plan found in Appendix B.

3.1 Goal, Objectives, and Policies

GOAL C-PA-I: Maximize public access to and along the Sonoma County coast. Minimize adverse impacts from public access to cultural resources, public safety, public health and the environment; and minimize adverse impacts from development on public access.

Objective C-PA-I.1: Acquire public access to and along the Sonoma County coast through dedication of land, easements, or rights-of-way; fee purchase, or donation.

Objective C-PA-1.2: Acquire public accessways in a distributed network throughout the Sonoma County coast so as not to overburden any one area.

Objective C-PA-1.3: Acquire private accessways through easements and develop them into public accessways.

Objective C-PA-1.4: Prioritize acquiring specific public access facilities within the Sonoma County Coastal Zone.

Land Acquisition Priorities

Policy C-PA-1a: Implement the Public Access Plan as outlined in **Appendix B** as the set of primary policies for acquisition of public access on the Sonoma County coast.

Policy C-PA-1b: Evaluate safety, quality of destination, public need, stability of bluff, distance from other access points, potential impacts to coastal natural resources, compatibility with agricultural and residential uses, and ease of development and operation of proposed access points. Use these criteria to establish three priority levels for acquisition as follows:

- (1) ***Acquisition Priority I:*** Begin or continue efforts to acquire through purchase, permit requirements, donation, or other negotiations as necessary to implement the Public Access Plan.
- (2) ***Acquisition Priority II:*** Consider requiring an offer of dedication or dedication of an easement as a condition or approval of any Coastal Development Permit where an offer of dedication or a dedication of an easement is, appropriate, provided there is a nexus and proportionality for the exaction.

When all available Priority I properties have been acquired, take positive steps toward acquiring Priority II properties. If a time sensitive Priority II property is available, consider pursuing it before all Priority I properties have been acquired.

- (3) ***Acquisition Priority III:*** Consider requiring an offer of dedication or dedication of an easement as a condition of any Coastal Permit where an offer of dedication or a dedication of an easement is appropriate, provided there is a nexus and proportionality for the exaction. Offers of dedication for some Priority III properties may never be exercised because adequate access is provided by private owners, there is inadequate funding, or it is determined to not be in the public's interest to open access.

When all available Priority I and II properties have been acquired, take steps toward acquiring Priority III properties. If a time sensitive Priority III property is available, consider pursuing it before all Priority I and II properties have been acquired.

Policy C-PA-1c: Evaluate impacts to coastal natural resources, public safety, cost of development, operational needs, and distance from existing developed access points to establish three priority levels for development as follows:

- (1) ***Development Priority I:*** Encourage each agency or association owning or operating designated accessways to allocate funds immediately and develop Priority I accessways within their purview.
- (2) ***Development Priority II:*** Encourage each agency or association owning or operating designated accessways to allocate funds and develop Priority II accessways only when all Priority I and II accessways within their purview have been developed.
- (3) ***Development Priority III:*** Encourage each agency or association owning or operating designated accessways to allocate funds and develop Priority III accessways only when all Priority I and II accessways within their purview have been developed.

Development of accessways distant from existing developed access points are given higher priority. Safety and cost of development and operation are paramount concerns.

Policy C-PA-1d: Encourage acquisition and development of additional access trails that integrate with the Coastal Trail System where feasible. In the event that an opportunity arises for acquisition of property that is not identified in the Public Access Plan, the agency proposing the acquisition shall conduct an analysis covering the following points:

- (1) The relationship of the unforeseen opportunity to the recreational opportunities identified in the Public Access Plan, including analysis of how the unforeseen acquisition would meet those needs compared to facilities identified in the Plan; and
- (2) An analysis of the opportunity costs of the acquisition, including whether the proposed acquisition is intended to replace or supplement a facility identified in the Public Access Plan. This analysis may consider how the unforeseen opportunity may impact the acquisition of facilities identified in the Plan.

Development Review

Policy C-PA-1e: Require dedication of a public access easement, right of way, or fee title, where an offer of dedication or a dedication of an easement is appropriate provided there is a nexus and proportionality for the exaction, as a condition of approval for a Coastal Development Permit for projects along the alignment of the California Coastal Trail, or identified as a public access point by the Public Access Plan. The dedication shall be granted to the County of Sonoma or a State agency and must be approved by the agency accepting dedication prior to development of the project approved by the associated Coastal Development Permit.

Policy C-PA-1f: Require dedication of a public access easement, right of way, or fee title, where an offer of dedication or a dedication of an easement is needed or appropriate, as a condition of approval for a Coastal Development Permit for projects that interfere or block historic public access points or routes. Work with the California Coastal Commission to ensure that any access rights that the public may have acquired through historic use are preserved. The dedication shall be granted to the County of Sonoma or a State agency and must be approved by the agency accepting dedication prior to development of the project approved by the associated Coastal Development Permit.

Determining Access and Recreation Needs

Policy C-PA-1g: Use the Public Access Plan project list found in Appendix B as the guide for determination of undeveloped (passive) park needs in the Coastal Zone, including County Regional Open Space Parks, Regional Trails, and State Parks in order to support coastal recreation.

Policy C-PA-1h: Consistent with California Government Code Section 66477 (the Quimby Act), require development to provide 5 acres of Community Parks, Neighborhood Parks, and Regional Recreation Areas per 1,000 residents in the Coastal Zone, or pay an in lieu fee. Developed park acreage that is open to the public within private residential areas shall count towards meeting the acreage standard.

Maintaining and Managing Public Access

Policy C-PA-1i: Sonoma County shall either accept or work in partnership with the California Coastal Conservancy, California State Parks, and non-profit land conservation partners such as Sonoma Land Trust, LandPaths, Wildlands Conservancy, and The Trust for Public Land to accept Offers of Dedication which increase opportunities for public access to the coast consistent with the County's ability to assume liability and maintenance costs.

Policy PA-1j: Require a Coastal Development Permit for closure of privately owned or controlled accessways that are open to public use or vacation of rights of way associated with public access or that provide access to existing or proposed access points. Proposals to close accessways and/or vacate rights of way shall be required to demonstrate that equivalent public access will be maintained within the property boundary or on an immediately adjacent parcel where the owner is willing to provide an access easement that does not adversely impact coastal natural resources. If providing alternative on-site or adjacent access is not feasible, offsite access may be considered if found to provide the same or greater access to the same area of the coast as the access point being closed.

Policy C-PA-1k: All Offers to Dedicate easements for public access shall be subject to the procedures in the California Code of Regulations Title 14, Division 5.5, Section 13574

(Procedures for Open Space Easements and Public Access Documents), and must be acceptable to the agency being offered the dedication.

Policy C-PA-11: Support development of public accessways in locations where landowners have expressed an interest in providing access or where easements have been acquired that would allow development of public access.

Policy C-PA-1m: Require Coastal Development Permit for vacations of Rights of Way within Sub Area 10 potentially impacting future access to the Estero Americano. The coastal permit shall only be approved if accompanied by findings that the vacation will not reduce existing or future public access opportunities, as a result of sale, or relinquishment of the existing right-of-way that could provide access to the Estero Americano.

2. CALIFORNIA COASTAL TRAIL

2.1 Goal, Objectives, and Policies

GOAL C-PA-2: Create a continuous California Coastal Trail system of walking, hiking, and bicycling access routes and trailhead connections that maximizes coastal access, ocean views, and educational opportunities while minimizing adverse environmental impacts.

Objective C-PA-2.1: Identify, prioritize, and develop California Coastal Trail sections as described in the Public Access Plan and outlined in figures C-PA-1 (a-k).

Objective C-PA-2.2: Provide a safe, continuous walking and hiking trail within the sight, sound, and smell of the ocean to the maximum extent feasible.

Objective C-PA-2.3: Provide a safe, continuous walking and hiking trail within the sight, sound, and smell of the ocean to the maximum extent feasible.

Objective C-PA-2.4: Study and implement future alignments of the California Coastal Trail that provide sufficient protection from the highest projection of erosion and sea level rise scenarios and preserve or establish native vegetation between the trail and the bluff edge.

Objective C-PA-2.5: Maximize connections to existing and proposed regional and local trail systems.

Objective C-PA-2.6: Ensure the California Coastal Trail has connections to trailheads, parking areas, interpretive kiosks, and inland trail segments at reasonable intervals.

Objective C-PA-2.7: Maximize ocean views and scenic coastal vistas from the California Coastal Trail where possible.

Objective C-PA-2.8: Provide an educational experience through interpretive facilities where feasible.

Trail Location and Alignment

Policy C-PA-2a: Multi-use trails, associated amenities, and passive recreational features shall be located to minimize impacts to sensitive habitats and other sensitive surrounding land uses, such as residences and agriculture.

Policy C-PA-2b: Study, identify, and develop future alignments of the California Coastal Trail that would be sufficiently protected from the highest projection of erosion and sea level rise scenarios and would preserve or establish native vegetation between the trail and the bluff edge.

Policy C-PA-2c: Provide a safe, continuous walking and hiking trail consistent with the principles of proximity, connectivity, integrity, respect and feasibility established by California Coastal Conservancy 2003 plan, “Completing the California Trail”. Wherever feasible, the Coastal Trail should be within sight, sound, or at least the scent of the sea. The traveler should have a persisting awareness of the Pacific Ocean. It is the presence of the ocean that distinguishes the seaside trail from other visitor destinations.

Consistent with these principles, trail segments to the sight, smell and sound of the ocean as possible, or using the following standards:

- (1) Where it is not feasible to locate the trail along the shoreline due to natural landforms or legally authorized development that prevents passage at all times, inland bypass trail segments located as close to the shoreline as possible should be used.
- (2) Shoreline trail segments that may not be passable at all times, or that are not passable by bicycles, should be augmented by inland alternative routes that are passable and safe for pedestrians and bicycles.
- (3) New lateral trails along the bluff edge shall be set back a sufficient distance from the bluff edge to avoid impacts from erosion and sea level rise, generally 50 feet, and native vegetation shall be established and maintained between the trail and the edge to stabilize the blufftop if practical.
- (4) Outlooks and other trail amenities shall be incorporated to discourage damage from informal trails.

Policy C-PA-2d: Where gaps in a continuous alignment are identified, employ temporary trail alignments to ensure continuity of the California Coastal Trail. Temporary segments should be noted as such, with provisions that as opportunities arise, the trail shall be realigned to its optimum location. Temporary segments should meet as many of the California Coastal Trail objectives and standards as possible. Reevaluate the temporary segment and proposed alignment every 5 years to determine feasibility of the proposed

alignment and the need to revise the public access plan due to changed conditions or circumstances associated with the proposed permanent segment.

Policy C-PA-2e: Avoid locating the California Coastal Trail along or on roads with motorized traffic where feasible. In locations where it is not possible to avoid siting the trail along or on a roadway, the trail should be located off of the pavement, and separated from traffic by a safe distance or by physical barriers that minimize obstruction or detract from the scenic views and visual character of their surroundings. In locations where the trail must cross a roadway, safe under- or over-crossings or other alternative at-grade crossings should be considered in connection with appropriate directional and traffic warning signage.

Policy C-PA-2f: The California Coastal Trail should use existing oceanfront trails and recreational support facilities to the maximum extent feasible.

Trail Design and Construction

Policy C-PA-2g: Access and recreational facilities associated with the California Coastal Trail, as well as the Trail itself shall be sited, designed and maintained to avoid or mitigate erosion, as well as accommodate long term impacts of sea level rise, and climate change.

Policy C-PA-2h: Provide adequate parking and trailhead facilities for the California Coastal Trail. Consider public safety concerns, protection of visual resources and environmentally sensitive habitat areas, potential ability for transit service, size and characteristics of existing and future trail and other facilities being served, and use patterns including the proximity of other nearby parking and trailhead facilities when determining locations. To ensure equitable access, provide trailhead parking unless nearby accessible connected trailheads are under capacity during summer season. Use size and scale of other trailhead parking areas in the area to guide the capacity.

Policy C-PA-2i: Provide low cost overnight camping and lodging facilities at reasonable intervals along the California Coastal Trail corridor to support long distance and other hiking and bicycling excursions.

Policy C-PA-2j: The Coastal Trail should be designed and located to avoid and minimize impacts to environmentally sensitive habitat areas consistent with **Policy C-OSRC-8f**. Where necessary to prevent disturbance to sensitive species, sections of the trail may be closed on a seasonal basis. Alternative trail segments shall be provided where feasible. For situations where impact avoidance is not feasible, appropriate minimization and mitigation measures should be required incorporated, including but not limited to, such as use of boardwalks, reducing trail width and protective fencing to maximize public access consistent with the Coastal Act and the Local Coastal Plan while reducing damage to coastal resources to the maximum extent feasible.

Policy C-PA-2k: The Coastal Trail should be designed to maximize compatibility with agricultural lands and uses.

Policy C-PA-2l: Require construction of California Coastal Trail segments as conditions of approval for coastal development along the alignment involving other new or major replacement infrastructure, such as realignment of Highway 1.

2.2 Program

Program C-PA-2-P1 Evaluate preservation of portions abandoned piers and associated onshore buildings in Bodega Bay if they can provide coastal access along the California Coastal Trail, and can be restored to and maintained in safe condition.

3. ACCESS PLANNING AND DEVELOPMENT

Facility Improvements. Necessary facilities at a particular site depend on the expected use and the availability of facilities nearby. Because the level of use is expected to increase over time, facilities may be developed in several phases with new or expanded facilities added as needed. Among the facilities needed for public access and outdoor recreation destinations are: safe trails, restrooms, parking areas, trash receptacles, and signs.

Quality of Destination. The desirability and capacity of coastal destinations are important considerations in locating public access points. Areas with few attractions and limited space may not justify the cost of development and operation. However, as the population expands and overuse impacts the existing destinations, the importance of every potential public access point increases.

Impacts on Environment. The environmental carrying capacity, protection of wildlife habitat, protection of views, and the psychological and social capacity of recreational lands are important factors to consider in planning and developing recreational facilities. Quantifying and measuring recreational carrying capacity is difficult and each site is unique.

The Local Coastal Plan generally supports distributing recreational facilities where compatible with the sensitivity and suitability of an area. Distributing recreational facilities throughout the Sonoma County coast helps prevent overuse and damage to the coastal environment in any one location. Often it is most efficient to utilize existing park service centers and consolidate significant developed park infrastructure to support the facilities. The existing park service centers are well-situated to serve additional dispersed recreation.

In planning for recreational activities, substantial modifications of the natural environment for a specific activity should be first avoided, then minimized when avoidance is not possible. The Coastal Act specifies that coastal dependent uses permitted on the coast have priority over non-coastal dependent recreational uses. While oceanfront sites enhance coastal facilities such as hotels, restaurants, and campgrounds, such locations may affect important coastal views from the highway and adjacent recreation areas.

Development of park facilities must also include consideration of water supply and wastewater disposal. Groundwater resources in the Coastal Zone are scarce and near the shoreline are at risk from

sea level rise; facility planning should include an early evaluation of water supply capability if water use or availability is required to support the proposed facility.

Peak Use. Peak use issues can be addressed through a variety of approaches. Visitors can be encouraged to use Sonoma County Transit, Mendocino County Transit, and carpool, reducing the need for new parking areas (see California Coastal Act Section 30252.1). Interpretive materials and programs can be provided to help connect visitors with lightly used access points they may not have known about such as Shorttail Gulch or Bodega Dunes Beach that provide alternatives to crowded locations such as Doran Beach or Salmon Creek Beach.

Completion of the California Coastal Trail will connect most access points, allowing visitors to park wherever parking is available and use the trail to reach their preferred access point. Heavy use at particular access points can be distributed by creating additional trails with coastal views on parkland east of State Highway 1. The Dr. Joseph Trail (Pomo Trail) is a good illustration of a popular trail with coastal views east of the highway. Measures to address use patterns at specific access points are in the Public Access Plan.

Liability. Liability is a concern of both public agencies and private property owners regarding public access. State laws do provide some immunity from liability. California Government Code Sections 831.2 and 831.4 provide immunity to public agencies for public recreational use of public lands and recreational trails and roadways, releasing agencies from liability if a person is injured while using the facility. California Civil Code Section 846 grants immunity to private landowners who allow people to use their property for recreational purposes. However, if a fee is collected the private landowner loses this immunity.

Coastal Permit Findings. The California Coastal Act requires that every coastal development permit issued for new development located between the nearest public road and the sea (i.e., west of State Highway 1) or the shoreline of any body of water located within the Coastal Zone include a specific finding that such development is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act. This policy does not apply to types of development not considered new development, as outlined in Coastal Act Section 30212.

New development that is in conformance with the Public Access Plan of the Local Coastal Plan is not required to provide access as the Public Access Plan is certified as being in conformance with access requirements of the Coastal Act.

If the new development is not in conformance with the Public Access Plan, public access from the nearest public roadway to the shoreline and along the coast (i.e., granting of an easement to allow vertical access to the mean high tide line or lateral access) shall be provided on the project site with the following exceptions:

- (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources; or
- (2) Adequate access exists nearby; or
- (3) It would have a significant adverse impact on agriculture as determined by the California Coastal Commission (Coastal Act Section 30212).

3.1 Goal, Objectives, and Policies

GOAL C-PA-3: Maximize free and lower cost public access to and along the Sonoma County coast. Minimize adverse impacts from public access on people and the environment; and minimize adverse impacts from development on public access.

Objective C-PA-3.1: Minimize barriers to public coastal access to the maximum extent feasible, including ensuring that public access and recreational opportunities and a range of visitor-serving overnight accommodations, assuring adequate provisions of lower cost overnight accommodations, account for the social, physical, and economic needs of all people.

Objective C-PA-3.2: Maintain, provide, and enhance free and lower cost public access to and along the Sonoma County coast.

Objective C-PA-3.3: Provide adequate facilities at public accessways.

Objective C-PA-3.4: Develop and maintain public accessways so as to protect public health and safety, protect sensitive visual and natural resources, and prevent adverse impacts on adjacent properties.

Objective PA-3.5: Ensure that development does not adversely affect existing and potential public accessways.

Objective PA-3.6: Prioritize development of specific public accessways.

Objective PA-3.7: Provide enough camping to meet the latent demand, and to provide a range of camping experiences.

Public Access Development Priorities

Policy C-PA-3a: The Public Access Plan shall establish priority of development of public access facilities such as trails, visitor serving centers, etc. on the Sonoma County coast.

Policy C-PA-3b: Require new development adjacent to public access and recreation areas vulnerable to coastal bluff erosion or sea level rise to be sited and designed to anticipate eventual loss and necessary replacement of such public access and recreation areas.

Policy C-PA-3c: The distance between coastal access trails and residences should be as large as possible to protect the quality of the user experience and the privacy of the occupants of the residence. Access facilities shall be designed and managed to minimize conflicts with residential development.

Policy C-PA-3d: Adopt a long-range plan or Master Plan for each facility that identifies and describes improvements necessary for continued operation, and adaptation to sea level rise and climate change.

Policy C-PA-3e: All proposed public access in the Public Access Plan has been designated from the highest to lowest priority for development as Development Priority I, II, or III. The emphasis for development priority is different than that for acquisition priority. Developing accessways distant from existing developed access points are given higher priority. Public safety and the costs of development and operation are principal concerns.

Implement the Development Priorities for the Public Access Plan as follows:

- (1) ***Development Priority I:*** Encourage each agency or entity owning or operating designated public access facilities to prioritize available funds towards developing Priority I public access facilities within their purview;
- (2) ***Development Priority II:*** Encourage each agency or entity owning or operating designated public access facilities to prioritize available funds towards developing Priority II public access facilities only when all Priority I public access facilities within their purview have been developed or if funding specific to a site becomes available; or
- (3) ***Development Priority III:*** Encourage each agency or entity owning or operating designated public access facilities to prioritize available funds towards developing Priority III public access facilities only when all Priority I and II public access facilities within their purview have been developed.

Policy C-PA-3f: Promote social equity and environmental justice by ensuring the fair treatment and meaningful involvement of all people, regardless of race, culture, or income by:

- a. Considering environmental justice and, where applicable, the equitable distribution of environmental benefits when acting on a coastal development permit, amending the LUP, or implementing the LUP.
- b. Encouraging inclusive public engagement in decision-making processes, with priority on communities that have historically been excluded.
- c. Implementing the LUP in a manner that ensures no person is discriminated against based on race, national origin, religion, age, sex, sexual orientation, color, genetic information, or disability.

Development Review

Policy C-PA-3g: Consider alternative mitigation measures for the impact of new development on public access in cases where development of certain public access facilities or improvements are found to be infeasible due to potentially significant impacts on public safety, agriculture, environmentally sensitive habitat areas, or cultural resources. Alternative

mitigation measures include but are not limited to development of off-site public access points of equivalent public access opportunities. If off-site public access points are developed as mitigation for the impact of new development on public access, these access points shall be as close as feasible to the location of the impact on public access.

Policy C-PA-3hg: Where adverse impacts to existing public coastal access cannot be avoided by new development and no feasible alternative exists, ensure that impacts are mitigated by dedication of a new access or trail easement providing equivalent access, or a proportionate fee to develop or improve other public coastal access points identified as Priority 1 Development by the Public Access Plan.

Policy C-PA-3ih: Conduct public hearings for review of the Coastal Permits for an existing coastal access trail if there is evidence of degradation of resources in the area of the facility or significant public interest in the facility. ~~Any proposal to reduce or close an existing public coastal access point or trail as a result of such review shall be reviewed by the California Coastal Commission.~~

Policy C-PA-3ji: Conduct visual analysis prior to siting parking areas for accessways.

Policy C-PA-3kj: Protect and encourage a range of accommodations in parks, including the provision of low cost accommodations where appropriate, including tent or small vehicle campgrounds, hike-in and primitive campgrounds, and hostel and sleeping cabin facilities. Use existing buildings and structures for these accommodations where feasible.

Policy C-PA-3lk: Locate campgrounds, whenever possible, in areas that have already been disturbed by prior uses and consequently where cultural and biotic resources are typically limited. Campgrounds should be sited in a manner that protects visual resources and consistent with County development standards. Provide separate walk-in, tent, and recreational vehicle camping areas.

Policy C-PA-3ml: Scale the capacity of planned public access facilities to be consistent with available water supply and available septic or sewer capacity.

Policy C-PA-3n: Lower-cost overnight accommodations shall be protected, encouraged, and where feasible, provided.

Policy C-PA-3o: New development involving overnight accommodations shall provide a range of accommodations and prices in order to serve various income ranges. Priority for overnight accommodations (from higher to lower priority): lower-cost; moderate-cost; higher cost.

Public Access Facilities

Policy C-PA-3~~pm~~: Provide safe and clear public access trails constructed with pervious surfaces. Improvements should be designed to be safe, minimize impacts to sensitive resources, minimize maintenance costs, and provide disabled accessibility to the extent feasible without substantially impacting sensitive resources.

Policy C-PA-3~~qn~~: Provide trash and recycling receptacles and their servicing at all major public access facilities.

Policy C-PA-3~~re~~: Provide clear directional signs at all public access facilities to indicate the location of trail heads and public parking at the minimum number of signs necessary for easy navigation by the public. Signs shall be compatible with surrounding views and visual resources, consistent with County Visual Resource Assessment Guidelines.

Policy C-PA-3~~sp~~: At trailheads with parking lots provide information, such information about regulations, contacts in case of an emergency, natural resources, the potential for fires, and the need for user cooperation.

Temporary Events

Policy C-PA-3~~tp~~: Until completion of **Program C-PA-3** continue to apply zoning permit standards for temporary private events on public beaches, trails, streets, recreational facilities, and/or any other area otherwise open and available for general public use, consistent with the California Coastal Commission 1993 “*Guidelines for the Exclusion of Temporary Events from Coastal Commission Permit Requirements*”, including as it may be updated. Temporary events are excluded from Coastal Development Permit requirements except for those that meet all of the following criteria:

- (1) Are held between Memorial Day weekend and Labor Day; and,
- (2) Occupy all or a portion of a sandy beach area; and,
- (3) Involve a charge for general public admission, participation, or seating where no fee is currently charged for use of the same area (not including booth or entry fees).
- (4) Are not already addressed by a previous Permit Sonoma/Coastal Commission determination, including programmatic CEQA documents, such as state/county master plans.

Notwithstanding the above, temporary events ~~Events that do not meet this criteria may still~~ shall be subject to a Coastal Development Permit if Permit Sonoma and/or the Executive Director of the California Coastal Commission determines that unique or changing circumstances exist relative to a particular temporary event that have the potential for

significant adverse impacts on coastal resources. Such circumstances may include the following:

- (1) The event, either individually or together with other temporary events scheduled before or after the particular event, precludes the general public from use of a public recreational area for a significant period of time;
- (2) The event and its associated activities or access requirements will either directly or indirectly impact environmentally sensitive habitat areas, rare or endangered species, significant scenic resources, visitor and recreational facilities, water-oriented activities, marine resources, biological resources, environmentally sensitive habitat areas, agricultural lands, and archaeological or paleontological resources;
- (3) The event is scheduled between Memorial Day weekend and Labor Day and would substantially restrict public use of roadways, trailheads, or parking areas or otherwise significantly impact public use or access to coastal waters;
- (4) The event has historically required a coastal development permit to address and monitor associated impacts to coastal resources.

For the purposes of this Policy, the following definitions shall apply:

- (1) "Temporary event(s)" means an activity or use that constitutes development as defined in Section 30106 of the Coastal Act; and is an activity or function of limited duration; and involves the placement of non-permanent structures; and/or involves exclusive use of a sandy beach, parkland, filled tidelands, water, streets or parking area which is otherwise open and available for general public use.
- (2) "Limited duration" means a period of time which does not exceed a two week period on a continual basis, or does not exceed a consecutive four month period on an intermittent basis;
- (3) "Non-permanent structures" include, but are not limited to, bleachers, perimeter fencing, vendor tents/canopies, judging stands, trailers, portable toilets, sound/video equipment, stages, platforms, movie/film sets, etc., which do not involve grading or landform alteration for installation.
- (4) "Exclusive use" means a use that precludes use in the area of the event for public recreation, beach access or access to coastal waters other than for or through the event itself.
- (5) "Sandy beach area" includes all publicly owned and all privately owned sandy areas fronting on coastal waters.

3.2 Programs

Program C-PA-1: Prepare a long-range plan or Master Plan for each State or County Park or Preserve consistent with priorities in the Public Access Element in conjunction with park development planning.

Program C-PA-2: Develop policies for review of applications for temporary private events on beaches, parkland, filled tidelands, water, streets, or parking areas which is otherwise open and available for general public use consistent with the California Coastal Commission 1993 “*Guidelines for the Exclusion of Temporary Events from Coastal Commission Permit Requirements*”, including as these guidelines may be updated. The policies shall consider the type of associated coastal-dependent activities; displacement of public use; number of people; season, weekday or weekend, and hours; location and area relative to size of beach and public accessways; pedestrian access; transportation and parking; amplified music and other noise; equipment; temporary structures and enclosures; food service; warming fires; signage; admission fee; wastewater and solid waste disposal; and required mitigation measures.

3.3 Initiatives

Initiative C-PA-1: Expand collection of data on visitor use of public access facilities and the methods used for monitoring visitor use patterns, to adjust to increasing demand for facilities and to assist in identifying needs for additional facilities.

Initiative C-PA-2: Encourage partnerships between public agencies and private organizations that maximize the efficiency of operating and maintaining public facilities and preventing public access facility closures.

4. PARKING

Outside of the developed area of Bodega Bay, parking along State Highway 1 is primarily used by visitors accessing the coast. Parking management influences the capacity of Highway 1 since visitors slow down while searching for parking spaces and the numerous parking lots and turnouts tend to slow traffic. Between Bodega Bay and Jenner, State Highway 1 is adjacent to the Sonoma Coast State Beaches. Roadside parking in this area is heavy and often supported by paved, striped parking lots. North of Jenner Russian Gulch and Vista Trail provide the only off road parking, although there are numerous small turnouts. Further north, Fort Ross State Historic Park, Stillwater Cove Regional Park, and Salt Point State Park provide some off-highway parking for developed park areas only. Gualala Point Regional Park and The Sea Ranch Coastal Access Trails all have off-highway parking.

While automobile dependency must be reduced, providing parking for visitors to the Sonoma Coast will continue to be necessary until an adequate public transportation system is established. Parking improvements needed on the Sonoma County coast include developing new and enlarging existing parking facilities to reduce hazardous parallel parking, improving signs and entrances to and exits from parking facilities, and increasing capacity by delineating parking spaces. Parking improvements

are most needed in the Sonoma Coast State Park area between Bodega Bay and North Jenner Beach, where traffic levels and demand for parking spaces are greatest.

4.1 Goal, Objectives, and Policies

GOAL C-PA-4: Establish a no or low cost parking system with adequate parking facilities for coastal parks, beaches, accessways, and trails throughout the Sonoma County coast, with minimal impacts on views, public safety, and natural resources.

Objective C-PA-4.1: Ensure that adequate parking facilities, including no-or -low cost parking improvements, are provided for each new or expanded public access facility.

Objective C-PA-4.2: Identify, prioritize, and implement parking improvements, including no-or -low cost parking improvements at parklands.

The following policies, in addition to policies in the Circulation and Transit Element, shall be used to achieve these objectives:

Locating and Developing Parking Improvements

Policy C-PA-4a: Develop adequate parking facilities in conjunction with development of new public access facilities. Parking may be developed in phases as use levels increase. At public access facilities, provide the maximum parking capacity that does not reduce public safety or significantly impact the environment.

Policy C-PA-4b: Provide bicycle racks or locked bicycle storage areas at State and County Regional Parks, beaches, and other developed parklands.

Policy C-PA-4c: Locate parking areas to directly connect with trails if possible. In locating new, large parking lots, consider the landward (east) side of State Highway 1 to reduce impacts to ocean views if safe trail crossings of the highway can be provided.

Policy C-PA-4d: When feasible locate parking in areas screened from public view.

Equitable Access

Policy C-PA-4e: Maximize, provide and maintain free and low-cost parking and recreational transit services for users of public access facilities and public access points, including programs that offer discounts for youth, seniors, disabled, veterans, educational groups, and other priority populations, subject to restrictions mitigations necessary to protect coastal resources.

Policy C-PA-4f: Prioritize improving access and maintaining existing free- and low-cost parking opportunities. If coastal parking fees are considered, evaluate whether any proposed parking fees or increased fees are commensurate with expenses and not overly burdensome so as to deter people from accessing recreational areas. Any Coastal Development Permit

(CDP) application for a parking fee program should be evaluated for the potential impact on public coastal access, and ensure that at least existing levels of public access are maintained, including through providing alternative access opportunities such as bike lanes and free bike parking, pedestrian trails, free parking for an initial period of time, hourly/daily/year-round parking fee options, discounted senior and low-income parking rates, public transit improvements, and relocated free vehicular parking spaces. Any revenue generated by parking fee programs within the Coastal Zone shall only be used to fund public access within the Coastal Zone and in the area where the funds are collected. Only approve a CDP for a parking fee program if it can be demonstrated that such a program will maintain and enhance, and will not adversely impact, coastal access.

4.2 Programs

Program C-PA-4-P1: Encourage the provision of transit, bicycle and pedestrian pathways, and other vehicle use reduction measures such as carpooling to reduce vehicle use to and between public and private access facilities on the coast to reduce the number of vehicles on State Highway 1 and the demand for parking spaces.

Program C-PA-4-P2: Evaluate the feasibility of a Bodega Bay water taxi to connect existing recreational and commercial facilities and reduce automobile dependency.

Program C-PA-4-P3: Evaluate feasibility of providing bus shuttle service from inland areas to popular coastal destinations and support expanded bus transit service consistent with the Circulation and Transit Element Policy C-CT-2d, Program C-CT-2-P1 and Initiative C-CT-2-II.

5. FACILITY MANAGEMENT AND OPERATION

Facilities that provide public access must be managed. An agency or organization must be willing to accept responsibility for maintaining and operating the facility before it is opened to the public. Appropriate public agencies include State Parks, County Regional Parks, and California Department of Fish and Wildlife. The County would give preference to public agencies for accepting and operating facilities. If it is not feasible for a public agency to accept a particular facility, an organization may do so after a public hearing has been conducted.

In some cases, the managing entity is different than the property owner. For example, State Parks has an agreement with County Regional Parks to operate several parcels adjacent to Stillwater Cove Regional Park on the north. This is because these parcels are close to the County Park facility. Other possibilities are public ownership of a facility which is leased back to a private party for operation, and ownership and operation of a public access facility by a private owner such as a business or non-profit group.

Allowable Activities

Allowable activities at coastal access facilities are governed by easement or deed conditions and the general plan or master plan for the specific facility. Typically, in passive use areas, allowed recreational uses include activities normally associated with beach use but do not include organized sports activities, campfires, or vehicular access.

Funding

The funding for the operation and maintenance of public park facilities can be difficult for public agencies and private businesses and nonprofits to support during challenging economic times. Because of the numerous access points to existing facilities, temporary closures are often ineffective at preventing access to facilities and can cause additional issues.

Maintenance

Properly maintaining access facilities is essential to protect natural resources and public safety and to prevent adverse impacts on adjacent properties. Coastal Permit conditions and renewals help ensure that maintenance is adequate.

Policing

Policing of recreational facilities is provided by the operating agency or private organization. The two public agencies that police most of the public recreational facilities on the Sonoma County coast are State Parks and County Regional Parks. In addition, the California Highway Patrol, State Department of Fish & Game, and County Sheriff play an important role. Current staffing levels for public agencies and many private organizations is limited.

Private Fee Access

A few landowners charge ~~minimal~~ reasonable day use access fees that permit the general public the opportunity to reach the shoreline, providing additional public access points. By controlling access by fee and location, the property owner can operate trails, parking, and boat launching in a manner that is compatible and complimentary affords minimum interference with other land uses. Coastal Permits may be required in the event the property owner chooses to restrict or eliminate these access points.

5.1 Goal, Objective, and Policies

GOAL C-PA-5: Ensure that public access facilities are operated and maintained to protect natural resources and public safety and to prevent adverse impacts on adjacent properties.

Objective C-PA-5.1: Require that the public access facilities are properly operated and adequately maintained to maximize public access.

Public Access and Recreation Planning

Policy C-PA-5a: California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental analyses on proposed State Parks or County Regional

Parks projects shall include estimates of current and future visitor use based on data supplied by the agency operating the facility, and analyses of adequacy of the proposed facilities to meet county-wide current and future visitor demand.

Policy C-PA-5b: Planning for new, expanded, or improved State Park and County Regional Park facilities shall take into consideration the balance of distribution of facilities between the North Coast and South Coast given the higher demand for facilities located between the Russian River and Bodega Bay.

Public Access and Recreation Operations and Maintenance

Policy C-PA-5c: When new recreation facilities are proposed, assess proposed staffing plans of the operating agency to ensure adequate staffing for maintenance and security.

Policy C-PA-5d: Use Coastal Permit conditions and renewals to ensure that recreation and access facilities are properly maintained to protect natural resources and public safety and to minimize adverse impacts on adjacent properties.

Public Access Facility Closures

Policy C-PA-5e: The following guidelines shall be applied to closures of public access facilities:

- (1) A beach closure or curfew cannot apply to the area of original jurisdiction of the California Coastal Commission (State tidelands, submerged lands, and public trust lands), including but not necessarily limited to the area seaward of the mean high tide line.
- (2) Public access to the water's edge and at least 20 feet inland of the wetted substrate (sand and rocks) of all beaches shall be allowed at all times, except when access is restricted to prevent impacts to protected natural resources, such as marine mammal haul out areas.
- (3) Closure to public use of any portion of the beach inland of the mean high tide line is not encouraged, and would require a coastal development permit, a condition of which must include maintenance of the public's right to gain access to State tidelands, except when closure is necessary to prevent impacts to protected natural resources, such as marine mammal haul out areas.
- (4) Measures that limit public use of the beach shall be limited to those necessary to address documented events that could create a risk or hazard to public safety or adverse impact to the environment, and shall be the minimum necessary to address that potential risk or hazard. The need for continuation of measures that provide

public safety but that limit public access to the beach shall be reassessed on a periodic basis to assure maximum feasible public access to the beach is provided.

6. RECREATIONAL BOATING

The California Coastal Act of 1976 supports coastal-dependent development stressing protection of recreational boating and necessary support facilities. While Bodega Harbor is known primarily for its commercial boating, recreational boating is also important at the harbor.

6.1 Goal, Objectives, and Policies

GOAL C-PA-6: Provide adequate recreational boating facilities at parks, harbors, and marinas on the Sonoma County coast.

Objective C-PA-6.1: Identify and develop the recreational boating facilities needed at parks, harbors, and marinas.

Objective C-PA-6.2: Develop a sustainable economic approach to support the boating facilities in Bodega Bay.

Policy C-PA-6a: Encourage public and private harbor and marina operators to accommodate existing and future demand for recreational and commercial boating facilities.

Policy C-PA-6b: Encourage continuing the existing boat rental and launch facilities at the coast and coastal waterways and providing additional facilities that provide new recreational opportunities compatible with natural resources.

Policy C-PA-6c: Provide the maximum public access feasible to new boat wharves and piers.

Policy C-PA-6d: Encourage the establishment of waterway trails for non-motorized boating to promote environmentally sensitive water based education, recreation, and tourism. Provide information at launch sites for safe and responsible boating.

6.2 Initiatives

Initiative C-PA-6-I1: Work with Regional Parks to evaluate the reuse of Mason's Marina to concentrate the County's marina services and to support other boating related uses.

Initiative C-PA-6-I2: Encourage the formation of a harbor district at Bodega Bay to improve recreational and commercial boating. The harbor district could facilitate the economic basis for providing improved boating facilities and public outreach.

Water Resources Element

INTRODUCTION

PURPOSE

The primary purpose of this element is to ensure that coastal water resources are protected. Water resource management should consider the amount of quality water that can be used over the long-term without exceeding the replenishment rates over time or causing long-term declines or degradation in available surface water or groundwater resources. The Water Resources Element establishes goals, objectives, and policies to protect and sustainably manage coastal water resources for all beneficial uses. Programs needed to implement proposed policies are also identified. In addition, the element calls out other initiatives—ongoing or potential future County initiatives that support water quality efforts and promote inter-agency and community collaboration. Nothing in this element should be construed to encourage or condone illegal use of water.

RELATIONSHIP TO OTHER ELEMENTS

The Water Resources Element addresses a range of water related issues in the Sonoma County Coastal Zone. Some other water-related topics are also addressed in other Elements. Water availability as a factor in Land Use Map densities is addressed in the Land Use Element. The Open Space and Resource Conservation Element addresses riparian corridors, wetlands, wildlife protection, tree protection, fishery resources and other biotic resources, soil erosion, forestry, and mineral resources. The Public Access Element addresses water-oriented recreation. The Public Facilities and Services Element addresses connections to public water systems. The Public Safety Element addresses flood hazards, fire suppression, and hazardous materials. The Agricultural Resources Element addresses aquaculture.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

Section 30230 Marine resources; maintenance

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 Biological productivity; water quality

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing

adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30236 Water supply and flood control

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Section 30411 Department of Fish & Wildlife; Fish & Game Commission; management programs; wetlands; aquaculture; coastal sites

(a) The Department of Fish and Wildlife and the Fish and Game Commission are the principal state agencies responsible for the establishment and control of wildlife and fishery management programs and the commission shall not establish or impose any controls with respect thereto that duplicate or exceed regulatory controls established by these agencies pursuant to specific statutory requirements or authorization.

(b) The Department of Fish and Wildlife, in consultation with the commission and the Department of Boating and Waterways within the Department of Parks and Recreation, may study degraded wetlands and identify those which can most feasibly be restored in conjunction with development of a boating facility as provided in subdivision (a) of Section 30233. Any such study shall include consideration of all of the following:

- (1) Whether the wetland is so severely degraded and its natural processes so substantially impaired that it is not capable of recovering and maintaining a high level of biological productivity without major restoration activities.
- (2) Whether a substantial portion of the degraded wetland, but in no event less than 75 percent, can be restored and maintained as a highly productive wetland in conjunction with a boating facilities project.
- (3) Whether restoration of the wetland's natural values, including its biological productivity and wildlife habitat features, can most feasibly be achieved and maintained in conjunction with a boating facility or whether there are other feasible ways to achieve these values.

(c) The Legislature finds and declares that salt water or brackish water aquaculture is a coastal-dependent use which should be encouraged to augment food supplies and to further the policies set forth in Chapter 4 (commencing with Section 825) of Division 1. The Department of Fish and Wildlife may identify coastal sites it determines to be appropriate for aquaculture facilities. If the department identifies these sites, it shall transmit information identifying the sites to the commission and the relevant local government agency. The commission and, where appropriate, local governments shall, consistent with the coastal planning requirements of this division, provide for as

many coastal sites identified by the Department of Fish and Wildlife for any uses that are consistent with the policies of Chapter 3 (commencing with Section 30200).

(d) Any agency of the state owning or managing land in the coastal zone for public purposes shall be an active participant in the selection of suitable sites for aquaculture facilities and shall make the land available for use in aquaculture when feasible and consistent with other policies of this division and other law.

Section 30412 State Water Resources Control Board & Regional Water Quality Control Boards

(a) In addition to Section 13142.5 of the Water Code, this section shall apply to the commission and the State Water Resources Control Board and the California regional water quality control boards.

(b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.

Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.

(c) Any development within the coastal zone or outside the coastal zone which provides service to any area within the coastal zone that constitutes a treatment work shall be reviewed by the commission and any permit it issues, if any, shall be determinative only with respect to the following aspects of the development:

- (1) The siting and visual appearance of treatment works within the coastal zone.
- (2) The geographic limits of service areas within the coastal zone which are to be served by particular treatment works and the timing of the use of capacity of treatment works for those service areas to allow for phasing of development and use of facilities consistent with this division.
- (3) Development projections which determine the sizing of treatment works for providing service within the coastal zone.

The commission shall make these determinations in accordance with the policies of this division and shall make its final determination on a permit application for a treatment work prior to the final approval by the State Water Resources Control Board for the funding of such treatment works. Except as specifically provided in this subdivision, the decisions of the State Water Resources Control Board relative to the construction of treatment works shall be final and binding upon the commission.

(d) The commission shall provide or require reservations of sites for the construction of treatment works and points of discharge within the coastal zone adequate for the protection of coastal resources consistent with the provisions of this division.

(e) Nothing in this section shall require the State Water Resources Control Board to fund or certify for funding, any specific treatment works within the coastal zone or to prohibit the State Water Resources Control Board or any California regional water quality control board from requiring a higher degree of treatment at any existing treatment works.

REGULATORY FRAMEWORK

Development and land use in the Coastal Zone has the potential to create erosion, sedimentation, and degrade surface water quality in coastal waterways, estuaries, wetlands, and coastal waters. Surface water quality concerns include low levels of dissolved oxygen; elevated water temperatures; pesticide runoff, and high levels of pollutants such as coliform bacteria, ammonia, toxic metals, and residual pharmaceuticals. These watershed conditions will impact coastal waters, especially in sensitive areas such as bays, lagoons, and coastal estuaries.

Watersheds in the Coastal Zone are regulated by the North Coast Regional Water Quality Control Board (Regional Water Board). Waste discharge requirements are set by the Regional Water Board for point sources of pollution, including industrial and commercial uses, community wastewater, agricultural runoff, and storm water management systems, and individual septic systems.

California's Non-point Source Pollution Control Program (CA NPS Program) addresses federal requirements under both the Clean Water Act and the Coastal Zone Management Act (Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990), by implementing California's Coastal Nonpoint Pollution Control Program on a statewide basis. The lead State agencies responsible for implementing the CA NPS Program are the State Water Resources Control Board (designated as the lead water quality agency) and the California Coastal Commission (designated as the lead coastal zone management agency), along with the nine Regional Water Boards. The California Coastal Act also mandates protection and restoration of water resources in the Coastal Zone. Sonoma County's Coastal Zone is primarily designated as a Class 4 Groundwater Availability Area; therefore, groundwater quantity and quality shall be protected.

The Local Coastal Program provides water quality protection measures in accordance with Coastal Act requirements for development in the Coastal Zone, which supplement the State Board's regulations. The Local Coastal Program is the standard of review for the Coastal Act Development Permits, issued by Sonoma County, including appeals to the Coastal Commission of Coastal Development Permits issued by Sonoma County.

National Pollutant Discharge Elimination System

The focus of regulatory efforts has expanded in recent years to address surface runoff and pollutants entering into drainage channels, streams, and groundwater. The National Pollutant Discharge Elimination System (NPDES) program requires individual permits for construction sites that disturb more than one acre of land, and for certain industrial and commercial activities such as fish processing and boat repair yards.

Sustainable Groundwater Management Act (SGMA)

The Sustainable Groundwater Management Act of 2014 (SGMA) provides for establishment of Groundwater Sustainability Agencies in designated groundwater basins and grants these agencies new authorities to manage groundwater use, recharge, and environmental impacts. The Act requires development of sustainable groundwater management plans for groundwater basins designated by Department of Water Resources as medium-or high-priority groundwater basins. There are no medium-or high-priority basins in the Coastal Zone, but as of 2020, Sonoma County is in the process of complying with SGMA.

Total Maximum Daily Load Program

The other major Clean Water Act program affecting the County in the future is the Total Maximum Daily Load (TMDL) program. The Regional Water Board is required to determine which surface water bodies are impaired, assess pollutant sources, determine acceptable levels, allocate allowable pollutant loads to various sources, and establish implementation programs. Impaired water bodies are those where beneficial uses of water are limited due to certain pollutants. Water bodies in the Sonoma County Coastal Zone that have been identified as impaired are the Russian River, Gualala River and Estero Americano. Pollutants of concern typically in Sonoma County are sediment/siltation, nutrients, pathogens, and temperature but also include low dissolved oxygen, mercury, other metals, herbicides and exotic species. The listing of impaired water bodies is periodically re-evaluated by the Regional Water Board, and TMDLs are being developed by the Regional Water Board for surface waters in the Coastal Zone.

WATER RIGHTS

Reasonable and Beneficial Use

The Reasonable and Beneficial Use Doctrine in the California Constitution requires that water be used in a reasonable and beneficial manner and prohibits misuse and waste of water. Water is used beneficially when, for example, it is used to drink, grow crops. What is reasonable water use depends on the circumstances. For example, it could be unreasonable for some water usages during a drought. All types of water rights are subject to this constitutional provision, and the State Water Resources Control Board is authorized to take action to prevent unreasonable uses of water.

Types of Water Rights

There are two principal types of surface water rights in California: riparian rights and appropriative rights. A riparian water right allows a landowner bordering a watercourse to share the water flowing past their property with other riparian landowners. An appropriative right is a use-based right dependent upon physical control and beneficial use of the water, rather than any special relationship between land and water. Since 1914, all new appropriations of surface water require a permit from the State.

BIOTIC RESOURCES AND WATER

Biotic resources include vegetation, trees and other natural vegetation that depend on water, but their presence also affects the long-term quality and quantity of water resources in several ways. The natural vegetation found around wetlands, streams, and lakes benefits water quality by filtering out sediment and pollutants from stormwater runoff before it enters surface water bodies. Vegetation can also block stream flows and increase the retention of stormwater, thereby recharging groundwater, absorbing pollutants, and modifying peak flood levels. Vegetation on stream banks reduces bank erosion as a source of sediment. Trees and shrubs provide shade which can lower the temperature of the water and increase its value as fishery habitat in a warm climate. Streamside trees that fall into stream channels may aid fishery habitat by providing shelter, diverting flood flows, and scouring deep holes.

I. WATER RESOURCES

WATER CYCLE

Sonoma County has a Mediterranean climate where most precipitation falls as rain during the winter; there is very little measurable precipitation during the summer. Most rainfall arrives with storms characterized as atmospheric rivers, relatively narrow atmosphere currents of air with high water vapor content. Precipitation across Sonoma County is highly variable—flatter areas near Petaluma receive an average of roughly 25 inches annually while mountainous areas in the northern Coastal Zone receive over 70 inches.

Rain may either be absorbed into soil or runoff directly into surface water (streams, rivers, lakes, etc.) that drain back to the sea. Rain that is absorbed into the soil may be retained in the soil, flow along shallow subsurface flow paths to surface waters, or infiltrate into groundwater. Groundwater moves slowly through subsurface layers to streams, lakes, and the ocean, or may be extracted through wells for irrigation or human uses. Soil water is absorbed by plants and evapotranspired.

WATERSHEDS

The term “watershed” refers to the area of land that includes a particular river or lake and all the rivers, streams, and creeks that flow into it. Most land in Sonoma County falls within the three main watersheds: Russian River, Gualala River, and San Pablo Bay. **Table C-WR-1** and **Figures C-WR-1a-c** show the areas and locations, respectively, of the watersheds and sub-watersheds of the Sonoma County Coastal Zone, which lay both inside and outside Sonoma County.

Table C-WR-1. Area of Watersheds and Sub-Watersheds of the Sonoma County Coastal Zone

<i>Watershed</i>	<i>Sub-Watershed</i>	<i>Total Area (square miles)</i>	<i>Area Within Coastal Zone (square miles)</i>
<i>Abbotts Lagoon-Frontal Pacific Ocean</i>	n/a	107	<1
<i>Gualala River</i>	n/a	299	2
<i>Gualala River</i>	South Fork Gualala River	44	2
<i>Lower Russian River</i>	n/a	148	15

Watershed	Sub-Watershed	Total Area (square miles)	Area Within Coastal Zone (square miles)
Lower Russian River	Dutch Bill Creek-Russian River	55	<1
Lower Russian River	Willow Creek-Russian River	24	15
Salmon Creek-Frontal Pacific Ocean	n/a	256	52
Salmon Creek-Frontal Pacific Ocean	Bodega Harbor-Frontal Pacific Ocean	55	11
Salmon Creek-Frontal Pacific Ocean	Russian Gulch-Frontal Pacific Ocean	166	36
Salmon Creek-Frontal Pacific Ocean	Salmon Creek	35	4
Tomaes Bay-Bodega Bay	n/a	160	17
Tomaes Bay-Bodega Bay	Bodega Bay	16	1
Tomaes Bay-Bodega Bay	Bodega Harbor	9	7
Tomaes Bay-Bodega Bay	Estero Americano	38	9

Russian River Watershed

Most of central Sonoma County is part of the Russian River watershed and ultimately drains west to the Pacific Ocean. This area has moderate topography and lies in the ancient alluvial floodplain of the Russian River. Much of the suburban and urban development of Sonoma County is located inland within sub-watersheds, including Healdsburg, Windsor, Santa Rosa, Sebastopol, Rohnert Park, and Cotati. These inland sub-watersheds drain to, and have the potential to impact, coastal surface waters and groundwater.

Gualala River Watershed

The watershed is elongated, running over 32 miles long north-south, with an average width of 14 miles east-west. A continuous history of movement along the San Andreas and Tombs Creek faults has been a dominant force in shaping the basin. In 1993, the USEPA listed the Gualala River on its federal Clean Water Act §303(d) list of impaired water bodies due to declines in anadromous salmonids from excessive sedimentation. The §303(d) listing was updated in 2003, and water temperatures in the basin are now considered impaired as well. The North Coast Regional Water Quality Control Board estimates that 85% of the anthropogenic sediment sources impacting the river today are derived from poorly constructed timber and ranch roads.

Frontal Pacific Ocean Watershed

The Coastal Zone includes many small watersheds which are drained by stream segments that flow a short distance from the first coastal ridgeline directly to the Pacific Ocean. These individual small coastal drainage basins are collectively referred to as the Frontal Pacific Ocean watershed. Streams in these watersheds flow through areas of steep terrain and marine terraces. Coastal streams typically enter the ocean at small sandy beach inlets along steep rocky coastal bluffs.

1.1 Goal, Objectives, and Policies

GOAL C-WR-1: Protect, restore, and enhance the quality of surface and groundwater resources to meet the needs of all reasonable beneficial uses.

Objective C-WR-1.1: Protect and, where feasible, restore the quality of coastal waters to implement Coastal Act policy (in particular Sections 30230 and 30231). Coastal waters include ocean, rivers, streams, wetlands, estuaries, lakes, and groundwater.

Objective C-WR-1.2: Protect unimpaired waters as identified on the California Water Board's most recent Section 303(d) list, and improve water quality of impaired surface waters, prioritizing watersheds which contain surface waters that are the most impaired, have the highest value for fish and wildlife, or are at most risk from future development.

Objective C-WR-1.3: Plan, site, and design development to minimize the transport of pollutants in runoff from the development, to avoid pollution of coastal waters.

Objective C-WR-1.4: Plan, site, and design development to minimize post-development changes in the site's runoff volume, flow rate, timing, and duration, to prevent adverse changes in the hydrology of coastal waters.

Objective C-WR-1.5: Prevent the degradation of surface and ground water quality from the failure of septic and other wastewater treatment systems.

Objective C-WR-1.6: Educate the public about practices and programs to minimize water pollution, and provide educational and technical assistance to agriculture in order to reduce sedimentation, and to increase on-site retention and recharge of storm water, to the maximum extent feasible.

Objective C-WR-1.7: Secure funding sources for development of Sonoma County Coastal Zone groundwater quality assessment, monitoring, remedial and corrective action, and awareness/education programs.

Objective C-WR-1.8: Require treated water to conform with beneficial water use standards to the maximum extent feasible.

Objective C-WR-1.9: Minimize the pollution of stormwater runoff and the degradation of surface water quality from roads and other paved surfaces, commercial development, waterfront development, and agricultural facilities.

Objective C-WR-1.10: Encourage new groundwater recharge opportunities and protect existing groundwater recharge areas.

Objective C-WR-1.11: Require consideration of naturally occurring and human caused contaminants in groundwater in development projects. Educate the public on evaluating groundwater quality.

Objective C-WR-1.12: Protect groundwater from saltwater intrusion.

Policy C-WR-1a: The approval for any project proposed within 200 feet of an impaired surface water shall include as conditions of approval design features and mitigation measures to prevent impacts to the quality of such waters.

Policy C-WR-1b: Require that permits and approvals for new development include evaluation and consideration of naturally occurring and human caused contaminants in groundwater.

Policy C-WR-1c: New development and redevelopment shall include measures to minimize post-development changes in the runoff flow regime, control pollutant sources, and, where necessary, remove pollutants. Such measures shall take into account existing site characteristics that affect runoff (such as topography, drainage, vegetation, soil conditions, natural hydrologic features, and infiltration conditions). In addition, these measures should be considered early in site design planning and through alternative analysis. Such measures include, but may not be limited to the following:

- (1) Give precedence to a Low Impact Development (LID) approach to stormwater management in all development. LID integrates Site Design strategies with small-scale, distributed BMPs to replicate the site's natural hydrologic balance through infiltration, evapotranspiration, harvesting, detention, or retention of stormwater close to its source. Use pollutant Source Control Best Management Practices (BMPs), which can be operational actions (during construction) or structural features (post construction) in all development to minimize the transport of pollutants in runoff from the development.
- (2) Incorporate Treatment Control BMPs to remove pollutants of concern when the combination of site design and source control BMPs are not sufficient to protect water quality, and to meet State and Federal water quality objectives.
- (3) Plan, site, and design development to maintain or enhance on-site infiltration of runoff, where appropriate and feasible. Minimize the installation of impervious surfaces, especially directly connected impervious areas, and, where feasible, increase the area of pervious surfaces in re-development, to reduce runoff and increase recharge capacity.
- (4) Plan, site, and design development to protect and, where feasible, restore natural hydrologic features such as groundwater recharge areas, natural stream corridors, floodplains, and wetlands.
- (5) Plan, site, and design development to preserve or enhance native vegetation. When feasible, native species should be selected to achieve water quality benefits such as transpiration, interception of rainfall, pollutant uptake, shading of waterways to maintain water temperature, and erosion control.

- (6) In areas adjacent to an Environmentally Sensitive Habitat Area (ESHA), plan, site, and design development to protect the ESHA from any significant disruption of habitat values resulting from the discharge of storm water or dry weather flows.

Policy C-WR-1d: Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate.

Policy C-WR-1e: Avoid construction of new wastewater outfalls where feasible. Avoid construction of new storm water outfalls and direct storm water to existing facilities with appropriate treatment and filtration, where feasible. Where new outfalls cannot be avoided, plan, site, and design outfalls to minimize adverse impacts to coastal resources from outfall discharges, including consolidation of existing and new outfalls where appropriate to minimize increased flow.

Policy C-WR-1f: Developments within 200 feet of the ocean, coastal wetlands or streams, or ESHA, or discharge runoff directly to the ocean, coastal waters, or to a stream or wetland buffer as defined by the Biological Resource policies of the LCP have a high potential for adverse impacts to water quality and hydrology due to proximity of the discharge relative to protected coastal resources. “Discharge runoff directly” is defined as runoff that flows from the development to the ocean, coastal waters, or to a stream or wetland buffer that is not first combined with flows from any other adjacent areas. Uses including, but not limited to, motor vehicle fuel outlets, boat yards, agricultural processing, and food service establishments, may be considered to have a high potential for adverse impacts regardless of location.

As determined by Permit Sonoma, on a case-by-case basis, such developments may require Treatment Control Best Management Practices (BMPs) for post-construction treatment of storm water runoff. Applicants for these types of developments shall do the following:

- (1) Conduct a polluted runoff and hydrologic site characterization by a qualified licensed professional, early in the development planning and design stage, and document the expected effectiveness of the proposed BMPs.
- (2) Conduct an alternatives analysis to demonstrate that there are no appropriate and feasible alternative project designs, including reduction of project scope, which would substantially improve on-site runoff retention. Coastal Development Permits may be denied for projects that are inconsistent with the lowest impact alternative.
- (3) Use treatment control BMPs or suites of BMPs designed to treat, infiltrate, or filter the amount of storm water runoff produced by all storm events up to and including the 1st inch of a 24 hour storm event, and/or the 85th percentile, 1-hour storm event (with an appropriate safety factor of 2 or greater) for flow-based BMPs.

- (4) Use treatment control BMPs or suites of BMPs to remove pollutants from any portion of the design storm runoff volume that will not be retained on-site, or if additional pollutant removal is necessary to protect coastal waters.
- (5) Use a runoff control BMP or suites of BMPs including LID and minimization of impervious surfaces for the design storm (Policy C-WR-1e (3) above), consistent with Regional Water Quality Control Board storm water permits or applicable State Water Resources Control Board requirements, to minimize adverse post-development changes in the runoff flow regime.

Policy C-WR-1g: Permits for new development shall require an inspection, monitoring, repair, and maintenance of Source Control and Treatment Control Best Management Practices (BMPs) by Permit Sonoma as necessary so that they function properly for the economic life of the development. The condition shall specify that this requirement runs with the land, such that the burden for implementing this requirement becomes the responsibility of the new owner upon transfer of the property.

Policy C-WR-1h: Approvals for new development and redevelopment shall ensure water quality impacts from construction are minimized through the following siting and design requirements:

- (1) Preserve the existing hydrologic conditions, drainage system, stormwater runoff infiltration, filtration, and retention functions to the maximum extent feasible including maintaining volume and velocity of stormwater and dry weather runoff as close to existing levels as feasible.
- (2) Limit the project footprint, phase grading activities, implement soil stabilization and pollution prevention measures, and avoid soil compaction.
- (3) Maximize percent cover by pervious surfaces, and minimize percent cover by impervious surfaces, especially those that are directly connected.
- (4) Maximize the use of vegetated strips of land or other techniques of increasing stormwater infiltration and filtration before reaching storm drain inlets.
- (5) Limit land disturbance from construction (e.g., clearing, grading, and cut-and-fill), especially in erosive areas (including steep slopes exceeding 35 percent), unstable areas, and erosive soils);
- (6) Requiring soil stabilization Best Management Practices (BMPs) be implemented over disturbed areas as soon as possible during construction.
- (7) Requiring that grading plans include measures to avoid soil erosion and sedimentation of storm water to the maximum extent feasible;

- (8) Requiring as a condition of grading permit approval for all new development, regardless of the area of land to be disturbed, that soil stabilization and erosion control measures be installed in erosive areas of construction sites (e.g., steep slopes exceeding 35 percent), unstable areas, and erosive soils);
- (9) Requiring treatment control BMP's adequate to remove pollutants of concern when the combination of site design and source control BMPs are not sufficient to protect water quality, or to meet State and Federal water quality objectives and avoid adverse impacts to habitat and water quality be identified and implemented for new development in or adjacent to Environmentally Sensitive Habitat Areas on sites that drain directly to surface waters, regardless of the area of land to be disturbed;
- (10) Requiring inspection of construction sites to verify implementation of approved erosion control plans and Storm Water Pollution Prevention Plans; and
- (11) Requiring BMPs be implemented for constructing, maintaining, and repairing roads and trails in County parks, including stabilizing erosion, clearing vegetation, resurfacing, and removing slide debris. Where feasible use pervious surfaces to reduce stormwater runoff.

Policy C-WR-1i: All projects which involve construction of new storm drain inlets or maintenance of existing inlets shall be required to add a sign or stencil to each inlet with the equivalent of this language: "No dumping, drains into creek/ocean."

Policy C-WR-1j: For new development and redevelopment projects that could affect water resources of Sonoma County's Coastal Zone, as a condition of permit approval and prior to permit issuance, require the applicant to:

- (1) Provide proof that all applicable local, state, and federal approvals related to water resources protection have been obtained. Such permits may include, but are not necessarily limited to the following:
 - a. National Pollutant Discharge Elimination System Permits (State and Regional Water Quality Control Boards)
 - b. Lake and Streambed Alteration Agreement (California Department of Fish and Wildlife)
 - c. Clean Water Act Section 404 Permit (U.S. Army Corps of Engineers)
- (2) Submit final project designs that demonstrate incorporation of applicable regulatory requirements, resource agency conditions of permit approval, and associated best management practices related to water resources protection.

Policy C-WR-1k: Remove, repair, and/or replace failing septic systems that pose a risk to public health or have potential to pollute groundwater.

Policy C-WR-1l: Prohibit new development proposals or impose moratoria on building and other permits that would result in a substantial increase in demand in areas within Bodega Bay and The Sea Ranch that are served by municipal wastewater service if the wastewater plant fails to meet standards set by the North Coast Regional Water Quality Control Board.

Policy C-WR-1m: Ensure that agricultural operations reduce non-point source pollution through the development and implementation of California Water Resource Control Board approved ranch plans and farm plans that demonstrate how the applicant will avoid, minimize, or mitigate the impact to water quality from agriculture to the maximum extent feasible.

Policy C-WR-1n: Design, construct, and maintain County buildings, roads, bridges, drainage, parks, marinas, parking lots, and trails to avoid or minimize sediment and other pollutants in storm water runoff. Implement Best Management Practices for their ongoing maintenance and operation.

Policy C-WR-1o: Drainage facilities located adjacent to beaches and bluffs shall direct such drainage inland and away from beaches and bluffs.

I.2 Programs

Program C-WR-1-P1: Develop and provide educational, outreach, or technical assistance programs focusing on water quality to owners and managers of agricultural operations and timberlands. Inform owners and managers of agricultural lands, including vineyards, orchards, row crops, grazing, ranches, and dairies, about the Agricultural Commissioner's Best Management Practices for erosion and sediment control, including on-site retention of storm water, maintenance of natural sheetflow and drainage patterns, and avoidance of concentrated runoff, particularly on steep slopes exceeding 35 percent; and for protection of streams and other surface waters from the effects of livestock grazing and other agricultural uses or timber operations.

Program C-WR-1-P2: Develop and require compliance with standards for the siting and design of harbors, marinas, and other waterfront development, regardless of the size of the area to be disturbed. Require stormwater source control Best Management Practices to minimize polluted runoff including installation of trash receptacles with lids, posting of No Littering signs; and installation and maintenance of filters in storm drains designed to capture hydrocarbon runoff and other pollutants from roadways and parking lots.

Program C-WR-1-P3: Create guidelines for development that would provide for retention of the site's pre-development rate of groundwater recharge.

Program C-WR-1-P4: Develop a program to facilitate tracking and maintaining consistency between the adopted Local Coastal Plan, adopted groundwater sustainability plans, urban

water management plans, and the master facilities plans of public water suppliers. Such a program should include meetings between Permit Sonoma, public water suppliers, the North Coast Regional Water Quality Control Board and the California Coastal Commission to develop the tracking plan. As part of plan development, Permit Sonoma will review all proposed master facilities plans, and develop Local Coastal Plan amendments necessary to implement both the master facilities plans and the water resource tracking plan.

1.3 Initiatives

Initiative C-WR-1-I1: Work with the California Coastal Commission, Regional Water Board, Sonoma County Water Agency, public water suppliers, and other interested parties to minimize polluted runoff from development, and to continue to develop and implement effective water quality plans and measures.

Initiative C-WR-1-I2: Coordinate with the North Coast Regional Water Quality Control Board and California Department of Water Resources to promote stormwater impoundments for agricultural uses.

Initiative C-WR-1-I3: Seek funding for comprehensive studies of long-term changes in climate and precipitation patterns in the County and region.

Initiative C-WR-1-I4: Support the Sonoma County Water Agency with development of flood control design criteria that considers stream geomorphic analysis, and the use of biotechnical bank stabilization methods for the purpose of preventing erosion and siltation in drainage swales and streams.

Initiative C-WR-1-I5: Coordinate with the U.S. Army Corps of Engineers, NOAA Greater Farallones National Marine Sanctuary, the Regional Water Quality Control Board and the Coastal Commission to continue maintenance dredging in Bodega Bay and other areas on the Sonoma Coast in accordance with the California Coastal Act. Dispose of dredge spoils in a manner that protects habitat and water quality and in accordance with all local, state, and federal permit requirements.

Initiative C-WR-1-I6: Work with the Regional Board in development of TMDL's, TMDL Implementation Plans, water quality monitoring, and programs and projects for water quality restoration and remediation for impaired water bodies to improve water quality.

Initiative C-WR-1-I7: Continue to cooperate with Mendocino County, the Regional Water Board, and CalFire to reduce water quality impacts of timber harvest in the Gualala River watershed.

Initiative C-WR-1-I8: Coordinate with the North Coast Regional Water Quality Control Board, California Coastal Commission, watershed focus groups, and stakeholders in collecting, evaluating, and using coastal watershed-specific water resource information.

2. GROUNDWATER

Groundwater Availability

The amount of groundwater in an area varies by the recharge from rainfall, the surface runoff in streams and drainage channels, and the local underground geology. The alluvial soils, sand, and gravel found in valleys generally can hold large amounts of water and thus constitute the largest aquifers in the County. Sandstone and some other sedimentary rocks can still absorb some water.

The climate of coastal Sonoma County provides abundant rainfall during the winter months, and potentially abundant groundwater recharge on an annual basis. This pattern of reliable groundwater recharge will be influenced by climate change and groundwater resources will likely be less predictable and more limited in the future.

Most of the County's groundwater basins are centered along major creek and river valleys. However, many upland areas and the Coastal Zone are comprised of harder Franciscan rock formations that lack water storage capacity that underlie the area. The Franciscan Formation is a large area of mixed sedimentary, metamorphic, and igneous rocks. Groundwater is stored in the fractures, joints, cavities, and bedding planes of the rocks. The Franciscan Complex is generally considered to be non-water bearing; water availability largely depends on the nature of the fractures and their interconnection. The location of water-bearing bedrock is difficult to predict, so water availability is uncertain. Rainfall that would otherwise percolate into the aquifer simply runs off into creeks and streams and then to the ocean for lack of storage space in most of the rocks. Groundwater in these areas will become increasingly brackish as saltwater intrusion increases with sea level rise. This increase will be exacerbated by increased groundwater extraction, creating exceptional challenges to sustainably increasing the capacity of existing water systems.

Chert, greenstone, and sandstone members of the Franciscan may possess water-bearing fractures that yield sufficient and occasionally abundant water in some locations. The location of water-bearing bedrock is difficult to predict, so water availability is uncertain.

Water Availability Classification

Using information on geology and water yields, the County uses a four-tier classification system to indicate general areas of groundwater availability.

Groundwater Quality

Poor groundwater quality can be the result of geologic conditions, such as the highly mineralized water extracted from Franciscan Complex Formation that underlies most of the Sonoma Coast. Some groundwater naturally contains dissolved substances that can cause health problems, depending on the concentrations and combinations of the substances present, such as arsenic, asbestos, boron, selenium, or mercury.

According to the State Water Resources Control Board, groundwater is also often polluted by human activities that generate contaminants such as microorganisms, gasoline and diesel fuels, solvents, nitrates, pesticides, pharmaceuticals, and metals. The underground flow and concentration of these contaminants, as well as the intrusion of ocean saltwater into groundwater, can be influenced by the extraction of groundwater, changes in levels of groundwater and sea level rise.

Class 1	Major Groundwater Basins
Class 2	Major Natural Recharge Areas
Class 3	Marginal Groundwater Availability Areas
Class 4	Areas with Low or Highly Variable Water Yield

The California Department of Water Resources (DWR) has identified the groundwater basins and subbasins in the Sonoma County Coastal Zone as follows:

Name and DWR Identifier	Size	Classification
Bodega Bay Area (DWR I-57)	2,680 acres	Class 4
Wilson Grove Formation Highlands (DWR I-59)	size unavailable	Class 2
Lower Russian River Valley (DWR I-60)	10 square miles	Class 1
Fort Ross Terrace Deposits (DWR I-61)	3.5 square miles	Class 3

Source: Department of Water Resources Bulletin 118

Except for relatively small area near Fort Ross, the Russian River, and Bodega Bay, most of the Sonoma Coast is within the Class 4 Groundwater Availability Area.

In addition to County mapping, the State regularly updates the maps of groundwater basins and prioritizes groundwater basins for sustainable management in the County.

Figures C-WR-2a-c shows the locations of the groundwater basins in the Coastal Zone. None of these groundwater basins are currently designated by DWR as medium- or high-priority groundwater basins.

Groundwater Depletion

Public concerns over depletion of groundwater supplies have increased as development that relies on groundwater supply has increased. The County fully participates in the California Statewide Groundwater Elevation Monitoring (CASGEM) and continues to collect data about existing groundwater levels, water quality, and water use to best inform planning decisions.

In response to reports that groundwater levels have declined in some areas, the County has initiated a long-term program to increase the available data on groundwater resources and to systematically organize and use it as development is planned and new well permits are sought. Programs are underway to assess the available groundwater in the County's three major basins, Santa Rosa Plain, Sonoma Valley, and Petaluma Valley. In the fractured rock areas of the Coastal Zone, data from monitoring will improve our understanding of available groundwater resources. This growing body of data will produce better information for County decision makers to determine what further measures may be appropriate in order to properly manage groundwater resources.

2.1 Goal, Objectives, and Policies

GOAL C-WR-2: Manage groundwater as a valuable and limited shared resource.

Objective C-WR-2.1: Conserve, enhance, and manage groundwater resources on a sustainable basis that assures sufficient amounts of clean water required for future generations, the uses allowed by the Local Coastal Plan, and the natural environment.

Objective C-WR-2.2: Develop a scientifically based program to collect the data needed to assess and understand groundwater conditions.

Objective C-WR-2.3: Encourage new groundwater recharge opportunities and protect existing groundwater recharge areas.

Objective C-WR-2.4: Increase institutional capacity and expertise within the County to competently review hydrogeologic reports and data for critical indicators and criteria.

Objective C-WR-2.5: Avoid additional land subsidence caused by groundwater extraction

Policy C-WR-2a: Ensure sufficient groundwater quantity and quality for existing and proposed uses reliant upon groundwater wells through application of County standards for pump tests, well yields, pollutant levels, and water storage. Require that streamflow depletion that affect surface water quality or quantity is avoided or fully mitigated and require streamflow depletion impact analysis for projects with potential to deplete surface waters.

Policy C-WR-2b: Continue the County program to require groundwater monitoring for new or expanded commercial and industrial operations using wells. Where justified by the monitoring program, establish additional monitoring requirements for other new wells.

Policy C-WR-2c: Permit applications for new development that result in a net increase in groundwater use in a Class 3 and 4 Groundwater Availability Areas, or within a watershed that is designated as critical habitat for Steelhead or Coho Salmon shall be denied unless the applicant can demonstrate through a hydrogeologic report that the proposed use will not cause an adverse effect on groundwater resources of the groundwater basin, subbasin, or fractured rock aquifer, and associated stream levels. . The hydrogeologic reports shall consider the following when evaluating impacts to groundwater resources: lowering of groundwater levels, reduction in groundwater storage, seawater intrusion, degradation of water quality, land subsidence, and depletion of interconnected surface water. The hydrogeologic report shall discuss if the development is consistent with an adopted groundwater sustainability plan or groundwater management plan, as applicable to the project site.

Policy C-WR-2d: Require new or expanded public water suppliers to monitor and report groundwater levels, yields, and other information on groundwater conditions.

2.2 Programs

Program C-WR-2-P1: In order to assess groundwater resources, review well permit data, monitoring data and identify special study areas where additional groundwater studies are needed. In each such special study area that is approved by the Board, develop a comprehensive groundwater assessment that includes the following:

- (1) Existing system of monitoring wells and stream gauges;
- (2) Locations of water wells;
- (3) Available data on groundwater and surface water levels and contamination;
- (4) Maps and graphs that show past and present data and changes in precipitation, imports, groundwater levels, groundwater quality, rates of extraction, and the relationship of groundwater to surface water;
- (5) Drillers' logs, geologic data and monitoring data needed to estimate water yields in the area;
- (6) A water budget for the area under existing and foreseeable conditions that estimates inputs, outputs, and the total amount of water gain or loss in the area;
- (7) Consideration of the following groundwater sustainability indicators: lowering of groundwater levels, reduction in groundwater storage, seawater intrusion, degradation of water quality, land subsidence, and depletion of interconnected surface water;
- (8) Recommendations for well monitoring, data collection and reporting; and
- (9) Provisions for applicant fees and other funding of County costs.

If an assessment, as defined above, demonstrates a need for additional management actions to address existing or foreseeable groundwater problems, a groundwater management plan shall be prepared. The groundwater management plan shall define groundwater sustainably for the special study area, include recommendations for sustainable yield and sustainable management criteria with minimum thresholds and measurable objectives, and include recommendation for groundwater management policy necessary to achieve groundwater sustainability, pursuant to the California Water Code or the County's land use or other legal authority. Include involvement by the affected water users, well drillers, local agencies, private water companies and landowners.

Program C-WR-2-P2: In cooperation with the Sonoma County Water Agency, California Department of Water Resources, other public agencies, and well owners, establish and maintain a system of voluntary monitoring of wells throughout the County, using public water system wells and private wells where available. Encourage participation in voluntary monitoring programs and, if funds are available, consider funding of well monitoring where determined necessary in order to stimulate participation.

Program C-WR-2-P3: Work with the State Water Resources Control Board, California Department of Water Resources, California Department of Health Services, California Environmental Protection Agency, public water suppliers, and applicable County agencies to

secure funding sources for developing groundwater assessment, protection, enhancement, and management programs.

2.3 Initiatives

Initiative C-WR-2-I1: Encourage and support research on and monitoring of local groundwater conditions, aquifer recharge, watersheds, and streams where needed to assess groundwater quantity and quality.

Initiative C-WR-2-I2: Work with the Regional Water Board and coastal communities to evaluate and monitor impacts on surface and groundwater quality caused by the operation of septic systems in existing and suspected problem areas.

3. PUBLIC WATER SYSTEMS

An adequate and sustainable water supply is essential if Sonoma County is to serve projected increases in population, housing, employment, business, and agriculture. The main purpose of this section is to address what the County can do to help maintain the long-term adequacy of water supply services provided by public and private entities, given the legal limitations on the County's authority over such services.

The Sonoma Coast has about 16 water systems which fall under the regulatory authority of State Water Resources Control Board Division of Drinking Water as a public water system.

The large public water systems on the coast are The Sea Ranch Water Company with approximately 1,900 connections and the Bodega Bay Public Utilities District with approximately 1,100 connections. The small public water systems range from the Sereno del Mar Mutual Water Company with 168 connections to the Blue Heron Restaurant with a single connection. The small public water systems supply water to a wide variety of uses such as businesses, residences, schools, and small unincorporated communities. Most are owned by mutual companies or other private entities, and a few are operated by special districts. These systems have small revenue bases and relatively high per capita costs and often have difficulty financing major capital investments needed to replace aging facilities or accommodate growth. Additional information about public water systems on the coast is provided in Public Facilities and Services Element Section 3.1 (Water Services) and **Table C-PF-1**.

All public water systems must meet and maintain water quality standards established by the Sonoma County Department of Health Services and the Regional Water Quality Control Boards. The suppliers are required to prepare and adopt wellhead protection plans that will avoid future contamination, and policies shall avoid unnecessary restrictions on development associated with protecting public water wells.

All public water systems in the Sonoma Coast rely on groundwater supplies near the ocean that are at risk from salinization as a result of sea level rise and less predictable recharge during the winter rainy season due to climate change. In light of uncertain future availability of water from surface and groundwater sources, water conservation, re-use, and alternative resources are increasingly important to providing adequate water supplies in the future.

3.1 Goal, Objectives, and Policies

GOAL C-WR-3: Encourage public water suppliers to provide an adequate water supply that meets long-term needs, is consistent with the adopted Local Coastal Plan and community water management plans, and maintains water resources for other water users while protecting the natural environment.

Objective C-WR-3.1: Assist public water suppliers in collecting and disseminating surface and groundwater data, assessing available water supplies, and protecting water quality.

Objective C-WR-3.2: Work with public water suppliers in developing and implementing long-term plans for water supply, storage, and delivery necessary to first meet existing water demands; and secondly to meet planned growth within the designated service areas, consistent with the sustainable yield of water resources.

Objective C-WR-3.3: Work with public water suppliers to balance reliance on groundwater and surface water to assure the sustainability of both resources.

Policy C-WR-3a: Assist public water suppliers in complying with Federal and State water quality standards by assuring that water sources used for public water systems are not contaminated by land uses or pollutants in the watershed, by supporting continued study and monitoring of water quality, and by encouraging acquisition of critical watershed areas by the water suppliers or the Sonoma County Agricultural Preservation and Open Space District. In furtherance of this initiative, work with public water suppliers in developing and implementing wellhead protection plans.

Policy C-WR-3b: Require local public agencies that are public water suppliers, including county-dependent districts, special districts, and other local public agencies, to consult with the County prior to acquiring a site or developing any well or facility for public water supplies in the unincorporated area; and require a determination of consistency with the Local Coastal Plan and supporting technical documentation for development of any such well or facility.

Policy C-WR-3c: Require public water systems to prepare master facilities plans that contain, but are not limited to, the following items and information:

- (1) Maps showing future service area boundaries.
- (2) Forecasted growth and relationship to Local Coastal Plan projections and limits.
- (3) Projected service and facility needs.
- (4) Evaluation of the impact a 7-foot increase in sea level will have on existing and future facilities.

- (5) Production from new and future wells is sustainable and will not have an impact to local groundwater quality or quantity.
- (6) Estimated costs and revenues for needed improvements.
- (7) System design parameters and assumptions.
- (8) Monitoring and mitigation measures to assure long-term adequacy of sources, including during possible drought conditions.
- (9) Identify and prevent cumulative impacts.
- (10) Water conservation measures.

Policy C-WR-3d: If a water system master plan required by **Policy C-WR-3c** or a monitoring program fails to show adequate water supply or facility capacity for planned growth within the water system service area, connections to new development is prohibited in order to protect services to existing residents, existing beneficial uses and implement Land Use Element **Policy C-LU-4t**.

Policy C-WR-3e: Support the actions and facilities needed by public water suppliers to meet the demands estimated in adopted master facilities plans, consistent with the adopted Local Coastal Plan, community water management plans, and in a manner that protects coastal resources.

Policy C-WR-3f: Require public water suppliers to avoid or minimize significant adverse impacts on the environment resulting from water supply, storage, and transmission facilities, including impacts on other water users.

Policy C-WR-3g: Support cooperative inter-regional planning efforts by the public water suppliers, their contractors, and other existing water users, to consider future demand projections concurrently with the availability of sustainable water supplies.

3.2 Program

Program C-WR-3-P1: Where a problem related to a public water supply is identified, promote and seek funding for evaluating and remediating the problem through a watershed management approach.

3.3 Initiatives

Initiative C-WR-3-I1: Cooperate with public water suppliers in planning, developing, and constructing storage and transmission facilities needed to supply water in compliance with adopted Local Coastal Plan policies, urban water management plans, water supply

agreements, sustainability goals, master facilities plans and, where applicable, programs to mitigate identified groundwater overdraft conditions.

Initiative C-WR-3-I2: Work with public water suppliers in assessments of the sustainable yield of surface water, groundwater, recycled water, and conserved water, including during possible drought periods. This work should include the exploration of potentially feasible alternative water supplies within the watershed serving the water users. Surface and groundwater supplies must remain sustainable and not exceed sustainable yield.

Initiative C-WR-3-I3: Request technical assistance and water resource data from public water suppliers and share available water resource information with them and the public.

4. WATER CONSERVATION AND RE-USE

Water conservation has long been a practice in Sonoma County households, businesses, and agriculture. The rise of environmental consciousness in the 1970s and a prolonged drought in 1976 and 1977 led to the early efforts by some water suppliers to reduce demand. Planned re-use of treated water in the Santa Rosa Plain was initiated by the Santa Rosa Subregional Long-Term Wastewater Management Plan during this same period as part of developing a regional wastewater system. Given future forecasts in changes to local precipitation patterns due to climate change, and increasing salinization of groundwater created by sea level rise, and future increased in demand, water conservation strategy research should be continued.

In recent years, both water conservation and re-use programs have expanded considerably. As advanced treatment has become an increasingly standard practice, re-use programs are becoming even more viable. Meeting peak water demands in the future may require increased water conservation efforts and water recycling by water users in both urban and rural areas.

The Sonoma Coast has always been a water-scarce area. As described above in Section 1 Groundwater Resources, most of the County's Coastal Zone is in a Class 4 Groundwater Availability Area. Therefore, there is an even greater need in the Coastal Zone to increase the efficiency of water use and reduce demand for water by applying new water conservation and re-use technology and implementing water conservation programs.

4.1 Goal, Objectives, and Policies

GOAL C-WR-4: Increase the role of water conservation and safe, beneficial water re-use in meeting water supply needs of both urban and rural users.

Objective C-WR-4.1: Increase the use of recycled water where it meets appropriate standards of quality and quantity for the intended use.

Objective C-WR-4.2: Promote and encourage the efficient use of water by all water users.

Objective C-WR-4.3: Conserve and recognize stormwater as a valuable resource.

Policy C-WR-4a: Water conserving plumbing and water conserving landscaping shall be required in all new development projects. Prior to building permit issuance, the applicant shall submit to Permit Sonoma for review and approval a Water Conservation Plan for all buildings and landscaping. The Water Conservation Plan shall include all reasonably feasible measures to reduce water demand to the maximum extent feasible and enhance water resource recovery to maintain sustainable water supplies. Measures that must be evaluated include: installation of low-flow fixtures, best available conservation technologies for all water uses, rainwater and stormwater collection systems and graywater reuse. Landscaping plans must comply with the County Water Efficient Landscape Ordinance. Verification from a qualified irrigation specialist that landscaping plan complies with the County Ordinance shall be provided. The measures in the plan shall be implemented by the applicant and verified by Permit Sonoma staff prior to Certificate of Occupancy or operation of the use.

Policy C-WR-4b: County operated water systems shall be required to minimize water loss and waste and promote programs to minimize water loss and waste by public water suppliers and their customers.

Policy C-WR-4c: Require conservation of water resources for agricultural through activities that increase the efficiency of water use for crop irrigation, frost protection, and livestock.

Policy C-WR-4d: Ensure that public wastewater disposal systems are designed to reclaim and reuse recycled water for agriculture, geothermal facilities, landscaping, parks, public facilities, wildlife enhancement, and other uses to the extent practicable, provided that the water meets the applicable water quality standards and is supplied in appropriate quantities for the intended uses.

Policy C-WR-4e: Allow graywater systems, roof catchment of rainwater, and other methods of re-using water; and minimizing the need to use potable surface water or groundwater.

Policy CWR-4f: Require property owners to incorporate only native, drought-tolerant, and low water use plants to conserve water and reduce the potential for runoff and erosion.

Policy C-WR-4g: Support programs to monitor and determine per capita or per unit water use in each community and area, and use these data in groundwater management plans, master facilities plans, and wastewater treatment plans.

Policy C-WR-4h: Encourage monitoring for all water use and require water metering for public water suppliers that require water users to pay for costs of the amount of water used. Encourage tiering and other pricing mechanisms for public water suppliers that provide incentives for water users to employ conservation and reuse programs. Actively encourage public water suppliers to maximize water re-use and conservation prior to increasing net water use for new development.

Policy C-WR-4i: Establish programs for retrofitting plumbing, providing cost rebates, identifying leaks, changing landscaping, irrigating efficiently, and other methods of reducing water consumption by existing users.

Policy C-WR-4j: Require new development in the Bodega Bay Urban Service Area to maintain the site's pre-development rate of groundwater recharge, both in quantity and quality, to the maximum extent feasible.

4.2 Programs

Program C-WR-4-P1: Initiate and support educational programs to inform residents, business and agriculture owners and operators, and other groundwater users of best management practices in the areas of efficient water use, water conservation, and increasing groundwater recharge.

Program C-WR-4-P2: Assess water use by County buildings and facilities and reduce water consumption to the maximum extent feasible.

Program C-WR-4-P3: Develop new standards for County codes that will permit increased the use of recycled water for new commercial, residential, and agricultural development.

Program C-WR-4-P4: Use water effectively and reduce water demand by developing programs to:

- (1) Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles;
- (2) Educate water users on water conserving landscaping and other conservation measures;
- (3) Encourage retrofitting with water conserving devices;
- (4) Design wastewater collection systems to minimize inflow and infiltration; and
- (5) Reduce impervious surfaces to minimize runoff and increase groundwater recharge.

4.3 Initiative

Initiative C-WR-4-I1: Help public water suppliers disseminate information on the limits of available water supplies, how the supplies can be used efficiently, the possible effects of drought conditions, acceptable levels of risk of shortage for various water users, priorities for allocation of the available water supply, conditions for use of limited supplies, and limits of alternate sources that could be used or developed. Towards this end, support water conservation and education programs which provide measurable targets for public water suppliers.

5. WATERSHED MANAGEMENT

Watershed management is a holistic approach to managing water resources and other watershed functions such as fish and wildlife, riparian functions, and ecological services. Watershed management allows for an integrated approach to surface water, groundwater, and water supply management taking into account effects on stream flow, groundwater levels, water quality and habitat conditions.

5.1 Goal, Objective, and Policy

GOAL C-WR-5: Improve the understanding, valuation, and sound management of the water resources in the diverse watersheds of the Sonoma County coast.

Objective C-WR-5.1: Seek and secure funding for addressing water resource issues on a watershed basis and prioritize a watershed management approach to remediating identified water related problems.

Policy C-WR-5a: Utilize the North Coast Integrated Coastal Watershed Management Plans for the Salmon Creek and the Russian River Watersheds where appropriate and feasible.

Public Safety Element: Table of Contents

Public Safety Element.....	3
Introduction	3
Purpose.....	3
Relationship to Other Elements	4
Relationship to California Coastal Act.....	4
Section 30006.5 Legislative findings and declarations; technical advice and recommendations	4
Section 30270 Sea level rise	4
Section 30235 Construction altering natural shoreline	4
Section 30253 Minimization of adverse impacts	5
Relationship to Other Plans, Reports, and Regulations.....	5
Global and Regional Sea Level Rise Scenarios for the United States	6
United States Coast Guard Sector San Francisco Area Contingency Plan	6
Sonoma County Hazard Mitigation Plan	7
Sonoma County Climate Action Plan	7
California Environmental Quality Act.....	8
Other Laws and Regulations.....	8
Determination of Acceptable Risks.....	8
1. General Hazards.....	9
1.1 Goal, Objectives, and Policies.....	9
1.2 Programs	13
1.3 Initiative.....	13
2. Geologic Hazards	14
Seismic Hazards	14
Related Seismic Hazard Plans and Regulations	15

Alquist-Priolo Earthquake Fault Zoning Act	15
Seismic Hazards Mapping Act	16
Other Seismic Safety Regulations.....	16
Other Geologic Hazards.....	16
Expansive Soils	17
Slope Instability.....	17
Coastal Bluff Erosion.....	17
Shoreline Protection Structures	20
2.1 Goal, Objectives, and Policies.....	21
2.2 Program.....	23
3. Flood and Inundation Hazards	24
Stream and River Flooding	24
Coastal Flooding and Storm Surge.....	25
Tsunamis	25
Floodplain Management	27
3.1 Goal, Objectives, and Policies.....	27
3.2 Programs	29
3.3 Initiatives	30
4. Sea Level Rise Hazards	31
Sea Level Rise Forecasts	31
Sea Level Rise Vulnerability Assessment for the Sonoma Coast	34
Exposure to Inundation and Erosion.....	37
Living Shorelines and Natural Infrastructure	37
Adaptation Strategies	38
Sea Level Rise Forecast Standard.....	38
4.1 Goal, Objectives, and Policies.....	39
4.2 Programs	41
5. Wildland Fire Hazards	43
Hazards and Risk Assessment.....	44
Land Use Planning	44

The Sea Ranch Fuels Management.....	44
Fire Safety Standards.....	45
Public Education	45
5.1 Goal, Objectives, and Policies.....	46
5.2 Initiatives	48
6. Hazardous Materials	49
Federal Hazardous Materials and Waste Programs.....	49
State of California Hazardous Materials and Waste Programs	50
California Coastal Act	50
Sonoma County Hazardous Materials and Waste Lead Agencies and CUPAs	50
6.1 Goal, Objective, and Policies	52
6.2 Initiatives	52
References	53

Public Safety Element

INTRODUCTION

PURPOSE

The Public Safety Element establishes goals, objectives, and policies to minimize potential human injury and property damage by guiding future development to reduce the exposure of persons and property to the above hazards. The policies in this Element are intended to avoid development which would result in unacceptable risks to the residents, visitors, private property, public facilities, and infrastructure in the Coastal Zone; and to minimize risks for existing development already located in hazard areas. Acceptable levels of risk are based on the nature of each hazard, the frequency of exposure, the number of persons exposed, and the potential damage.

The policies in the Public Safety Element are intended to avoid development which would adversely affect existing and future residents, visitors, and property; and to not place an undue financial burden on property owners and taxpayers by allowing development in hazard areas which may have unusually high costs for public services and disaster relief. The Public Safety Element is based on the best available science and information and official data sources to delineate areas potentially at risk from various hazards. It includes maps of known high hazard areas to not only guide development but also to increase awareness of inhabitants and aid in disclosure of potential hazards in real estate transactions.

The Public Safety Element is only one part of a comprehensive countywide approach to address hazards that also includes emergency response plans, pre-disaster preparation and training, pre-disaster mitigation, design and construction standards, and education.

RELATIONSHIP TO OTHER ELEMENTS

The hazards addressed in the Public Safety Element and the sensitivity of various land uses have been considered in preparing the Land Use Element. Policies in the Land Use Element limits the range of land uses allowed in high hazard areas to reduce the number of people and structures exposed to risk. The Public Safety Element policies are also coordinated with the policies of the Open Space and Resource Conservation, Public Facilities and Services, Circulation and Transit, and Land Use Elements.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

Section 30006.5 Legislative findings and declarations; technical advice and recommendations

The Legislature further finds and declares that sound and timely scientific recommendations are necessary for many coastal planning, conservation, and development decisions and that the commission should, in addition to developing its own expertise in significant applicable fields of science, interact with members of the scientific and academic communities in the social, physical, and natural sciences so that the commission may receive technical advice and recommendations with regard to its decision making, especially with regard to issues such as coastal erosion and geology, agriculture, marine biodiversity, wetland restoration, sea level rise, desalination plants, and the cumulative impact of coastal zone developments.

Section 30270 Sea level rise

The commission shall take into account the effects of sea level rise in coastal resources planning and management policies and activities in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise.

Section 30235 Construction altering natural shoreline

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-

dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fishkills should be phased out or upgraded where feasible.

Section 30253 Minimization of adverse impacts

New development shall do all of the following:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along coastal bluff and cliffs.
- (3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.
- (4) Minimize energy consumption and vehicle miles traveled.
- (5) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

The Public Safety Element establishes goals, objectives, and policies to minimize potential human injury and property damage by guiding future development to reduce the exposure of persons and property to the above hazards. The policies in this Element are intended to avoid development which would result in unacceptable risks to the residents, visitors, private property, public facilities, and infrastructure in the Coastal Zone; and to minimize risks for existing development already located in hazard areas. Acceptable levels of risk are context sensitive and based on the nature of each hazard, the frequency of exposure, the number of persons exposed, and the potential damage.

The policies in the Public Safety Element are intended to avoid development which would adversely affect existing and future residents, visitors, and property; and to not place an undue financial burden on property owners and taxpayers by allowing development in hazard areas which may have unusually high costs for public services and disaster relief. The Public Safety Element is based on the best available science and information and official data sources to delineate areas potentially at risk from various hazards. It includes maps of known high hazard areas to not only guide development but also to increase awareness of inhabitants and aid in disclosure of potential hazards in real estate transactions.

The Public Safety Element is only one part of a comprehensive countywide approach to address hazards that also includes emergency response plans, pre-disaster preparation and training, pre-disaster mitigation, design and construction standards, and education.

RELATIONSHIP TO OTHER PLANS, REPORTS, AND REGULATIONS

The Local Coastal Plan, and Coastal Zoning Ordinance that implement it, are not the only means to minimize risks to public safety and property from hazards in the Coastal Zone. Local Coastal Plan

policies are intended to be complementary to federal, state, and local laws, regulations, and plans that impose siting and design or other regulatory requirements to minimize risks from natural hazards to public safety and property and increase community resilience to these hazards. Implicit in the Public Safety Element is the assumption that the County will continue to comply with these laws, regulations, and plans.

Global and Regional Sea Level Rise Scenarios for the United States

This plan, published in February 2022 by the National Oceanic and Atmospheric Administration in partnership with U.S. Environmental Protection Agency, National Aeronautics and Space Administration, U.S. Geological Survey, U.S. Army Corps of Engineers, U.S. Department of Defense, and the University of Hawai‘i at Mānoa represents the best forecasts of sea level rise currently available. This report and accompanying datasets from the U.S. Sea Level Rise and Coastal Flood Hazard Scenarios and Tools Interagency Task Force provide 1) sea level rise scenarios to 2150 by decade that include estimates of vertical land motion and 2) a set of extreme water level probabilities for various heights along the U.S. coastline. These data are available at 1-degree grids along the U.S. coastline and downscaled specifically at NOAA tide-gauge locations. Estimates of flood exposure are assessed using contemporary U.S. coastal flood-severity thresholds for current conditions (e.g., sea levels and infrastructure footprint) and for the next 30 years (out to year 2050), assuming no additional risk reduction measures are enacted.

Forecasts and data for the California coast contained in this plan as well as findings in the National Academy of Sciences “*Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*” are the primary scientific studies used to develop policies in response to sea level rise hazards.

At the state level, the California Coastal Commission recommends using the best available science to predict sea level rise, which is expected to be updated approximately every five years. The best available science on sea level rise in California at the time of the 2024 Local Coastal Plan update was the California Ocean Protection Council’s State of California Sea Level Rise Guidance (2024 update) and the California Coastal Commission’s Sea Level Rise Policy Guidance (2024 update), which present scenario-based sea level rise projections for the California coast.

United States Coast Guard Sector San Francisco Area Contingency Plan

The Federal Water Pollution Control Act (Clean Water Act) prohibits discharges of oil and hazardous substances into or upon the Nation’s waterways, shorelines, and adjoining areas. The Act mandates development of a National Contingency Plan, providing for coordinated federal response to releases of such materials. The Act also provides for the preparation of Area Contingency Plans (ACPs) for specific geographic regions.

The Sector San Francisco ACP covers the land masses and waters of Northern California, including Sonoma County and describes the authorities, roles, and responsibilities of parties involved in National Contingency Plan development and implementation. The ACP includes an inventory, along with maps and descriptions where appropriate, of notable sensitive resources that could be damaged by a release of oil or other hazardous material. The inventory includes biological and cultural

resources at dozens of sites along the Sonoma Coast. For each site, the ACP describes resources of concern, known natural hazards in the area, response strategies specific to the site, and an overview of response logistics.

The U.S. Coast Guard has authority and jurisdiction to coordinate spill responses within the Coastal Zone. In the event of a spill or release, a U.S. Coast Guard representative, or Federal On-Scene Coordinator, evaluates the severity of the event and coordinates the response with other federal, state, and local agency representatives, in accordance with the ACP and other applicable plans, laws, and regulations. Sonoma County Departments that could be involved in the response effort include the Fire and Emergency Services Department, Sheriff's Office, and Department of Health Services, among others.

Sonoma County Hazard Mitigation Plan

The Federal Disaster Mitigation Act of 2000 requires local governments to adopt and implement a local hazard mitigation plan in order to be eligible for various types of pre-disaster and post-disaster community aid and grant programs from the Federal Emergency Management Agency (FEMA). Unlike an emergency response plan, a hazard mitigation plan focuses on identifying mitigation actions that can be taken before disasters occur to reduce the level of property damage, personal injury, and community disruption that might otherwise result. It is based on the premise that many of the losses that could result from hazards could be avoided, prevented, or minimized through better planning, construction, design, and education.

In April 2017, the County adopted the most recent Sonoma County Hazard Mitigation Plan (Hazard Mitigation Plan) to help reduce the level of injury and property damage resulting from hazards including seismic hazards, landslides, floods, wildfires, and hazards resulting from climate change. The Hazard Mitigation Plan also addresses erosion, erosion is the loosening and transportation of rock and soil debris by wind, rain, or other running water or the gradual wearing away of the upper layers of the earth, sea-level rise, and tsunami, as secondary hazards. The Hazard Mitigation Plan includes hazard maps and a five-year implementation plan. The implementation plan identifies community policies, actions, and tools to reduce the public's exposure to hazards, minimize potential property damage and disruption, and reduce the costs of disaster relief. The Hazard Mitigation Plan implementation plan as amended is incorporated by reference into this Public Safety Element to ensure consistency as it is updated and revised every five years.

Sonoma County Climate Action Plan

Sonoma County has long recognized the need for local action to help meet the global challenge of climate change. In July 2016 the Regional Climate Protection Authority adopted the *Climate Action Plan 2020 and Beyond (Climate Action Plan 2020)*. The Climate Action Plan 2020 recommendations will be implemented by local jurisdictions.

The Climate Action Plan 2020 is the outcome of a coordinated, multi-partner planning effort to reduce greenhouse gas emissions in Sonoma County. It builds on previous efforts, and provides a framework for implementing measures to reduce greenhouse gas emissions adopted by the County and the nine cities.

The Climate Action Plan 2020 contain regional and project-level measures to support the County's effort to achieve the reaffirmed statewide reduction targets of 25 percent below 1990 levels by 2020, with long-term goals of 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. It includes a backcast of 1990 greenhouse emissions and a robust inventory of 2010 levels.

California Environmental Quality Act

Under the California Environmental Quality Act (CEQA), prior to any action on a project subject to CEQA, the lead agency which is the public agency that has the principal responsibility for carrying out or approving a project, must prepare an analysis of the impacts of the proposed project. The analysis must include an assessment of whether it would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure; landslide; flooding in the 100-year floodplain; inundation by a seiche, tsunami, or mudflow; or hazardous materials. A seiche is a standing wave that oscillates in a lake as a result of seismic or atmospheric disturbances creating huge fluctuations of water levels. A seiche has to occur in an enclosed body of water such as a lake, bay or gulf. The hundreds year flood is the magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or one percent, chance of occurring in any given year.

The assessment must identify potential mitigation measures and project revisions or alternatives which may be considered to reduce the risks from such hazards to a level of less than significant. Most development projects in the Local Coastal Zone are subject to analysis under CEQA.

Other Laws and Regulations

A number of other state and federal laws and regulations complement the Local Coastal Plan's public safety intent by establishing siting constraints, study requirements, and building standards for specific types of development such as essential services buildings, dams, schools, hospitals, power plants, pipeline and transmission lines, and water supply and water treatment facilities. In addition, new construction in the Coastal Zone must comply with and meet the applicable standards of the California and Sonoma County Building Codes to increase resistance to or reduce risks from seismic events, geologic hazards, flooding, fires, and hazardous materials. The County will continue to apply and enforce all applicable design and siting requirements established by state and County Codes to increase the safety and disaster resistance of new or existing buildings whether private or public through the permit review process.

DETERMINATION OF ACCEPTABLE RISKS

Acceptable levels of risk are based upon the nature of each hazard, the frequency of exposure, the number of persons exposed, and the potential damage. Specific standards for acceptable levels of risk for each hazard are found within each hazard category. The County is not able to guarantee that any particular development will not, at some time in the future, be adversely affected by the hazards identified in this Element because such hazards, by their nature, defy precise prediction. Acceptable levels of risk may vary depending on the type of hazard, degree of certainty of hazard exposure, and state of existing development. Acceptable risk can only be determined after all effort has been made

to reduce the risk and does not include development that increases known risks to human health and safety in identified hazard areas.

Maps included in the Public Safety element are for illustrative purposes only and are not a suitable basis for parcel or site-specific decisions. The map scale and reproduction methods limit precision in physical features displayed. The parcels boundaries and physical features are not intended to represent surveyed data. Site-specific studies are required to draw parcel-specific conclusions.

Although there are significant regulatory requirements and controls to regulate the location and design of new construction or development and minimize the hazard risks to acceptable levels, it may not be possible to reach the same level of hazard avoidance or risk reduction for existing development, which has already been located in hazard areas or constructed prior to the enactment of applicable building and zoning codes designed to minimize hazard risk and vulnerability.

Additionally, many sites within the coastal zone are subject to potential risks for multiple hazards, as such policies for all of the applicable hazards must be addressed, with the most restrictive or specific regulation applied.

Even with adequate planning, regulation, and mitigation, natural hazards and disasters cannot be prevented from occurring and the risk of impacts from such events cannot be eliminated altogether. Natural hazards and disasters will continue to occur. Although the County will take actions to guide future development, considerable development has already occurred in areas subject to hazards. The County will work to increase public and private disaster preparedness and response and plan accordingly to reduce the potential for harm and damage from such events, however, the potential for significant harm and damage arising from natural hazards and disasters remains.

Existing development and future development potential of parcels may be lost as a result of natural hazards and disasters. There is no obligation on the part of the County to compensate property owners for their losses or to allow rebuilding and development on parcels which cannot meet current building and zoning standards.

I. GENERAL HAZARDS

I.1 Goal, Objectives, and Policies

GOAL C-PS-I: Prevent unnecessary exposure of people and property to risks of injury or damage from earthquake, geologic, flood, inundation, and wildland fire hazards and hazardous materials.

Objective C-PS-I.1: Comply with all applicable land use, building, and development regulations codified by federal, state, and local government to minimize risks of personal injury and property damage from hazard events.

Objective C-PS-I.2: Make fully-informed decisions on land use, development, and real estate regarding hazards through the use and dissemination of the best available science, information, and analysis.

Objective C-PS-I.3: Implement pre-disaster mitigation actions identified in the most recent California Governor's Office of Emergency Services approved Hazard Mitigation Plan

implementation plan to help reduce the level of risk and the level of personal injury and property damage that could result from hazards.

Objective C-PS-1.4: Minimize public costs for development in high hazard areas that are associateds with high costs for public services and disaster relief.

Policy C-PS-1a: As a condition of coastal permit approval for new development in an area subject to current or future hazards, applicants shall be required to acknowledge and agree, and private applicants must also record a deed restriction on the property to acknowledge and agree that:

- (1) The development is located in a hazardous area, or an area that may become hazardous in the future;
- (2) ~~The permittee~~ he assumes the risks of injury and damage from such hazards in connection with the permitted development;
- (3) ~~The permittee~~ he unconditionally waives any claim of damage or liability against the County of Sonoma and Coastal Commission if the permit is appealed, its and their officers, agents, and employees for injury or damage from such hazards;
- (4) ~~The permittee~~ he indemnifies y and holds harmless the County of Sonoma, and Coastal Commission if the permit is appealed, its and their officers, agents, and employees with respect to approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards;
- (5) ~~Except for coastal-dependent development or uses, the permittee has~~ They have no rights under Coastal Act Section 30235 and related LCP policies to shoreline armoring in the future;
- (6) Sea level rise could render it difficult or impossible to provide services to the site (e.g., maintenance of roadways, utilities, sewage, wastewater disposal, or water service), thereby constraining allowed uses of the site or rendering it uninhabitable;
- (7) ~~For structures not already located on public trust lands, t~~The boundary between public trust land (tidelands) and private land is likely to ~~may~~ shift with rising seas, causing the structure or portion of the structure to eventually be located on ~~public trust~~ lands impressed with a public trust interest, and the ~~development~~ approval does not permit ~~encroachment onto development on land impressed with a public trust interest~~ land;
- (8) Any development that comes to be located on lands impressed with a public trust interest due to the movement of the mean high tide line ~~future encroachment on to public trust lands~~ must be removed unless the Coastal Commission ~~determines~~ authorizes ~~that the encroachment is legally permissible pursuant to the Coastal Act and authorizes it~~ the development to remain pursuant to a permit or permit amendment. Such development, ~~and any future encroachment~~ would also be subject to the State Lands Commission's (or other trustee agency's) discretionary leasing approval; and

- (9) The structure may be required to be removed or relocated and the site restored if it becomes unsafe for occupancy or use due to coastal hazards.

Policy C-PS-1b: Continue to apply, update, and enforce all applicable design, siting, and construction requirements and standards established by federal, state, and the County government to increase the safety and natural disaster resistance, resilience, and accommodation of new or existing public or private buildings through the permit review process. Where a parcel is subject to multiple hazards the most restrictive or specific regulation will be applied.

Policy C-PS-1c: Make natural hazard maps, data, and information available for public use and review at the County permit office and County website. Provide maps, data, and information in order to guide land use, development, and real estate decisions that affect risks to public safety and property from natural hazards. Post notices at the offices of the Sonoma County Recorder, Sonoma County Assessor, and Permit Sonoma that identify the location of these maps, data, and information.

Policy C-PS-1d: Evaluate and update hazard data every 3 years or at intervals recommended by responsible agencies, whichever is more frequent, to reflect any changes made by various responsible agencies including, but not limited to, the FEMA, United States Geological Survey (USGS), California Geologic Survey and /or California State Geologist, National Oceanic and Atmospheric Administration (NOAA), ~~National~~ California Ocean Protection Council, California Coastal Commission, and California Department of Forestry and Fire Protection (CAL FIRE). In the event of conflicting information among these sources, Permit Sonoma staff shall determine which is most appropriate in consultation with California Coastal Commission staff. Provide locally generated hazard data to these agencies involved in hazard mapping.

Policy C-PS-1e: Use the most recent natural hazard data, maps, analyses, and impact and vulnerability assessments from appropriate agencies; and require preparation of additional site-specific or project-specific hazards analyses for development projects when necessary to ensure full consideration of risks from natural hazards in the design and development review processes.

Policy C-PS-1f: Where new hazard data or information, analyses, or maps become available as a result of agency research, database updates, or more detailed site specific analyses, the best available science ~~and information~~ shall be used and considered consistent with the Local Coastal Plan even if it departs from the hazard maps and policies adopted with the Local Coastal Plan, provided such information is peer-reviewed, widely accepted within the scientific community, and locally relevant to the satisfaction of the approving entity (County, or Coastal Commission on appeal). A Local Coastal Program (LCP) update or amendment ~~will also shall~~ be initiated, if warranted. All updates or amendments to the LCP shall be reflective of the most current best available science and state guidance applicable at the time of the update, including any updated guidance as published by the California Ocean Protection Council or California Coastal Commission. As used in this element, best available science is defined as:

Recently published scientific information about coastal hazards and sea level rise that can be used in vulnerability assessments, evaluation of coastal development permit applications that present hazard risks, and preparation of technical reports and related findings. Sources of information may include, but shall not be limited to, state and federal agencies, research and

academic institutions, peer-reviewed scientific journals, and research published by organizations that focus on climate change and sea level rise, such as the California Coastal Commission, Ocean Protection Council, and the Intergovernmental Panel on Climate Change.

Policy C-PS-1g: Where there is a significant factual question about whether a particular development has sufficiently mitigated the potential risks from natural hazards to an acceptable level, the applicant shall provide evidence that the development would not cause damage or substantial adverse impacts on coastal resources. If the development is consistent with the Local Coastal Plan, and the property owner wishes to proceed in the face of a factual question regarding risks from natural hazards, the property owner shall provide indemnification to the County in the form of a deed restriction, insurance or other security, and a recorded notice which will protect the interests of the County and notify future purchasers of the property of the potential problem.

Policy C-PS-1h: For development proposed in a flood hazard area combining zone, ~~P~~property owners shall be responsible for conducting their own research, and determining, and understanding the vulnerabilities and risks to their real estate investments from hazard events. For development proposed in such areas, ~~p~~Property owners shall be ~~encouraged~~ required to develop an emergency response plan and mitigation plan to address those hazards before emergency conditions occur, and to carry their own hazards insurance. In developing such plans, property owners shall be encouraged to consider the FEMA's National Flood Insurance Program and Community Hazard Rating System, as well as the State of California Multi-Hazard Mitigation Plan.

Policy C-PS-1i: Where existing development is located in a natural hazard area and is destroyed by a hazard event, there is no inherent public obligation to allow ~~coastal~~ redevelopment that cannot meet current health and safety Codes and standards or to compensate the owner for the loss of their investment.

Policy C-PS-1j: As a condition of Coastal Development Permit approval for development subject to hazard risks in the Geologic Hazard Areas ~~Zone~~ (Figures C-PS-1a through -1c and C-PS-2a through -2c), Flood Hazard Areas ~~Zone~~ (Figures C-PS-3f-ii through 3j-ii), and areas subject to inundation from sea level rise within the anticipated economic lifespan of the structure, require the applicant to record a document approved by Permit Sonoma indemnifying the County from liability for any personal or property damage caused by natural geologic or other hazards on such properties and acknowledging that future shoreline protective devices to protect structures is prohibited, except for coastal-dependent development or uses.

Policy C-PS-1k: Land divisions, including lot line adjustments, shall be prohibited unless all proposed parcels can be demonstrated to be safe from flooding, erosion, fire and geologic hazards, including as may be exacerbated by climate change; would not require the construction of shoreline protective devices; and can accommodate a safe, all-weather access.

Policy C-PS-1l Facilitate response and recovery from natural hazard events by improving the ability of public infrastructure and facilities to withstand and remain functional after hazard events. Where infrastructure is determined to be at risk from repetitive loss, retrofit, replace, or relocate existing

infrastructure and facilities to reduce public safety risks associated with temporary or permanent loss of public infrastructure and facilities.

Policy C-PS-1m: Evaluate policies and standards for wetland, ESHA, and stream buffers to ensure protection of sensitive habitat into the future and to maximize the role natural habitats can play in reducing the impacts of sea level rise.

I.2 Programs

Program C-PS-1-P1: Develop a comprehensive adaptation plan and incentives for planned retreat or relocation from hazard areas;

- (1) Establish mandatory rolling setbacks for future development or significant ~~coastal~~ redevelopment in areas that are likely to be affected by the impacts from sea level rise within the anticipated lifetime of the structures.
- (2) Identify funding or other incentives for purchase or relocation of existing structures out of vulnerable areas or areas exposed to significant hazards risks.
- (3) Limit rebuilding of structures in vulnerable areas that have been damaged by storms or the impacts from sea level rise, including increased rates of erosion.

Program C-PS-1-P2: Identify existing green infrastructure (coastal land, habitats, vegetation, natural features, and ecological processes) which may be used to increase coastal resiliency to climate change, sea-level rise, and flood and geologic hazards (~~erosion~~); and strategies for adapting to climate change and sea-level rise through maintenance or enhancement of this green infrastructure. These adaptation strategies may include, but are not limited to, planned retreat, land preservation, habitat conservation, and habitat restoration.

Program C-PS-1-P3: Prepare a study of the impacts of sea level rise and other ~~coastal~~ hazards on public facilities and infrastructure, private development, communities, and natural ecosystems based on the best available scientific estimates and current state guidance as part of future updates to the Hazard Mitigation Plan.

Program C-PS-1-P3: Develop a Strategic Plan for and incorporate into existing plans, damage assessment and recovery of essential service buildings and facilities consistent with Policy PS-1n of the General Plan 2020.

I.3 Initiative

Initiative C-PS-1-I1: Work with stakeholders to develop a disclosure for real estate transactions involving properties subject to inundation, flooding, and/or coastal erosion hazards as a result of projected future sea level rise. Prior to the lease, sale, or other conveyance of any portion of public property, or issuance of a Coastal Development Permit for the use or development of public lands subject to projected sea level rise, provide a Real

Estate Disclosure Statement which states that the property is located in an area that is subject to inundation, flooding, or coastal erosion hazards as a result of projected sea level rise.

2. GEOLOGIC HAZARDS

Seismic Hazards

Earthquakes are usually caused by sudden movement along geologic faults. Sonoma County has four active or potentially active earthquake faults within its boundaries identified by the state Alquist-Priolo Earthquake Fault Maps. Known geologic faults, including the San Andreas Fault system, within the 10 SubAreas of the Coastal Zone are shown on **Figures C-PS-1a through -1c**.

While a seismic event along any fault in the county could result in noticeable impacts along the Sonoma County coast, a seismic event along the Northern Segment of the San Andreas Fault system would be expected to have the greatest potential impact in the Coastal Zone due to the potential for surface fault rupture and violent ground shaking. As shown on Figures C-PS-1a through -1c, this fault generally lies off the west coast of the County. The fault crosses land at Bodega Bay, passes offshore, then crosses land again at Fort Ross running northward, through the Sea Ranch community, and continuing north into Mendocino County. Analysis of seismic data indicates that 8.5 magnitude earthquakes can be expected along the San Andreas Fault, and that earthquakes of 8.0 or more along this fault can be expected every 200 to 400 years (Prentice, 1989).

The adverse effects of earthquakes result from the physical effects of ground shaking, surface fault rupture, liquefaction, and earthquake-induced landslides; or secondary effects such as fires, tsunamis, seiches, dam failure, and hazardous materials releases. Each of these effects is briefly discussed below.

Ground shaking. Ground shaking from earthquakes affects the greatest number of people and can cause the most damage of any geologic hazard. According to the *California Hazard Mitigation Plan*, damage due to ground shaking produces over 98 percent of all building losses in a typical earthquake. During an earthquake, the ground can shake for a few seconds or over a minute. The amount (strength and duration) of ground shaking is affected by many factors. Distance from the earthquake epicenter, the point on Earth's surface directly above the focus point of where the earthquake is originating underground, is the most significant factor. However, geologic conditions and the direction, magnitude, and depth of the fault rupture are also critical. Shaking, particularly horizontal shaking, results in the most earthquake damage because structures often have inadequate resistance to this type of motion. Unconsolidated and poorly consolidated alluvium, which is detrital materials such as clay, silt, sand, or gravel that has been deposited by running water, and terrace deposits will undergo greater ground shaking than consolidated bedrock formations. Unstable slopes also may undergo greater ground shaking, increasing the risk of landslides after an earthquake event. Figures C-PS-1a through -1c show ground shaking hazard potential on the Sonoma County coast based on maps produced by the California Geological Survey.

Ground Failure. Strong ground shaking during earthquakes can also result in ground failure. This risk increases with earthquake magnitude and ground shaking intensity but is also influenced by other factors such as slope, ground moisture, and the type and content of bedrock. Ground shaking on gentle and moderate slopes of poorly consolidated surface deposits can result in differential compaction, settlement and liquefaction. Liquefaction occurs when a saturated or partially saturated

soil substantially loses strength and stiffness in response to an applied stress such as shaking during an earthquake or other sudden change in stress condition, in which material that is ordinarily a solid behaves like a liquid. Damage from ground shaking can be increased by liquefaction and landslides. Liquefaction changes water-saturated soil to a semi-liquid state, removing support from foundations and causing buildings to sink. The most likely areas to experience liquefaction are valleys and tidal marshes with high water tables and sandy soils. Landslides, mudflows, and rock falls can result from ground shaking and are most common on steep slopes but may also occur in areas of gentle slopes due to liquefaction of subsurface materials.

Ground Displacement along Faults. Surface fault ruptures can result from large magnitude earthquakes. Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Structures located within the fault rupture zone are subjected to excessive force. Most structures are not designed to withstand such large deformations and experience major damage. Pipelines crossing the fault zones can also be damaged by ground failure. During the 1906 earthquake, horizontal displacement along the San Andreas Fault averaged 15 feet in Sonoma County. Hazards from surface fault ruptures are generally avoided or minimized by limiting development in active fault zones in compliance with the Alquist-Priolo Earthquake Fault Zoning Act.

Secondary Effects of Earthquakes. Earthquakes can result in additional property damage and human injury from secondary effects. Some earthquakes can result in large tsunami waves along the ocean shoreline or seiches on lakes which can cause damage by their force and by inundation of low-lying developed areas adjacent to the shoreline. Tsunamis and seiches are discussed in greater detail in Section 4 (Flood and Inundation Hazards). In addition, damage to utilities and other public facilities can produce disastrous secondary effects. Much of the destruction from the 1906 earthquake in Sonoma County was from fires that could not be put out due to broken water lines, damaged roads, and lack of communication. In addition, seismic events could trigger slope failure resulting in landslides which block or damage roads and infrastructure. Risks resulting from the secondary effects of earthquakes can be reduced by various methods, but locating essential facilities and dense populations within high hazard areas increase the potential for damage.

Related Seismic Hazard Plans and Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface fault rupture by preventing the construction of buildings used for human occupancy on the surface trace of active faults. The Act does not address hazards associated with earthquakes such as ground shaking, landslides, or liquefaction.

Alquist-Priolo Earthquake Fault Zoning Act requires counties to designate Earthquake Fault Zones where movement of the earth's surface has taken place during the last 11,000 years; and to require a geologic report for projects proposed within these zones. The State Geologist has identified active faults and mapped Earthquake Fault Zones around the surface traces of the faults. The maps are provided to local agencies which must regulate development projects within the Earthquake Fault Zones. Figures C-PS-1a through -1c show the San Andreas Earthquake Fault Zones along the Sonoma County coast.

Seismic Hazards Mapping Act

The 1991 Seismic Hazards Mapping Act seeks to protect the public from the hazards caused by earthquakes. The Act requires the State Geologist to delineate and designate areas subject to strong ground shaking, landslides, and liquefaction as Seismic Hazard Zones; and for the California Geological Survey to prepare maps of these Hazard Zones. Counties must regulate certain types of development projects and withhold the development permits for sites within Seismic Hazard Zones until the geologic and soil conditions of the project site are investigated and appropriate mitigation measures, if any, are incorporated into the project plans. Counties must also take these Seismic Hazard Zones into account when adopting and revising land use planning and permitting ordinances and reviewing building permits. California Civil Code Sections 1103-1103.14 require disclosure through a Natural Hazard Disclosure Statement in real estate transactions if the property is located in an Earthquake Fault Zone or Seismic Hazard Zone.

Other Seismic Safety Regulations

In addition to the above, several other seismic safety regulations have been developed over the last century. A summary of these regulations is provided below:

- (1) The 1933 Field Act and Other School Seismic Safety Legislation requires thorough reviews of plans, strict inspections, and quality control standards for school construction.
- (2) The 1968 Geologist and Geophysicist Act requires geologic or seismic assessments to be carried out by qualified geologists and geophysicists.
- (3) The 1973 Alfred E. Alquist Hospital Seismic Safety Act requires all hospitals built after 1973 to be built to higher seismic standards so they can be reoccupied and remain functional after major earthquakes.
- (4) The 1979 Beverly Act authorizes creation of a Geologic Hazard Abatement District (GHAD) as a means to reduce geotechnical problems associated with development in geologically active areas such as erosion and failure of coastal bluffs. A GHAD is an independent public entity (public agency) formed as a Board of Directors which oversees the prevention, mitigation, and abatement of geologic hazards. Funding of a GHAD is through supplemental property tax assessments. A GHAD was proposed for shoreline protection and coastal bluff stabilization for the Gleason Beach community in 2003, but was not adopted.
- (5) The 1986 Unreinforced Masonry Building Act requires local jurisdictions to address the life safety risks posed by Unreinforced Masonry (URM) buildings that were constructed before the adoption of seismic-resistant building codes.
- (6) The 1986 Essential Services Building Seismic Safety Act requires that essential services buildings be designed and constructed to be capable of providing essential services to the public after a disaster.

Other Geologic Hazards

The Sonoma County coast has other geologic hazards in addition to those arising from seismic events, which include expansive soils; slope instability, which can result in landslides; and coastal bluff erosion. Erosion is the loosening and transportation of rock and soil debris by wind, rain, or other

running water or the gradual wearing away of the upper layers of the earth. Each of these hazards is discussed below. However, unlike other coastal communities, Sonoma County does not experience significant beach sand erosion issues.

Expansive Soils

Buildings, utilities, and roads can be damaged by underlying soils rich in clay that swell each winter and shrink each summer depending on rainfall. This is a less obvious geologic hazard than earthquakes or landslides, but the gradual cracking, settling, and weakening of buildings over time could be significant.

Slope Instability

Slope instability includes landslides and other shallow soil slippage events that involve various forms of mass earth and rock movement downslope. The most common type of slope instability in Sonoma County is landslides. Landslide potential is generally greater on areas of steeper slope and can be triggered by heavy rainfall; earthquakes; road cuts; and construction activities such as grading and filling, placing culverts, and installing septic tanks. Logging, grazing, and removing vegetation may also adversely affect slope stability. Landslides and shallow soil slippage are prevalent in the Coastal Zone. **Figures C-PS-2a through -2c** show the areas on the Sonoma County coast subject to slope instability.

Landslides and coastal bluff erosion play a role in threatening development along the Sonoma County coastline. Development of homes, septic systems, landscape irrigation, and drainage as well as heavy rainfall and tidal action impact the rate of coastal erosion. Intensive grazing, tilling of slopes, and road construction have resulted in erosion on the Sonoma County coast through shallow slippage, gullying, sheet wash, and wind action. Ongoing coastal erosion has contributed greatly to historic sedimentation of Bodega Harbor, the Estero Americano, and other water bodies. State Highway 1 on the North Coast experiences landslides and erosion to the extent that the road is frequently closed for repair.

Coastal Bluff Erosion

According to the National Academy of Sciences (2012), most of the damage along the California coast is caused by storms, particularly by the confluence of large waves, storm surges, and high astronomical tides during a strong El Niño event; and a rising sea level would magnify the impacts of high waves and storm surges on the coastline. Storms and sea level rise are causing California coastal bluffs, beaches, and dunes to retreat at rates from a few centimeters to several meters per year. Coastal bluff erosion could increase abruptly from an episodic event such as a tsunami or an unusually severe winter storm. The National Academy of Sciences (2012) projects that California coastal bluffs could retreat more than 100 feet by 2100.

While the entire Sonoma Coast is subject to high rates of erosion and frequent landslides, the greatest hazards located between Bodega Bay and the Russian River. This section of the coast is characterized by a broad coastal prairie terminating in a steep coastal bluff that drops 50 to 100 feet down to narrow rocky beaches. In the early 1900's the Bodega-Jenner Highway, later to become Highway 1, was constructed along the western edge of the coastal prairie. Beginning in the late 1920's, hundreds of small parcels were created in the land west of Highway 1 and sold as vacation home sites. The

majority of this development occurred before passage of the Coastal Act, with a substantial number of homes constructed before Sonoma County first required building permits in 1963.

Geologically, the coastal prairie is a thick layer of Franciscan mélangé, which is highly fractured, easily erodible, and unstable. The combination of weak bedrock geology, high rainfall, and direct exposure to storm waves generates one of the highest rates of shoreline retreat in California. As coastal bluff retreat began to threaten existing development west of Highway 1, property owners modified drainage and armored the shoreline, which failed to protect homes and actually accelerated erosion rates.

As of 2022, the greatest hazards from coastal erosion are at Gleason Beach, north of Scotty Creek. When these lots between Highway 1 and the ocean were created in 1927, the average lot was 300 feet deep. Twenty-one homes were developed on these lots. By the spring of 2017, only seven houses remained, and the edge of the coastal bluff reached the fog line on Highway 1. Recognizing that previous attempts to stabilize Highway 1 were unsuccessful, Caltrans implemented a managed retreat project that relocates approximately one mile of Highway 1 inland by approximately 450 feet in anticipation of a projected sea level rise in this area. This project is also removing debris from former homes along the top of the bluff, removing shoreline armoring, restoring of the coastal bluff to a natural condition.

Avoidance is the preferred method for minimizing the risk to and vulnerability of development from coastal bluff erosion. In cases where existing development is threatened, the first priority should be to evaluate the feasibility of relocating the development. Only when all other options are deemed infeasible should shoreline protection structures be considered. By appropriately siting new development, the need for a seawall, revetment, or other shoreline protection structure or alteration to the coastal bluff may be avoided.

If a coastal bluff is determined to be stable, the setback from the top of the coastal bluff should be calculated by the coastal bluff retreat times the life expectancy of the house or building to be protected. If the coastal bluff is determined to be unstable, a buffer should be added as a safety factor to the setback from the top of the coastal bluff. The buffer should be calculated through a site-specific quantitative slope stability analysis that incorporates historic data. Safety and stability must be demonstrated for the predicted position of the bluff and bluff top edge following bluff recession over at least 100 years, considering both historical data and the influence of future sea level rise.

For purposes of this Local Coastal Plan, the terms coastal bluff, bluff edge, bluff top, ~~coastal~~ redevelopment and embankment have specific meanings, which are defined below and in the Glossary.

Bluff Edge. The line of intersection between the steeply sloping coastal bluff face and the flat or more gently sloping coastal bluff top; or the upper termination of a coastal bluff, cliff, or seacliff. In cases where the top edge of the coastal bluff is rounded away from the face of the coastal bluff as a result of erosion processes related to the presence of the steep coastal bluff face, the coastal bluff line or edge shall be defined as that point nearest the coastal bluff beyond which the downward gradient of the surface increases more or less continuously until it reaches the general gradient of the coastal bluff. In a case where there is a step-like feature at the top of the coastal bluff face, the landward edge of the topmost riser shall be taken to be the coastal bluff edge. Coastal bluff edges typically retreat landward due to coastal erosion, landslides, development of

gullies, or by grading (cut). In areas where the coastal bluff top or coastal bluff face has been cut or notched by grading, the coastal bluff edge shall be the landward most position of either the current or historic coastal bluff edge. In areas where fill has been placed near or over the historic coastal bluff edge, the original natural coastal bluff edge, even if buried beneath fill, shall be taken to be the coastal bluff edge.

Bluff Top: The upper surface of a coastal bluff or cliff.

Coastal Redevelopment: ~~Development located between public trust lands and a point 100 feet inland of the top of a coastal bluff, adjoining or near the ocean and land interface, or at very low-lying elevations along the shoreline that consists of alterations including:~~

- (1) Additions to an existing structure;
- (2) Exterior and/or interior renovations; and/or
- (3) Demolition or replacement of an existing ~~coastal bluff top~~ home or other principal structure, or portions thereof, which results in either:
 - (a) Alteration and/or replacement (including demolition and renovation) of 50 percent or more of one or more major structural components including exterior walls, floor and roof structure, and/or foundation; or a 50 percent increase in gross floor area. Alterations are not additive between individual major structural components; however, changes to individual major structural components are cumulative over time from the effective date of the Coastal Act (January 1, 1977).
 - (b) Demolition, renovation, alteration, or replacement of less than 50 percent of a major structural component where the proposed alteration would result in cumulative alterations exceeding 50 ~~percent% or more of that a~~ major structural component, taking into consideration previous alterations/replacement work undertaken and/or approved on or after the effective date of the Coastal Act (January 1, 1977); or an alteration that constitutes a less than 50 percent increase in gross floor area where the proposed alteration would result in a cumulative addition of greater than 50 percent of the floor area, taking into consideration previous additions undertaken and/or approved on or after the effective date of the Coastal Act (January 1, 1977).

In all cases, policies that apply to 'new development' shall also apply to 'redevelopment'.

Coastal Bluff: Area between the cliff edge and the highest high tide line. Bluffs or cliffs are scarps or steep faces of rock, decomposed rock, sediment or soil resulting from erosion, faulting, folding or excavation. When the top edge of the cliff is rounded away from the face of the cliff, the edge shall be defined as that point nearest the cliff beyond which the downward gradient of the land surface increase more or less continuously until it reaches the general gradient of the cliff.

Critical Infrastructure: Public water infrastructure, including water utilities, such as water tanks, municipal wells, and major sewer and water service mains and pumps; transportation infrastructure, such as roads and highways; utility infrastructure, including telecommunication and electrical distribution facilities; emergency preparedness and response facilities, including police and fire stations; and public schools.

Embankment: A man-made ridge, bank, mound, or dike of earth, gravel, or stone that carries a road or railway or confines or holds back water in a waterway.

Shoreline Protection Structures

Section 30235 of the Coastal Act establishes the following limits on shoreline protection devices:

“Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fishkills should be phased out or upgraded where feasible.”

Seawalls, groins, breakwaters, and other shoreline protection structures are hardened structures installed along the coast which provide a physical barrier that armors and stabilizes the shoreline landward of the structure from the erosive forces of wave action. Shoreline protection structures are typically installed by private landowners or local, state, and federal governments in order to provide stabilization and protection of coastal development from floods, storms, and sea level rise. The use of shoreline protection structures is allowable in some circumstances to serve coastal-dependent uses or to protect existing structures or public beaches when designed to eliminate or mitigate adverse impacts.

Although shoreline protection structures can be used to protect coastal development they are not appropriate to use in most circumstances due to the large amount of adverse environmental impacts that they generate. Shoreline protection structures prevent beaches from migrating inland and induce erosion in adjacent unprotected shoreline. These structures also have adverse impacts on recreational beach uses, scenic resources, and the natural supply of sand to shoreline areas which will be exacerbated by sea level rise. In addition, they also have potential ecological impacts including loss of habitat, creation of habitat for invasive species and effects on dune habitat by preventing natural sand movement. Shoreline protection structures also have a relatively short structural lifespan relative to the high cost of installing and removing the structures. Despite the significant cost of installation, there are instances where the performance of such structures has been inadequate and the erosion and damage they were installed to prevent or reduce still occurs. Remnants of failed shoreline protection structures and collapsed private buildings degrade the natural beauty of the Sonoma County coastline. Clean-up of these structures on the beach can pose a problem due to the high cost of funding a full clean-up or if equipment access to the beach is limited.

2.1 Goal, Objectives, and Policies

GOAL C-PS-2: Prevent unnecessary exposure of people and property to risks of injury or damage from earthquakes, landslides, coastal erosion, and other geologic hazards.

Objective C-PS-2.1: Locate and design new development to avoid risks of human injury and property damage from existing and anticipated geologic hazards, including coastal bluff erosion.

Objective C-PS-2.32: ~~Minimize the need to construct seawalls or other shoreline protection structures to reduce impacts to natural shoreline processes, cultural and biological resources, views, and coastal access.~~ Construction of seawalls or other shoreline protection structures shall be allowed only consistent with Coastal Act Section 30235.

Policy C-PS-2a: Encourage the consolidation of lots and new structures in high hazard areas.

Policy C-PS-2b: A site-specific geologic hazards report prepared by a licensed Geotechnical Engineer, Engineering Geologist, or Geophysicist shall be required for development projects proposed within Geologic Hazard Areas, as shown in **Figures C-PS-1a through -1c and C-PS-2a through -2c.**

Policy C-PS-2c: A geologic hazards report shall ~~also~~ be prepared where a site evaluation conducted for a Coastal Permit, building permit or grading permit application has identified that such a report is required.

Policy C-PS-2d: ~~The~~ A geologic hazards report shall include the following information:

- (a) Description of the types and locations of the geologic hazards on the project site.
- (b) Analyses of the risks of human injury and property damage from geologic hazards associated with the proposed development, including but not limited to site preparation, grading, installation of septic systems, installation of drainage and road improvements, construction of foundations, and construction of buildings and structures.
- (c) Design siting and construction mitigation measures for the proposed development to minimize the potential for collapse; debris falling on occupants or pedestrians; failure of critical mechanical or electrical systems; releases of large quantities of hazardous or toxic materials; and substantial economic loss from geologic hazards.
- (d) Certification from the Geotechnical Engineer, Engineering Geologist, or Geophysicist that the risks of human injury and property damage from geologic hazards associated with the proposed development have been mitigated to an acceptable level.

Policy C-PS-2ee: Require all public facility projects, including but not limited to roads, utilities, parks, schools, and emergency response facilities to incorporate measures that mitigate geologic hazards to a level that does not pose a risk to public safety.

Policy C-PS-2df: Applications for new development or ~~coastal~~ redevelopment on coastal bluff property shall be required to include a site-specific coastal bluff erosion hazards report from a licensed Geotechnical Engineer, Engineering Geologist, or Geophysicist that establishes a geologic setback line for proposed new development. This setback shall be no less than 100 feet and shall establish where on the bluff top stability can reasonably be assured for the economic life of the development (no less than 100 years). All new structures ~~for human occupancy and infrastructure~~ located on a coastal bluff top shall be setback to ensure that it will not be endangered by coastal bluff erosion, retreat, and collapse; and thereby avoid the need for shoreline protection devices during the economic life of the development. Shoreline protection devices are prohibited for new development and redevelopment and shall not be considered when evaluating setbacks from coastal hazards.

The coastal bluff erosion hazards report shall take the following factors into account in establishment of the geologic setback line:

- (1) Proposed extent of grading and site preparation.
- (2) Proposed plans for construction of roads, driveways, foundations, water lines, drainage improvements, and septic systems and leachfields.
- (3) Increase in erosion and bluff retreat created by sea level rise.
- (34) Maximum coastal bluff retreat, taking into account sea level rise, projected to occur within the economic life of the development (no less than 100 years for residential and commercial structures and critical infrastructure). The projected coastal bluff retreat shall be calculated considering the specific geologic and hydrologic conditions on the site; historic coastal bluff retreat data; projections for future sea level rise according to the best available science; and ~~existing and~~ projections for changes in storm frequency, magnitude, and duration due to climate change.

Policy C-PS-2eg: Where existing legally established development or coastal dependent development is threatened by coastal bluff erosion, the first priority shall be to evaluate the feasibility of relocating the development. The second priority shall be to consider the feasibility of less environmentally damaging alternatives than shoreline protection structures (e.g., nature-based adaptation solutions). Only when all other options are deemed infeasible should shoreline protection structures be considered. Regardless of other alternatives being found infeasible, shoreline protection devices still need to go through a full Geoastal Act review and meet the following criteria and must be consistent with standards in Appendix F: Shoreline Protection Structure Guidelines:

- (1) Shoreline protection structures shall be sited and designed to minimize impacts to all relevant coastal resources and to avoid creating hazards on public trust lands, including through preserving the maximum amount of existing beach and public access, taking into account projected future changes in sea level based on the most up-to-date science and agency guidance.
- (2) All unavoidable coastal resource impacts shall be appropriately and proportionally mitigated.

- (2) ~~Shoreline protection structures shall not impact public access or create hazards on public trust lands.~~
- (3) Shoreline protection structures shall be designed to eliminate or mitigate impacts on local sand supply.
- (34) ~~Shoreline protection structures shall be designed to minimize~~ing alteration of and visually blend ~~ing~~ with the surrounding natural shoreline.
- (45) Shoreline protection structures shall be minimally sized and designed to perform, to the maximum extent feasible, without maintenance for the life of the structure being protected.
- (56) ~~Shoreline protection structures may not have~~ must minimize and mitigate any adverse impact on cultural and historic resources, consistent with policies found in the Cultural and Historic Resources Element.

Policy C-PS-2fh: Where, as a result of coastal erosion, it is no longer feasible based on size and environmental conditions for a parcel to meet the minimum requirements for development under the Sonoma County Code, the development potential of the parcel may be considered lost due to the forces of nature. There shall be no obligation on the part of the County to restore the development potential of such parcels through Code variances, lot line adjustments, transfer of development rights, or other means.

Policy C-PS-2gi: Avoid shoreline protection device construction, reconstruction, expansion, alteration, and/or replacement unless determined necessary by and compliant with ~~California Coastal Commission and the~~ County of Sonoma's Shoreline Protection Structure Standards (Appendix F).

Policy C-PS-2hj: Shoreline protective devices shall only be authorized until the time when the existing principal structure that is protected by such a device is no longer present, no longer requires armoring, or is redeveloped. Permittees shall be required to submit a coastal permit application to remove the authorized shoreline protective device within six months of a determination that the shoreline protective device is no longer authorized to protect the structure it was designed to protect because the structure is no longer present or no longer requires armoring and the device is not needed to protect adjacent development that is still entitled to shoreline armoring. In the case of redevelopment, any potential rights to protection are terminated and removal of the shoreline protective device shall be required as part of demolition and alteration of the structure being redeveloped.

2.2 Program

Program C-PS-2-P1: Where geologic hazards threaten multiple properties in the same vicinity and all would benefit from a unified, coordinated response to minimize risks, consider the formation of a Geologic Hazard Abatement District (GHAD) as a means to reduce geotechnical problems associated with development in geologically active areas. A GHAD is an independent public entity (public agency) which oversees the prevention, mitigation, and abatement of geologic hazards. Funding of the GHAD is through supplemental property tax assessments.

3. FLOOD AND INUNDATION HAZARDS

Flooding along rivers and creeks on the Sonoma County coast is a natural, annual phenomenon. Many smaller creeks and drainages along the coast drain smaller areas directly into the ocean without causing the flooding problems that occur on larger watershed basins or river systems. Floods on small streams usually peak and recede quickly, while floods on larger systems like the lower Russian River may not peak for two days or more after the start of a storm and may exceed flood stage for four days or more. In larger drainage basins, streams overflow banks when runoff from the watershed exceeds the capacity of the stream channel to carry the flow. Because the Coastal Zone is a narrow band of land near the coast, most of the flood waters draining to the ocean originate from inland areas outside the Coastal Zone.

Flooding can move, destroy, or damage buildings, roads, infrastructure, and personal property, not only by inundation but also by the force of flowing waters. Flood damage may weaken building materials and increase mildew, mold, bacteria and other disease vectors. Floods can result in human injury and pose a threat to life. Floods can wash away soil, erode banks, destroy crops, and transport loose objects and flood debris downstream; and may end up degrading Sonoma County beaches or offshore marine habitats.

Although floods are primarily associated with the overflow of rivers and creeks, damage from flooding and inundation can also result from dam failure, tsunamis, seiches, ocean surges and higher waves during storms, and sea level rise. Localized flooding can also occur from blocked or undersized storm water conveyance channels and infrastructure.

Stream and River Flooding

Flooding is most often associated with an overflowing stream or river. The floodplain is the area adjacent to the watercourse that is subject to recurring inundation from floods.

The magnitude of floods, can be described in terms of flow (cubic feet per second), elevation (height above a defined datum), or by the areal extent of flood water inundation. However, the more frequent and universal way of describing flood magnitudes is by their projected recurrence level - the bigger the flood, the more years that would typically be expected to pass statistically before it reoccurs. For instance, a flood level that would occur on average once every two years is referred to as the 2-year flood, and it would statistically have a 50 percent chance of occurring in any given year. A 10-year flood has a 10 percent chance of occurrence, a 50-year flood has a 2 percent chance, a 100-year flood has a 1 percent chance, and a 500-year flood has a 0.2 percent chance of occurring in any given year. Although the recurrence level is based on statistical averages, the actual occurrence of flood events varies and could occur at shorter intervals or even within the same year.

Storms are described in the same way - as the storm event of such a magnitude (amount of rainfall during a specified length of time) that it has a certain percent chance of occurring in any given year. For instance, the 100-year flood is the storm event of such a magnitude that it has a 1 percent chance of occurring in any given year. Similarly, the 10-year storm is a storm event of such a magnitude that it has a 10 percent probability of occurring in any given year.

Floodplains or flood zones are described with reference to the associated flood – as the areal extent of land that would be covered by the flood event of such a magnitude that it has a certain percent

chance of occurring in any given year. For instance, the 100-year floodplain is the area that would be covered by the 100-year flood.

The FEMA and Federal Insurance Administration have assessed flood hazards for most major streams in Sonoma County, however these assessments do not consider increased flood hazard due to sea level rise. These assessments are periodically updated to reflect new data from flood studies and actual flood events. The FEMA maps show the 100-year floodplain and are commonly used as the primary source of flooding information for planning and development review and floodplain management. Where the subject river or stream has been studied by detailed hydrologic and hydraulic methods, FEMA may also designate a floodway within the 100-year floodplain. According to FEMA, the floodway is “where the water is likely to be deepest and fastest - the area of the floodplain that should be reserved (kept free of obstructions and development) to allow floodwaters to move downstream.” The floodway, as defined by FEMA, is generally considered to be the area where the flood risk is highest and the vulnerability of development is greatest.

Currently the Russian River is the only river on the Sonoma County coast for which the 100-year flood plain has been mapped by FEMA, shown on **Figures C-PS-3f-ii, 3g-ii, 3h-ii, and 3j-ii**. It shows the land area adjacent to a watercourse, drainage way, or creek which has been or may be covered by floodwaters. The boundaries of a flood plain are typically described in terms of the magnitude of a flood event such as the “100 year flood plain”. Portions of the older unincorporated communities of Duncans Mills and Jenner lie within the 100-year flood zone of the Russian River in the Coastal Zone.

Within the area covered by the 100-year floodplain of the Russian River, the risk of human injury and property damage from flooding increases with the topographic depth, frequency of flooding, and force of the flood current. Properties within the floodway (approximate 10-year floodplain) would be subject to a greater depth and frequency of flooding and greater magnitude of cross currents than properties within the 25-year or 50-year floodplains. Development is prohibited within the river’s floodway because the risk of human injury and property damage in this area is unacceptable.

The greatest threat to public safety and property exists where development is located in areas subject to recurring flooding. The Russian River has the highest frequency of flooding and greatest flood hazards in the Coastal Zone due to the size of its drainage basin and the amount of historic development in the floodplain. The Coastal Zone contains only about 237 of the 1,485 square miles (16 percent) of the Russian River Watershed. Therefore, most of the flood waters from the Russian River draining to the ocean originate from inland areas outside the Coastal Zone.

Coastal Flooding and Storm Surge

Areas designated as the VE Zone on FEMA’s Flood Insurance Rate Map (FIRM) are considered to be in a Coastal High Hazard Area subject to high velocity waters from coastal flooding, tidal inundation, and tsunamis. However, FEMA has not designated all potential Coastal High Hazard Areas, and is in the process of updating its mapping of these areas.

Tsunamis

A tsunami is a series of traveling ocean waves, generated by a distant or near-shore undersea earthquake or landslide, that decrease in speed and increase in height as they enter shallow coastal

waters. If these waves are much larger than usual, they can become a threat to human life and property by the force of the wave as well as by inundation. Following arrival of the first wave, subsequent waves may increase in height and arrive minutes to hours later. Factors influencing the size and speed of a tsunami include the source and magnitude of the triggering event, water depth, offshore topography, onshore topography, and coastline shape.

The National Oceanic and Atmospheric Administration (NOAA) heads the National Tsunami Mitigation Program, a federal and multi-state initiative to address tsunami hazards in the United States. The Program develops tsunami inundation and evacuation maps for at-risk communities. NOAA, the California Emergency Management Agency (CalEMA), California Geological Survey (CGS), and University of Southern California have conducted systematic analyses of all historic and possible tsunami hazards along the coast of California for the purpose of mapping tsunami run-up zones from nearshore events in these at-risk communities. Based on a comparison of historic tsunami events along the west coast of California and consideration of tidal fluctuations and other factors, a maximum tsunami wave height of 21 feet along the Sonoma County coast could be created by a large seismic event. However, given the limits of available data, and the possibility that future events may differ from historic events, it is possible that the actual inundation from a tsunami could be greater than currently projected.

For the purposes of this Local Coastal Plan and the *Sonoma County Operational Area Tsunami Response Plan and Evacuation Plan* (part of the *Sonoma County Hazard Mitigation Plan*), a conservative approach was assumed and a maximum tsunami wave height of 25 feet (7.6 meters) along the Sonoma County coast and 5 feet (1.5 meters) in San Pablo Bay were used to identify potential tsunami inundation areas.

Tsunami inundation maps for the Sonoma County coast and San Pablo Bay were released in 2009. The tsunami inundation zone on the Sonoma County coast is shown on **Figures C-PS-3a through -3k**. Not all tsunamis will inundate all areas in the potential zone. Some tsunamis may be only a few inches or a few feet and affect only a portion of the potential tsunami inundation zone.

Since most of the County coastline is elevated, most areas along the coast are considered safely out of reach of a potential tsunami wave. However, the low-lying coastal communities along the southern Sonoma County coast extending from Jenner to Bodega Bay have area of significant exposure and risk of human injury and property damage because they contain low-lying public beaches, parks, and infrastructure; and residential and commercial development. Although there are no known recorded deaths from a tsunami in Sonoma County, there were small impacts from tsunamis in 1946 and 1960.

Under the California Coastal Analysis and Mapping Project (CCAMP), FEMA is initiating flood studies/mapping projects in coastal areas as a result of Congressional appropriations for flood hazards mapping. These efforts will address gaps in required engineering and mapping for high flood risk areas impacted by coastal flooding. The Open Pacific Coast Study is a component of CCAMP that involves detailed coastal engineering analysis and mapping of the Pacific coast of California. Results from the Open Pacific Coast Study will be used to remap the coastal flood risk and wave hazards for fifteen California counties, including Sonoma County.

Floodplain Management

The primary method of reducing the risk of hazards and impacts from flooding is through floodplain management. In addition to mapping flood hazards, floodplain management may include restrictions on the type and location of land uses and development in the floodplain. Land uses which can sustain periodic flooding and decrease flood hazards downstream would be encouraged. Floodplain management may also include establishing development and construction standards that minimize vulnerability to flood hazards, such as requiring the first floor of structures to be one foot above the base flood elevation. Floodplain management may also include increased retention of stormwater runoff in the watershed, acquisition of property in flood hazard zones, public education and outreach, and other methods which reduce the need for costly construction projects and disaster relief.

Floodplain management is required by federal and state law. Various incentives such as flood insurance, loans, and State funding of flood control projects are offered if flood management practices are followed including measures that are taken to increase the hydrologic capacity of a natural water course or to create new man-made channels or reservoirs to drain and contain precipitation that otherwise exceeds the capacity of the water course, in an effort to reduce flood damage, usually to man made improvements. In Sonoma County, floodplain management has reduced flood damage primarily by limiting the kind and extent of new construction in flood hazard areas and by elevating existing structures above the base flood elevation. However, property damage from flooding is still a major and persistent problem along the Russian River, which has resulted in Sonoma County having the highest rate of repetitive property losses from flooding in California; and which indicates that a more proactive approach is needed.

The floodplain policies of this Local Coastal Plan are intended to limit development within 100-year flood plain areas; require compliance with siting, development, and constructions standards to minimize the risk of flood hazards for new development; and collaborating and participating in the County's multi-strategy approach to reduce repetitive flood loss properties and minimize the risks for existing development.

3.1 Goal, Objectives, and Policies

GOAL C-PS-3: Prevent unnecessary exposure of people and property to risks of human injury and property damage from flooding and other types of inundation hazards

Objective C-PS-3.1: Regulate new development to reduce the risks of human injury and property damage from existing and anticipated flood hazards to acceptable levels.

Objective C-PS-3.2: Minimize risks of human injury and property damage for existing development within flood hazard areas with an emphasis on reducing repetitive property losses.

Policy C-PS-3a: Any area that would be inundated by a 100-year flood event shall be considered to be a flood hazard zone. The Flood Insurance Rate Maps (Flood Rate Maps) adopted by FEMA shall be used as the official source of flood elevation data and flood hazard zone mapping and the 100-year flood and to support the National Flood Insurance Program (NFIP) and associated flood insurance studies. Land use planning and development review shall be based on the Flood Rate Maps except

where more detailed parcel-specific and site-specific analyses of flood elevations and flood hazard zones based on scaled interpretations of the Flood Rate Maps are available. Where local analyses indicate flood elevations or flood hazard zones which differ from the adopted Flood Rate Maps, such data shall be provided to FEMA so they may be amended.

Policy C-PS-3b: Floodplain management shall be given priority over flood control structures for preventing property damage from flooding, except where the intensity of development requires a high level of protection, justifies the costs of a bank or shoreline protection structure, and such structure complies with requirements of the California Coastal Act and shoreline protection structure requirements of this Public Safety Element.

Policy C-PS-3c: Encourage increased stormwater retention and decreased stormwater runoff both within and outside of the Coastal Zone to reduce flooding within the Coastal Zone. Floodplain storage capacity shall be preserved by avoiding fill in areas outside of the FEMA 100-year flood hazard zones which retain or could retain flood waters.

Policy C-PS-3d: New development, water diversion, vegetation removal, and grading shall be regulated to minimize any increase in flooding and related human injury and property damage.

Policy C-PS-3e: Where additional data and information is necessary to adequately assess the on-site and off-site flood and inundation hazards from a proposed development, to develop mitigation measures, or to determine compliance of an existing or proposed development with the Coastal Zoning Ordinance, a supplemental site-specific flood and inundation hazards analysis shall be required. The site-specific analysis may include but is not limited to:

- (1) Topographic mapping.
- (2) Analysis of the influence of sea level rise on flood elevations and flood and inundation hazards and zones.
- (3) Delineation of flood and inundation hazard zones.
- (4) Calculation of expected flood elevations.
- (5) Calculation of expected flood velocity.
- (6) Analysis of the impacts on on-site and off-site flooding, drainage, and stormwater runoff.
- (7) Using construction details and specifications, analysis of compliance with the Coastal Zoning Ordinance.
- (8) Using cost and appraisal data, analysis of when reconstruction, rehabilitation, additions, or other improvements to structures would constitute a substantial improvement under the Sonoma County Code.
- (9) Development of mitigation measures to reduce or eliminate the potential for human injury and property loss from flood and inundation hazards, particularly in areas subject to repetitive property loss.

Policy C-PS-3f: Drainage facilities shall be designed to minimize off-site drainage and flooding according to the most current County flood control and design criteria. Alternative bio-engineered drainage designs (e.g., low impact development techniques) are preferred and shall be proposed where they provide adequate capacity and performance to handle expected stormwater flows. The cost of drainage facilities required to handle stormwater runoff from new development shall be the responsibility of the new development.

Policy C-PS-3g: Construction of structures within 100 feet of the top of any natural or manmade embankment which defines a channel shall be prohibited, except where Permit Sonoma finds the flood hazard risk to life and property has been minimized. Where reductions in setback are allowed, the allowed setback should be based on expected risk, given hazards present; and risks to coastal hazards must be avoided, lessened to maximum extent feasible. Reductions to building setbacks in 100-year floodplains shall be avoided. Where this policy conflicts with **C-OSRC-4c** of the Open Space and Resource Conservation Element, the more restrictive of the two shall apply.

Policy C-PS-3h: Assess potential hazards from proposed development on a case by case basis to ensure that siting, mitigation measures, or design changes are sufficient to minimize reduce exposure to these hazards consistent with other LCP policies to an acceptable level. Such assessments shall consider hazards from river and creek flooding, dam failure, storm surge and high waves during storms, sea level rise, and undersized or blocked stormwater facilities.

Policy C-PS-3i: New residential development is prohibited in Tsunami Hazard ~~Zones~~ Areas.

Policy C-PS-3j: Tentative and final subdivision maps and approved site plans shall show areas subject to flooding as designated on the Flood Rate Maps adopted by the FEMA.

Policy C-PS-3k: Evaluate potential flood and inundation hazards for development projects relative to potential repetitive property loss, and incorporate mitigation measures to reduce the potential for human injury and property damage to a level of less than significant. Evaluate impacts from sea level rise, and storm inundation events. Consider unique coastal characteristics, infrastructure, and adaptive capacity in project design.

Policy C-PS-3l: Work with County Departments, responsible agencies, public, and other stakeholders to develop and implement a long-term plan for reducing repetitive property losses from flooding as detailed in Policy PS-2d of General Plan 2020. Conduct ongoing flood monitoring, implementation of the Local Hazard Mitigation Plan, consider participation in federal hazard programs.

3.2 Programs

Program C-PS-3-P1: Establish a new Flood Hazard Area Combining Zone to include regulations for the permissible types of uses, intensities, and development standards in the following flood and inundation hazard areas:

- (1) 10-Year Base Flood Zones
- (2) 100-Year Base Flood Zones

- (3) Areas at risk from a 7-foot sea level rise and storm surge – Flooding
- (4) Areas at risk from a 7-foot sea level rise – Landward Limit of Erosion High Hazard Zone; and
- (5) Areas at risk from tsunami of up to 25 Feet

Program C-PS-3-P2: Develop an ordinance that prioritizes relocation and allows reconstruction of a structure damaged or lost from inundation or flooding related to sea level rise where certain criteria can be met; an evaluation of the feasibility of relocation to a location where hazard risks are minimized is provided; where relocation is not feasible, a reconstructed structure must be raised a minimum number of feet above the anticipated base flood elevation considering projected future sea level rise during the economic life of the structure based on the most up-to-date science; and where such an adaptation approach is considered feasible and practical and is expected to minimize the risk of inundation and flooding of the structure to an acceptable level.

3.3 Initiatives

Initiative C-PS-3-I1: Coordinate flood hazard analysis and floodplain management activities with the United States Army Corps of Engineers (USACOE), FEMA, State Office of Emergency Services (State OES), Sonoma County Fire and Emergency Services Department, Sonoma County Water Agency (SCWA), and other responsible agencies.

Initiative C-PS-3-I2: Encourage FEMA to update its flood insurance studies and Flood Insurance Rate Maps (Flood Rate Maps) to show the following information. This mapping would allow regulations and mitigation efforts to focus on the areas at the highest risk of flood hazards, and allow flood insurance premiums to be more reflective of the actual flood hazard risks on specific properties. Provide FEMA data generated from detailed parcel-specific and site-specific analyses of flood elevations and flood hazard zones when available to assist in updating flood insurance studies and Flood Insurance Rate Maps.

- (1) Flood elevations and flood hazard zones which reflect inundation hazards unique to the Coastal Zone such as sea level rise and greater ocean surges and larger waves during storms based on the most up-to-date data and science, including data developed under the California Coastal Analysis and Mapping Project and Open Pacific Coast Study (OPC Study); and
- (2) Detailed mapping of the 100-year floodplain to delineate the 10-year, 25-year, and 50-year floodplains.

Initiative C-PS-3-I3: Coordinate with state and local emergency services to educate the public about the areas subject to inundation from a tsunami, where to go in the event of an earthquake, and evacuation routes in the event of a tsunami by distributing educational materials to parcel owners within the tsunami run-up zone and by erecting signage specified by the Sonoma County Operational Area Tsunami Response Plan.

Initiative C-PS-3-I4: Encourage the California Department of Parks and Recreation, Sonoma County Regional Parks Department, Sonoma County Agricultural Preservation and Open Space District, Sonoma Land Trust, and similar organizations to purchase natural lands adjacent to wetlands or other

sensitive natural habitats which are at risk of inundation or flooding from projected sea level rise, based on the best available science, for use as wildlife habitat.

4. SEA LEVEL RISE HAZARDS

Section 30006.5 of the California Coastal Act identifies sea level rise as one of the topics for which additional scientific and technical analysis and recommendations are necessary to aid coastal planning, conservation, and development decisions. Section 30270 of the California Coastal Act states that the Commission shall take into account the effects of sea level rise in coastal resources planning and management policies and activities in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise. This Local Coastal Plan includes policies to address hazards from sea level rise to enhance the safety of residents and visitors, while providing a framework for consideration and permitting of coastal development projects. This Local Coastal Plan acknowledges the threat of sea level rise and supports appropriate responses, while recognizing that sea level rise is a global rather than a purely local issue.

Sea Level Rise Forecasts

The State of California has long-supported the development of scientific information on climate change and sea level rise to help guide planning and decision-making. ~~In April 2017, a working group of the Ocean Protection Council's (OPC) Science Advisory Team published *Rising Seas in California: An Update on Sea Level Rise Science*, and provided additional guidance in the *State of California Sea Level Rise Guidance 2018 Update*. The 2018 update synthesizes recent evolving research on sea level rise science, notably including a discussion of probabilistic sea level rise projections as well as the potential for rapid ice loss leading to extreme sea level rise. This study projected that there could be approximately 7.3 feet of sea level rise by 2100, assuming that carbon emissions continue at the current rate.~~

At the state level, the California Coastal Commission recommends using the best available science to predict sea level rise, which is expected to be updated every five years. The best available science on sea level rise in California at the time of the 2024 LUP update is the California Ocean Protection Council's *State of California Sea Level Rise Guidance* (2024 update) and the California Coastal Commission's *Sea Level Rise Policy Guidance* (2024 update), which present scenario-based sea level rise projections for the California coast.

In June 2024, the California Ocean Protection Council adopted its most recent update to the *State of California Sea Level Rise Guidance*. This update incorporates the previous five years of scientific research on sea level rise projections, including the Intergovernmental Panel on Climate Change's (IPCC's) *Sixth Assessment Report* (2021) and the National Oceanic and Atmospheric Administration's (NOAA's) national report, *Global and National Sea Level Rise Scenarios for the United States*.

The IPCC's *Sixth Assessment* report synthesizes the state of global research on sea level rise. It describes both a plausible range of potential future global mean sea level rise, as well as a narrower likely range. These ranges reflect the variety of conceivable global development, emissions, and warming futures as well as the many physical mechanisms driving sea level rise. It describes how some drivers of sea level rise are well researched and have a high degree of scientific consensus, while others are areas of developing research. Namely, the rate at which Antarctica and Greenland ice

sheets may contribute to sea level rise is a topic of evolving research, particularly with regard to how it may drive a worst-case, rapid rate of sea level rise.

In February 2022, ~~National Oceanic and Atmospheric Administration~~ NOAA published the *Global and Regional Sea Level Rise Scenarios for the United States*. This document, prepared in partnership with U.S. Environmental Protection Agency, National Aeronautics and Space Administration, U.S. Geological Survey, U.S. Army Corps of Engineers, U.S. Department of Defense, and the University of Hawai'i at Mānoa represents the best forecasts of sea level rise and associated impacts currently available. Key findings of this study are:

- (1) An increasingly larger body of climate science data provides better forecast of rise in sea level by 2050, but also finds that flooding from increased storm surge heights will increase the frequency of disruptive high tide flooding. Within the next 30 years, frequency of destructive flood levels that exceed 1.2 meters above 2020 sea level will increase from the current 0.04 events per year to 0.2 events per year.
- (2) Higher global temperatures will rapidly increase the rate of sea level rise due to accelerated melting of ice sheets in Antarctica and Greenland, and expansion of water as oceans become warmer. Additional influences such as deformational effects due to land ice loss and local increases in sea level rise due to changes in ocean currents reduce confidence in longer range projections beyond 2050, but if global mean temperatures were to rise as high as about 3°–5°C, much larger amounts of sea level rise would become increasingly possible, as instabilities in ice-sheet dynamics would potentially come into play. This increase in global mean temperatures is likely by 2100 if no effort is made to reduce activities and emissions that contribute to climate change, and would result in a 2.0 meter increase in sea level along the coast of California.

The Ocean Protection Council's 2024 update to the *State Sea Level Rise Guidance* provides the same five sea level rise scenarios as NOAA's report with further downscaling to reflect regional and local influences on sea level rise in California. Scenarios are provided for California as a whole, reflecting statewide average vertical land motion, as well as for each of the 14 tide gauge locations in the state to reflect local vertical land motion. This study projected that there could be approximately 7.3 feet of sea level rise by 2140, assuming that carbon emissions continue at the current rate.

These California-specific sea level rise scenarios have been incorporated into the Coastal Commission's 2024 *Sea Level Rise Policy Guidance* update. They are slightly lower than the projections included in the 2018 version of the *Sea Level Rise Policy Guidance*, reflecting the updated body of research on global and regional sea level rise. The Coastal Commission's 2021 *Critical Infrastructure at Risk: Sea Level Rise Guidance for California's Coastal Zone* provides specific guidance on how to promote resilient critical infrastructure based on best available science.

Another important resource specific to the west coast is *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (National Academy of Sciences 2012; National Academy Report). The National Academy Report found a steep change in projected sea level rise at Cape Mendocino in Humboldt County due to tectonic uplift. The report states that much of the land on the coast north of Cape Mendocino is rising at up to 0.1 inch per year, whereas the land on the coast south of Cape Mendocino is sinking at an average rate of about half that. As a result, relative sea

level north of Cape Mendocino has been falling over the past ten decades while the level south of Cape Mendocino has been rising.

While the Sonoma Coast regularly experiences erosion, flooding, and significant storm events, sea level rise would exacerbate these natural processes, and lead to significant social, environmental, and economic impacts. The Fourth National Climate Assessment finds that the cost of doing nothing in response to sea level rise exceeds the costs associated with adapting to sea level rise by 4 to 10 times. Therefore, it is critically important that the Local Coastal Plan provide policies that prepare for and adapt to sea level rise to ensure public resources and coastal communities are resilient for present and future generations. Future Development considerations should include future vulnerabilities to sea level rise and corresponding habitat migration.

~~Table C-PS-1 below shows the projected sea level rise over time for the Sonoma Coast based on these studies:~~

Table C-PS-1 below shows the projected sea level rise scenarios for Point Reyes tide gauge. Note that the next nearest tide gauge to Sonoma County is Arena Cove, which sea level rise scenarios are slightly lower than Point Reyes. Review the *State Sea Level Rise Guidance* or the Commission's *Sea Level Rise Policy Guidance* to view all the sea level rise scenarios for 14 California tide gauges.

Projected SLR Amounts (in feet)					
	Low	Intermediate-Low	Intermediate	Intermediate-High	High
2030	0.3	0.4	0.4	0.4	0.5
2040	0.4	0.5	0.6	0.7	0.8
2050	0.5	0.7	0.8	1.0	1.3
2060	0.6	0.8	1.1	1.6	2.0
2070	0.7	1.0	1.4	2.2	3.0
2080	0.8	1.2	1.9	3.0	4.1
2090	0.9	1.4	2.5	3.9	5.4
2100	1.0	1.6	3.1	4.8	6.6
2110	1.1	1.8	3.8	5.7	7.9
2120	1.2	2.0	4.4	6.4	9.0
2130	1.2	2.2	4.9	7.0	9.9
2140	1.3	2.4	5.5	7.6	10.9
2150	1.4	2.7	6.0	8.2	11.8

Median values of sea level scenarios, in feet, for each decade from 2020 to 2150, with a baseline of 2000. All median scenario values incorporate the local estimate of vertical land motion. The red box highlights the three scenarios that the *State Sea Level Rise Guidance* and Coastal Commission *Sea Level Rise Policy Guidance* recommend for use in various planning and project contexts.

**Table C-PS-1. Sea Level Rise Projections Relative to 1983-2001 National Tidal Datum Epoch
(Medium to High Risk Aversion Forecast – High GHG Emission Model)**

Year	Projected Sea Level Rise	
	feet	meters
2030	0.8	0.25
2040	1.3	0.4
2050	2.0	0.6
2060	2.7	0.8
2070	3.5	1.0
2080	4.6	1.4
2090	5.6	1.7
2100	7.0	2.1

Sonoma County Planning staff examined the digital data from the Pacific Institute Report that was used to prepare **Figures C-PS-3a through -3k**. **Table C-PS-2** shows, by SubArea, the public roads, State facilities, and County facilities projected to be permanently inundated or temporarily flooded as a result of sea level rise and the 100-year storm event forecast for 2100. In addition to the public roads and facilities listed in **Table C-PS-2**, numerous private properties are projected to also be inundated or flooded.

Sea level rise inundation maps were prepared for Sonoma County using the Pacific Institute Report's projected sea level rise, together with 100-year fluvial flood events for year 2100. **Figures C-PS-4a through -4c** illustrate the areas along the Sonoma County coast at risk from erosion, and **Figures C-PS-3a through -3k** illustrate the areas at risk from permanent inundation and temporary flooding as a result of a 7-foot sea level rise during a 100-year storm event by year 2100.

Sea Level Rise Vulnerability Assessment for the Sonoma Coast

In May 2017 Sonoma County completed a sea level rise adaptation planning effort for the Sonoma Coast. The County first conducted a general assessment of the coastal areas, communities, land uses, development, and public facilities most vulnerable to sea level rise impacts to prioritize development of community-specific focused vulnerability assessments. The *Sonoma County Coast General Vulnerability Assessment* was completed in June 2016. The *General Vulnerability Assessment* depicts the inundation from sea-level rise in 1-foot increments up to 6 feet (2100 scenario). The results are those SubAreas with a relative vulnerability of “high” are Highcliffs/Muniz-Jenner (SubArea 6), Pacific View/Willow Creek (SubArea 8), and State Beach-Bodega Bay (SubArea 9).

Based on these results, the County identified the community of Bodega Bay as the subject for a focused vulnerability assessment. The *Bodega Bay Focused Vulnerability Assessment and Adaptation Strategies* (Vulnerability Assessment) and recommendations are located in **Appendix G**.

Table C-PS-2. Public Roads, Federal Facility, State Facilities, and County Facilities on the Sonoma County Coast Potentially Inundated or Flooded as a Result of 7-foot Sea Level Rise and the 100-Year Flood forecast for 2100.

SubArea	Public Roads	State Facilities	County Facilities
1 The Sea Ranch North	Highway 1	Del Mar Landing State Ecological Reserve	Gualala Point Regional Park & Beach The Sea Ranch Access Trails: Coastal bluff-Top; Salal; and Walk-on Beach
2 The Sea Ranch South			The Sea Ranch Access Trails: Shell Beach; Stengel Beach; Pebble Beach; and Black Point Beach
4 Salt Point		Salt Point State Park: Fisk Mill Cove; Gerstle Cove; Horseshoe Cove; Horseshoe Point; Salt Point; and Stump Beach	
5 Timber Cove/ Fort Ross	Highway 1	Fort Ross State Historic Park: Fort Ross Cove; Kohlmer Gulch; Sandy Cove; and Windermere Point	Stillwater Cove Regional Park: Stillwater Cove & Boat Launch; Stillwater Cove Expansion: Pocket Cove and Coastal Bluff Trail – Ocean Cove to Stillwater Cove
7 Duncans Mills	Highway 1 Hwy 116 B Street Freezeout Rd Main St Steelhead Blvd	Sonoma Coast State Park Access Trails: Duncans Mills River; Rancho del Paradiso - Freezeout River; Steelhead Boulevard River; and Willow Creek – Freezeout Jenner Visitors Center	
8 Pacific View/ Willow Creek	State Highway 1 Emery Rd Willow Creek Rd Wrights Beach Access Rd	Sonoma Coast State Park & Beach: Arched Rock; Duncans Cove, Point, & Landing; Penny Island; Blind Beach; Furlong Gulch Beach; Goat Rock Beach; Mann Beach; No Name Beach; North Portuguese Beach; Portuguese Beach; Wrights Beach; Monte Rio to Willow Creek Trail; and Willow Creek Campground & River Access Trail	Gleason Beach Accessway California Coastal Trail

Sonoma County Local Coastal Plan |
Public Safety Element

SubArea	Public Roads	State Facilities	County Facilities
9 State Beach/ Bodega Bay	Highway 1 Bay Flat Rd Bean Ave Brooke Rd Churchill St Doran Beach Rd Driftwood Rd Extension–Westshore to Whaleship Roads Maryana Dr Ocean View Ave Shaw Ct Smith Brothers Rd Westshore Rd	Bodega Dunes Campground North Salmon Creek Beach South Salmon Creek Beach U.C. Davis Bodega Marine Lab (access road) Bodega Head (access road) Federal: U.S. Coast Guard facility at Doran Beach	Birdwalk Loop Trail Doran Regional Park & Beach Doran Beach Jetty Day Use Area; Miwok Tent Campground; boat launch & parking; and visitor's center/ operations Westside Regional Park: boat launch; RV & tent campsites; and parking Mason's Marina Spud Point Marina Bodega Bay Sport Fishing Center Bodega Harbour Yacht Club (county owned)
10 Valley Ford	Highway 1 John's St Middle Rd School St (Main St) Valley Ford – Estero Rd Valley Ford – Freestone Rd Valley Ford Rd		Gold Ridge Soil Conservation District Office

References:

Global and Regional Sea Level Rise Scenarios for the United States (NOAA 2022)

Rising Seas in California: An Update on Sea-Level Rise Science (Ocean Protection Council 2017)

Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future (National Academy of Sciences 2012)

The Impacts of Sea-Level Rise on the California Coast Pacific Institute Report (Heberger et al., 2009)

Note:

The County's hazards maps and tables can be used as a resource for identification of potential hazard areas and vulnerable properties; however, absence of a hazard area on the maps cannot be considered absence of hazard, and local site conditions must be examined using the best available science.

Exposure to Inundation and Erosion

As part of the Sonoma County coast sea level rise adaptation planning effort funded by the Ocean Protection Council, the Center for Ocean Solutions analyzed the relative exposure of coastline areas to erosion and sedimentation caused by storms, and the role of natural habitat in reducing this exposure (Hartge et. al., 2016a).

The Center of for Ocean Solutions (COS) and the National Capital Project (NCP) have conducted spatial analyses areas along the Sonoma County coastline at risk of erosion and inundation caused by storms. In addition, the analyses evaluated the role of natural habitat in reducing coastal exposure in Sonoma County. The information below summarizes the findings for the spatial analyses under a 2030 sea level rise scenario (National Academies of Science, 2012).

Figures C-PS-4a through -4c depict the findings of the analyses of coastal exposure for Sonoma County to erosion and inundation caused by storms under a ~~2030~~ **7 foot** sea level rise scenario. The coastal exposure values reflect the relative exposure of different coastline segments to erosion and inundation caused by coastal storms. The map is based on spatial data that includes the 2030 projection for sea level rise, coastal geomorphology, coastal topography and bathymetry, surge potential, wind and wave exposure, natural habitats, and human population. This mapping approach is qualitative and provides a broad overview of the spatial patterns of coastal exposure along the Sonoma County coastline to help prioritize future nature-based adaptation planning strategies for specific locations. **Policy C-PS-1d** requires review and updating of hazard maps every 3 years to assure that mapping reflects the best available science and most recent data.

Living Shorelines and Natural Infrastructure

The habitats fringing a coastline attenuate waves and thus reduce storm-related damage to shorelines from erosion and inundation. North of the Russian River mouth to the northern extent of Sonoma County, kelp forest habitat backed by rocky cliffs dominate the landscape and are generally low exposure. In contrast, south of the Russian River mouth, a greater diversity of habitats (e.g., wetlands, beaches, dune systems) are present and are habitats that are highly exposed to erosion and inundation during storms compared to north of the River mouth. As ~~coastal~~ development and rising sea levels alter or damage these habitats, coastlines and nearby infrastructure become increasingly vulnerable to storms.

Coastal habitats provide an ecosystem service by reducing the impacts of storms and by increasing resilience in coastal areas. However, with ever increasing stresses on ecosystems, it is important to identify where natural habitats provide the greatest benefits to prioritize adaptation planning efforts that protect or restore those critical natural habitats. The habitat types which provide the highest level of natural protection have been identified and mapped.

Figures C-PS-5a through -5c depict the areas along the Sonoma County coastline in which natural habitat plays a role in reducing exposure to erosion and inundation during storms. For example, the dark brown areas in Doran Beach and south of Salmon Creek indicate locations where habitats play the largest role in reducing exposure. The lighter tones in the map also indicate where habitat areas provide a protective coastal ecosystem service.

Adaptation Strategies

Much is at stake from sea level rise, and in order to minimize damage and losses, California's coastal communities must make adaptation to sea level rise a priority by conducting community sea level rise vulnerability and risk assessments and developing a Sea Level Rise Adaptation Plan. Developing a risk assessment involves considering the actual or future threats or hazards of concern, the economic importance or value of public facilities and infrastructure to the community, and the certainty of projected impacts to the degree that these are known or can be expected. Developing a Sea Level Rise Adaptation Plan involves setting goals, identifying objectives and adaptation measures, developing adaptation strategies for different types of land uses and facilities. The Adaptation Plan should consider public access, unique water dependent infrastructure, inundation caused by storm events, salt water intrusion, and consistency across any state and federal sea level rise projections.

In any coastal community there are three types of areas to be considered for adaptation planning: (1) undeveloped land that is considered or zoned to be developable; (2) existing unprotected development, including residential and commercial areas as well as infrastructure; and (3) existing development that has already been armored. The major armored area along the Sonoma County coast is a portion of the residential development above Gleason Beach. The Gleason Beach Highway 1 Realignment project ~~proposed~~ by Caltrans is an example of a "retreat" adaptation strategy. ~~The proposal is to project has~~ realigned a 3,700 foot, two-lane section of Highway 1 about 400 feet inland of the current alignment at Gleason Beach. The purpose of the project ~~is was~~ to provide a safe transportation facility that is no longer vulnerable to advancing coastal erosion.

Adaptation strategies for private property may be different or more difficult from those appropriate for ~~and~~ public property. Over a longer timescale, the cost of restricting or limiting new development in areas vulnerable to the hazards or impacts from sea level rise is far lower than the cost of addressing damaged or threatened development.

Based on the costs and benefits as well as the risks, adaptation strategies will identify the threshold at which the community should take action to prevent, reduce, or adapt to impacts from sea level rise. For example, a coastal park or parking lot can be used intermittently for a long time with periodic winter flooding, but a water or wastewater treatment plant at or near beach elevation must be retrofitted, relocated, or replaced well in advance of facility flooding or failure to ensure continued public services.

Sea Level Rise Forecast Standard

The Sonoma County Local Coastal Plan uses a **7-foot sea level rise forecast** as the basis for integrating sea level planning and resiliency into all elements of this plan. This is slightly higher than worst case scenario forecasts of 2 meters (6.56 feet) by 2100 found in ~~the recent studies~~ *Rising Seas in California: An Update on Sea Level Rise Science*, and NOAA's Global and Regional Sea Level Rise Scenarios for the United States and the 2024 OPC State of California Sea Level Rise Guidance. Based on the State Guidance, Sonoma's coastline could experience 7 feet of sea level rise by approximately 2130-2140 under the Intermediate-High scenario or as soon as 2110 under the High scenario (based on the Arena Cove and Point Reyes tide gauges). Seven feet of sea level rise is not expected to occur prior to 2150 under the lower scenarios, and consistent with the 2.1 meter (7 feet) medium to high risk forecast of the Ocean Protection Council's *State of California Sea Level Rise Guidance 2018 Update*.

4.1 Goal, Objectives, and Policies

GOAL C-PS-4: Prevent unnecessary exposure of people, property, and coastal resources to risks of injury, damage, or loss from sea level rise.

Objective C-PS-4.1: Regulate new development to reduce the risks of human injury or property damage in areas subject to projected future sea level rise and other coastal hazards to an acceptable level, incorporating adaptive capacity in design and operation when hazard risk exceeds a project-specific threshold.

Objective C-PS-4.2: Minimize the risks of human health and safety, and property damage associated with existing development that may result from sea level rise consistent with LCP and Coastal Act policies regarding new shoreline protection structures or repair of existing shoreline protection structures.

Objective C-PS-4.3: Identify and assess risks to existing development, public facilities, infrastructure, and coastal resources that are vulnerable to projected future sea level rise inundation from seasonal storm events, and other coastal hazards.

Objective C-PS-4.4: Develop a plan for community adaptation to projected future sea level rise and other coastal hazards to reduce the risks and impacts to an acceptable level.

~~**Policy C-PS-4a:** Sea Level is defined as the locally corrected mean high water level referenced to the average of all the high water heights observed over the 1983-2001 National Tidal Datum Epoch at the National Oceanic and Atmospheric Administration Point Reyes Station Datum, Station ID 9415020.~~

~~**Policy C-PS-4b:** Sea Level Rise is defined as a 7-foot increase in sea level relative to the locally corrected mean high water level referenced to the average of all the high water heights observed over the 1983-2001 National Tidal Datum Epoch at the National Oceanic and Atmospheric Administration Point Reyes Station Datum, Station ID 9415020.~~

Policy C-PS-4c: For the purposes of vulnerability and risk assessments, mapping, land use planning, and adaptation planning, take a precautionary approach by identifying the areas projected to be inundated by sea level rise as defined in Policy C-4b vulnerable to seven feet of sea level rise, including under projected high tides, high water conditions in combination with high tides, storm wave run up and storm surge, and erosion resulting from sea level rise.

Policy C-PS-4d: Update hazard data every 5 ~~3~~ years or at intervals recommended by responsible agencies, whichever is more frequent, using the best available scientific estimates, aligning with projections used by regional, state and federal agencies.

Policy C-PS-4e: Use the best available science and technical analyses available in combination with site-specific information when evaluating land use or development proposals in areas subject to sea level rise and other coastal hazards.

Policy C-PS-4f: Applications for Coastal Development Permits for development potentially subject to hazards from projected sea level rise, shall include a geologic/flood hazards report prepared by a licensed Geotechnical Engineer that evaluates the potential risk from inundation and/or coastal erosion over the economic life of the development. ~~The~~ At a minimum, the report shall evaluate hazards in the context of a 7-foot sea level rise and include recommendations on development location, design, and construction to ~~reduce~~ minimize risk from coastal hazards and avoid impacts to coastal natural resources. Applications for critical infrastructure shall also evaluate the High Scenario from the OPC State Sea Level Rise Guidance (or a similarly precautionary scenario from future updates). Hazards reports may evaluate additional sea level rise scenarios as necessary to provide sufficient information for determinations.

Policy C-PS-4g: Restrict rebuilding or ~~coastal~~ redevelopment of structures in vulnerable areas that have experienced repetitive damage from storms, flooding, landslides, or the impacts from sea level rise.

Policy C-PS-4h: New development shall be set back a sufficient distance landward or otherwise sited and designed to avoid or minimize, to the maximum extent feasible, inundation and/or coastal erosion resulting from the extent of projected sea level rise, storm events, and other coastal hazards based on the best available science over the expected economic life of the development. In all cases, new development shall assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. Other than for coastal dependent development, ~~Shoreline protection devices are prohibited for new development and shall not be considered when evaluating setback from coastal hazards.~~

Policy C-PS-4i: For development proposed where potential inundation, flooding, and/or coastal erosion resulting from projected sea level rise cannot be completely avoided, sea level rise adaptation measures, including a requirement for future removal of development, shall be evaluated and incorporated into the development siting, design, construction, and operation. These measures shall not have an adverse impact on coastal ~~natural~~ resources, and risk disclosures and deed restrictions shall be required.

Policy C-PS-4j: New development shall be avoided on undeveloped land immediately adjacent to wetlands or other sensitive habitats that are at risk of inundation or flooding resulting from projected sea level rise so that these lands are available for wetland or other habitat restoration projects.

Policy C-PS-4k: Buffers to protect wetlands and riparian habitat shall be measured from the extent of a projected 7 foot sea level rise in tidally influenced areas ~~based on the best available science.~~ Consultation with California Department of Fish & Game, U.S. Fish & Wildlife Service, and U.S. Army Corps of Engineers is required to establish buffers in these areas.

Policy C-PS-4l: Development shall be removed and the disturbed area restored to a natural condition if:

- (1) Permit Sonoma declares the development unsafe for occupancy and/or use regardless of whether a new shoreline protective device would make the development safe for occupancy or use.

- (2) Development ~~that~~ encroaches onto current or future public trust land due to sea level rise and the State Lands Commission or other public trust land authority, denies a grant, lease, or other legal mechanism that would otherwise allow the development to remain in place. This does not apply to legally established development currently elevated above public trust lands on Bodega Bay.
- (3) Bluff top erosion reduces setback between the development and the bluff top below minimum setback required by **Policy C-PS-2d**.

Policy C-PS-4m: The conditions of approval for any Coastal Development Permit on public or private property that is subject to hazards from projected sea level rise shall include the requirement that the owner shall record a deed with the following notice included: “The subject property is located in an area subject to inundation, flooding, or coastal erosion hazards as a result of projected sea level rise.”

4.2 Programs

Program C-PS-4-P1

Develop ~~adoption~~ adaptation plans for public infrastructure and local communities. For existing private development in vulnerable areas, develop the following strategies for addressing the impacts from sea level rise:

- (1) Incentives for planned retreat or relocation from vulnerable areas; establish mandatory rolling setbacks for future development or significant ~~coastal~~ redevelopment in areas that are likely to be affected by the impacts from sea level rise within the anticipated lifetime of the structures.
- (2) Identify funding for purchase or relocation of existing structures out of vulnerable areas.

For existing public infrastructure or community resources including ports, and public trust uses such as navigation and recreation in vulnerable areas, develop the following strategies for addressing the impacts from sea level rise:

- (1) Retreat or retrofit plans for existing infrastructure subject to future flooding, and remove and relocate or replace the infrastructure according to the plans.
- (2) Increasing adaptive capacity of shoreline roads, and determine the feasibility of relocating shoreline roads and increasing culvert and roadside ditch capacity. Work with entities such as Caltrans that plan, construct, or operate infrastructure.
- (3) Amendments to the Local Coastal Plan Public Access Element and Public Access Plan to ensure long- term protection of the function and connectivity of existing public access and recreation resources.
- (5) Reduce and eliminate dependence on shoreline protection structures. Identify critical structures where short term armoring is necessary until long-term solutions can be designed and implemented.

Based on the costs and benefits as well as the risks, the adaptation plan should then identify the threshold at which the community should take action to prevent, reduce, or adapt to impacts from sea level rise. For example, a coastal park or parking lot can be used intermittently for a long time

with periodic winter flooding, but a water or wastewater treatment plant at or near beach elevation must be retrofitted, relocated, or replaced well in advance of facility flooding or failure to ensure continued public services.

Program C-PS-4-P2: By January 1, 2034, Prepare a Sea Level Rise Vulnerability and Risk Assessment, and Adaption Plan for the Sonoma County coast based on the best available state guidance [e.g. from the California Coastal Commission's Sea-Level Rise Policy Guidance (2018 2024 Update), the California Ocean Protection Council's Sea-Level Rise Guidance (2018 2024 Update), or subsequent updates] and other applicable publications. Focus on those SubAreas of the Sonoma County coast at the highest risk of inundation, flooding, or coastal erosion resulting from sea level rise, which include The Highcliffs/Muniz/Jenner (SubArea 6), Pacific View/Willow Creek (SubArea 8), Duncans Mills (SubArea 7), and State Beach/Bodega Bay (SubArea 9). Update these studies and the LCP every 5-10 years, or as necessary based on evolving conditions.

Preparation of the Sea Level Rise and Coastal Hazards Adaptation Plan shall involve collaboration with pertinent County of Sonoma departments and agencies, independent utility districts, and responsible federal and state agencies; and participation of the public.

The Sea Level Rise and Coastal Hazards Adaptation Plan shall focus on public and quasi-public facilities and infrastructure and include the following components:

- (1) Discussion of the following planning tools to help communities adapt to sea level rise and other coastal hazards: public purchase of private property for public uses, sale or transfer of public land to accommodate relocated roads and infrastructure, transfer of development rights, parcel reconfiguration, and zoning and land use designation amendments.
- (2) Requirements and standards for siting, design, and construction of new public facilities and infrastructure and private structures in areas subject to sea level rise and other coastal hazards as mapped in the Vulnerability Assessment.
- (3) Requirements and standards for maintenance and removal of abandoned structures.
- (4) Cost/benefit analyses of: a) adaptation measures versus no adaptation measures and b) carrying-out adaptation measures pre-inundation versus post-inundation (i.e., emergency conditions).
- (5) Plan for full disclosure of potential hazards to owners of property in areas subject to sea level rise and other coastal hazards as mapped in the Vulnerability Assessment.
- (6) Identify options and mechanisms to minimize or avoid County obligations to compensate for private property loss or damage resulting from sea level rise and other coastal hazards.
- (7) Identify key next steps for continued adaptation planning efforts such as specific adaptation projects or actions to be implemented over near- to medium-term time horizons, completion of more detailed feasibility or other studies, or updates to the vulnerability assessment and adaptation plan.

The County will continue to work with the National Oceanic and Atmospheric Administration, California Coastal Commission, Ocean Protection Council and other agencies and organizations to develop possible adaptation strategies for particular areas of the Sonoma County coast. (NEW)

Program C-PS-4-P3: Study, monitor, develop, and implement a plan to mitigate the impacts to groundwater from saltwater intrusion resulting from sea level rise and storm events based on the best available science. (NEW)

5. WILDLAND FIRE HAZARDS

The combination of highly flammable fuel, long dry summers and steep slopes creates a significant natural hazard of large wildland fires in many areas of Sonoma County, including in the Coastal Zone. Wildland fire results in death, injury, economic losses, and a large public investment in firefighting efforts. Woodlands and other natural vegetation are destroyed resulting in the loss of timber, wildlife habitat, scenic quality and recreation. Soil erosion, sedimentation of fisheries and reservoirs, and downstream flooding can also result.

Most damage results from a few large fires in the dry weather months. There were 14 ~~21~~ wildland fires of 100 acres or more in the County between 2008 and 2023 ~~1989 and 2000~~.

Fire hazard severity has been mapped by the California Department of Forestry and Fire Protection (CAL FIRE). Areas on the County coast with a high or very high fire risk are shown on **Figures C-PS-6a-c** and include Timber Cove and Sea Ranch. The highest fire hazard in Sonoma County is found in mountainous areas with dry summers, plenty of fuel, and steep slopes.

~~Residences have~~ Residential development has been linked with an increased ~~in~~ the number of fires in rural areas. Approximately ninety-seven percent of the wildland fires over 50 acres in Sonoma County since 1989 were caused by human activities or facilities. Residences in rural areas cause fire ~~suppression~~ protection agencies to devote limited resources to structural protection while the wildfire spreads.

The probability of large damaging fires in developed areas is affected by weather conditions and the spread of fires in surrounding wildland areas. The type of construction, preventive measures, and the extent of fire ~~suppression~~ protection services are the chief factors which determine how far these fires spread and how severe their impacts can be to both human and natural communities.

~~The California Department of Forestry and Fire Protection (CAL FIRE)~~ has lead responsibility for fighting wildland fires in designated State Responsibility Areas. The Sonoma County Fire District ~~and Emergency Services Department~~ (County Fire) provides fire prevention, fire protection, rescue, emergency medical, code enforcement, and arson investigation services for the unincorporated areas of Sonoma County that are not included in an independent fire protection district. County Fire is responsible for enforcing the California Fire Code and other fire-related codes and ordinances. It enforces vegetation management, reviews building construction plans, and performs inspections of new construction for fire code compliance. In addition, three volunteer fire districts providing fire protection services to different portions of the Sonoma County Coastal Zone. See the Public Facilities and Services Element for a more detailed description of the fire protection services in the Coastal Zone.

The Sonoma County Fire Code is based on the National Fire Code, California Fire Code, Uniform Building Code, and California Subdivision and Development Code; constitutes the local adoption of the California Building Code; and is in Chapter 13 of the Sonoma County Code. It sets forth the requirements of the Sonoma County Fire Safety Ordinance, referred to as the Fire Safe Standards. The County Fire Code was adopted to establish minimum fire safe standards for development within the unincorporated area of the county. The County Fire Code requirements ensure that all new development within the unincorporated area of the county will provide a basic level of fire protection around itself making it easier and safer for fire fighters to access and fight wildland and structure fires.

The Fire Safety Standards include but are not limited to requirements for emergency access, road naming and addressing, minimum emergency water supply and sprinklers to ensure a supply of water to fight or defend property from a fire, fuel modification and defensible space to reduce the possibility and intensity of a wildfire, and other fire protection measures. Due to the severe fire risk in many areas of the County, including in the Coastal Zone, the County's Fire Safe Standards which outline development standards for emergency access, water supply, and vegetation management are more stringent than those required by the California Fire Code.

Hazards and Risk Assessment

Fire hazards shown on Figures C-PS-6a through -6c are only a general picture of the actual hazard because of the size of the areas and differences in vegetation and slope. The maps show the fire hazards only in unincorporated areas which are classified as wildlands and are therefore within the State Responsibility Area served by CAL FIRE.

Land Use Planning

In order to reduce the risks of property damage and human injury from wildland fires in rural areas, the types and intensities of land uses should be limited. Rural development should be most restricted where natural fire hazards are high, fire protection is limited, and road access prevents timely response by firefighting personnel and rapid evacuation ~~by~~ of residents. Wildland fire hazards may be reduced by mitigation measures including removing and/or treating vegetation and installing dependable water systems, but cannot be eliminated entirely.

The Sea Ranch Fuels Management

A landscape and fire management plan for The Sea Ranch was implemented in the 1990s to balance fire safety with the basic concept of preserving the natural landscape. In 2002 The Sea Ranch Association (TSRA) introduced a more aggressive Fuels Management Program to reduce fuel loads throughout The Sea Ranch. The Sea Ranch Association has continued to implement and expand the program. It incorporates the Sonoma County Fire Safe Standards (see Regulatory Environment below) and includes the following objectives and actions: create roadside fuel breaks to allow for safe evacuation and emergency access; reduce fuels on hillsides below homes to reduce fire intensity; enlarge the Highway 1 fuel break and reduce fuels on both sides of the highway; introduce sheep and goat grazing in the meadows on both sides of Highway 1; enhance riparian vegetation and remove conifers in drainages; and control new vegetation growth. TSRA also addresses fire safety around individual structures through its Defensible Space Fuel Management Resolution which requires the

owners of developed property to maintain the fuel breaks around structures mandated by CAL FIRE; and its Design Manual Rules, which outline the permit process, procedure, and standards for fuels management on private lots and neighboring property.

Fire Safety Standards

Fire hazard regulations are intended to minimize on-site property damage and personal injury, avoid damage to adjacent properties, reduce the adverse impacts of uncontrolled wildland fires on natural ecosystems, and reduce the cost of fire ~~suppression~~ protection services. Increasing built-in fire protection in those areas where new construction is allowed is one of the most cost effective ways of achieving these objectives. All development must have adequate water available for fire suppression, whether from a hydrant and community system or from an on-site storage tank.

In particular, ~~Where~~ development is permitted near wildlands and natural vegetation, the fire hazard must be further ~~mitigated~~ reduced by other measures. ~~First, The locations of subdivision of lots and the configuration of building envelopes can be planned in ways that maximize access by for emergency service vehicles and minimize construction in steep or wooded areas. Also, Fire retardant roof materials are now required in high fire hazard areas. Moreover, Preventing the spread of wildland fires to and from structures also may requires use of fire retardant materials, treatment and/or removal of surrounding vegetation and clearing of fuel breaks.~~

Differences in local, state, and federal fire safety standards and requirements and in staffing and training among local fire districts prompted the formation of the Sonoma County Department of Fire Services in 1985, now the Sonoma County Fire and Emergency Services Department. Improvements in standards for road design, water supply, and sprinkler systems have increased the effectiveness of local fire protection services. In February 2003 the County Board of Supervisors approved Ordinance Nos. 5402 and 5373 that amended the County Fire Code to require fire sprinklers for both residential and commercial development with some exceptions. In recent years, fire services have reorganized and consolidated in order to minimize administrative costs and to promote more efficient and consistent service response.

~~CalFire~~ CAL FIRE enforces requirements for firefighting and prevention, works with property owners on controlled burns, and advises rural residents on fire prevention methods. CalFire is currently preparing minimum fire safety standards for wildland areas. See “Regulatory Setting” below for more information about ~~CalFire~~ CAL FIRE responsibilities and activities. The following policies are intended to improve public safety and ~~forest~~ ecosystem health consistent with the objectives of the Open Space and Resource Conservation Element.

Another important component of fire safety is an improved system of street addresses throughout the county. Fire response time, particularly in rural areas, is occasionally affected by the ability of the responder to locate the affected address. Improved visibility and standardizing street addresses can result in reduced emergency response time.

Public Education

Increased public awareness of fire hazards and fire safe practices is an effective way to avoid or reduce future fire damages and loss of life. Emergency service providers typically provide educational programs that focus on fire prevention. In addition to continuing to promote these ongoing programs,

fire prevention information can be provided directly to the general public and to prospective permit applicants for incorporation into the building design. Such a program can be further expanded to include fire hazard information by providing fire hazard warning signs along roadways in particularly vulnerable fire hazard areas.

5.1 Goal, Objectives, and Policies

GOAL C-PS-5: Prevent unnecessary exposure of people and property to risks of injury or damage from wildland and structural fires.

Objective C-PS-5.1: Work with other fire agencies to improve fire safety standards, carry-out fire prevention and protection programs, and educate the public about fire hazards and fire prevention.

Objective C-PS-5.2: Regulate new development to reduce the risks of human injury and property damage from known fire hazards to an acceptable level.

Objective C-PS-5.3: Adopt measures to address landscaping and vegetation clearance for fire prevention and protection purposes that avoid and minimize impacts to environmentally sensitive habitat areas and natural communities.

Objective C-PS-5.4: Foster fire resilience in human and natural communities through the incorporation of balanced fire management focused on reducing the severity of fires that could alter long-term plant succession and adversely affect natural fire regimes, in light of a changing climate.

Policy C-PS-5a: Encourage continued operation of CAL FIRE California Department of Forestry and Fire Protection programs for fuel breaks (both shaded and non-shaded), brush management fuel reduction and clearance, controlled burns, habitat restoration and enhancement, revegetation, and maintenance of fire roads; ~~however, brush clearing and controlled burns~~ vegetation treatment and management deemed necessary shall be consistent with all applicable policies of this Local Coastal Plan ~~not take place in designated environmentally sensitive habitat areas or other sensitive habitats.~~

Policy C-PS-5b: New development shall:

- (1) ~~m~~Meet all applicable fire safety standards,
- (2) Reduce fire risk through structure hardening and weatherization, including the use of performance-based, fire-resistant materials and innovative design considerations.
- (3) Reduce fire risk through the incorporation of emergency water supply/sprinkler systems and area-appropriate landscaping.
- (4) ~~and shall b~~Be sited and designed to minimize required initial and future fuel modification and brush clearance in general, to the maximum feasible extent, and ~~to~~

- (5) ~~a~~ Avoid such vegetation treatment and removal activities other than habitat restoration work within environmentally sensitive habitat areas and environmentally sensitive habitat areas buffers on site and on neighboring property, including parkland.

All such requirements shall be applied as conditions of approval applicable ~~and maintained~~ for the life of the development.

Policy C-PS-5c: ~~Where otherwise inconsistent with Policy C-PS-5a, r~~ Removal of major vegetation adjacent to lawfully existing structures development for fire safety purposes shall be allowed upon a finding that fuel modification and brush clearance techniques are required in accordance with applicable defensible space and fire safety regulations and are being carried out in a manner which reduces coastal resource impacts to the maximum feasible extent, and mitigates for unavoidable such impacts. In addition to the foregoing requirements, removal of environmentally sensitive habitat, or removal of materials in an environmentally sensitive habitat areas buffer shall only be allowed ~~for fire safety purposes to protect lawfully existing structures~~ and must demonstrate that:

- (1) Removal does not conflict with any prior terms and conditions of applicable CDPs and/or other authorizations that affect the area in question, approval
- (2) There are no other feasible alternatives for achieving compliance with required fire safety regulations,
- (3) All ESHA/ESHA buffers are avoided as much as possible, and allowable measures take place outside of and as far away from ESHA itself as much as possible,
- (34) All ESHA impacts are commensurately mitigated at a minimum 3:1 ratio and in a manner that leads to no net loss of ESHA resource habitat values.

Policy C-PS-5d: Controlled burns shall be allowed on agricultural land with a permit from the local fire agency and in consultation with the local Air Quality Management District and CAL FIRE California Department of Forestry and Fire Protection.

Policy C-PS-5e: The severity of natural fire hazards (as may be exacerbated by climate change), potential damage from wildland and structural fires, adequacy of fire protection services, and mitigation measures consistent with the Public Safety Element shall be considered in the review of all proposed development projects.

Policy C-PS-5f: Fire management plans shall be required for allowable subdivisions and new or expanded recreational facilities in non-urban areas, including development of California Department of Parks and Recreation and Sonoma County Regional Parks holdings. Such plans shall include, but not be limited to, adequate water storage, adequate ingress and egress for emergency vehicles and occupant evacuation, and building siting to minimize fire hazards.

Policy C-PS-5g: New or expanded public-serving infrastructure and utilities shall be clustered within urban areas and away from fire-prone wildland or rural areas to the greatest degree possible. Where critical infrastructure must be located within high or very high fire risk areas, and no feasible alternative locations exist, then a fire management plan shall be required, which in addition to the items in Policy C-PS-5f, shall ensure careful vegetation management, address any and all unavoidable

impacts to environmentally sensitive habitat areas and surrounding land, and provide adaptation measures that maximize wildfire resilience while minimizing service disruptions.

Policy C-PS-5g5h: Encourage and promote fire safe practices and the distribution of fire safe educational materials to the general public, permit applicants, and local planning agencies.

Policy C-PS-5h5i: Provide fire hazard information signs in Areas of Very High or High Potential for Large Wildland Fires in a manner that is consistent with the Local Coastal Plan and does not degrade Scenic Highway Corridors or scenic views.

Policy C-PS-5i5j: Encourage and assist private individuals and communities on the Sonoma coast to construct small-scale water storage facilities for back-up use in the case of fire and for back-up non-potable water demand.

~~**Policy C-PS-5j:** Exclude vegetation removal associated with defensible space activities consistent with state or local guidelines from the requirements of a Coastal Development Permit, when such activities are done in conjunction with an allowed or permitted use and will not result in type conversion of the existing vegetation community.~~

Policy C-PS-5k: Some vegetation removal activities may qualify for exemptions or exclusions from permitting requirements (see LCP Implementation Plan: Section 26C-340.1).

~~**Policy C-PS-5k5l:** Where other streamlining options are not available consider joint or programmatic Coastal Development Permit opportunities or similar tools to minimize the burden on individual properties for activities intended to reduce risk to existing resources, structures, or uses.~~

5.2 Programs

Program C-PS-5-P1: Where necessary and where public funding is available, develop streamlined Forest Health and Fire Resilience Public Works Plans for high fire risk areas in order to reduce risk and improve the health of fire-adapted coastal lands.

5.3 Initiatives

Initiative C-PS-5-I1: Work with CAL FIRE ~~the California Department of Forestry and Fire Protection~~ to identify areas of high fire fuel loads and take advantage of opportunities to reduce those fuel loads, particularly in Areas with Very High or High Potential for Large Wildland Fires and in High Fire Hazard Severity Zones.

Initiative C-PS-5-I2: The Sonoma County Department of Emergency Services shall offer assistance to local agencies in adopting and enforcing fire safety regulations and shall work with local agencies to develop proposed improvements to related County Codes and standards.

Initiative C-PS-5-I3: Encourage the California Department of Parks and Recreation, and the Sonoma County Regional Parks Department to continue efforts to educate the public about fire hazards and fire prevention.

6. HAZARDOUS MATERIALS

Many substances can be hazardous to human health and the environment, which includes air, soil, water, plants, and animals. The California Health & Safety Code defines a hazardous material as “any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and the environment if released into the workplace or the environment.” Common hazardous materials include oils, fuels, paints and varnishes, antifreeze, cleaning products, solvents, pesticides (includes herbicides, insecticides, fungicides, and rodenticides), and the associated hazardous waste. The increased use of hazardous materials has increased the potential hazards from hazardous materials and actual human injury and environmental damage, especially when they are used and disposed of near surface water. Public concerns have led to tighter controls on the production, transport, storage, sale, and use of hazardous materials, particularly on the handling and disposal of concentrated residues and wastes produced by power plants and other industrial operations.

Hazardous materials are found at many locations in Sonoma County. The electrical generating plants in The Geysers geothermal area use and produce hazardous materials hauled on winding mountain roads. Spills and releases of such materials have occurred. Petroleum fuels get into groundwater and surface water, particularly from underground storage tanks at gasoline stations and marinas. Preventing hazardous materials in the County’s solid waste landfills and transfer stations and industrial operations is important because these materials could affect water quality. Boat use, repair, and maintenance activities at Bodega Bay, Spud Point Marina, and Porto Bodega in the Coastal Zone involve the storage, handling, use, and disposal of hazardous materials such as oils and fuels, paints and varnishes, solvents, and cleaning agents that may drain to surface water.

Pesticides are another hazardous material commonly used in Sonoma County by agricultural, residential, commercial, and recreational land uses. While state law preempts local regulation of pesticides, the County does have the authority to establish use restrictions applicable to its own operations. By doing so, the County can set an example that will encourage others to reduce reliance on pesticides.

Concerns about Outer Continental Shelf (OCS) oil and gas development led to the approval of Ordinance 3592R in the late 1980s, a countywide ballot initiative that requires voter approval of any proposed Local Coastal Plan Amendment to allow onshore facilities that would support OCS oil and gas development (see Outer Continental Shelf Development Policy in the Land Use Element). The issue of potential oil or other hazardous material spills from onshore support facilities would be addressed in the required environmental documents on the proposed projects.

The management of hazardous materials is included in this Public Safety Element because it has become a major public safety issue requiring attention significant personnel and financial resources and attention by local agencies. Different local, state, and federal agencies have different responsibilities in regulating hazardous materials, and are discussed below.

Federal Hazardous Materials and Waste Programs

The primary federal laws regulating hazardous materials, administered by the United States Environmental Protection Agency (U.S. EPA), are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of

1980 (CERCLA). CERCLA, often referred to as the Superfund, was enacted to provide broad federal authority to clean up releases or threatened releases of hazardous substances at abandoned hazardous waste sites in the U.S. The hazardous materials waste program under RCRA establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal — in effect, from cradle to grave. In any given State, U.S. EPA or the State hazardous waste regulatory agency enforces hazardous waste laws. The U.S. EPA encourages States to assume primary responsibility for implementing a hazardous materials and waste program through State adoption, authorization, and implementation of the regulations.

State of California Hazardous Materials and Waste Programs

The State of California has assumed the primary responsibility for implementing the federal hazardous materials and waste program. California legislation in 1993 (Senate Bill 1082) established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program consolidates, coordinates, and makes consistent the California Environmental Protection Agency (Cal EPA) environmental programs which include:

- (1) Hazardous materials inventories and business plans
- (2) Permitting for generators of hazardous waste and operators of on-site hazardous waste treatment
- (3) Aboveground storage tanks
- (4) Underground storage tanks
- (5) Spill or accidental release prevention, control, and response
- (6) Fire code management plans

Under the Unified Program, Cal EPA certifies local agencies to implement the six state environmental programs listed above within their jurisdictions. The appointed local lead agencies are referred to as Certified Unified Program Agencies (CUPAs).

California Coastal Act

Section 30232 of the California Coastal Act requires that protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Sonoma County Hazardous Materials and Waste Lead Agencies and CUPAs

Hazardous Materials. The California Department of Toxic Substances Control (DTSC) is vested with the primary authority through the U.S. EPA to enforce federal and state laws pertaining to the regulation of hazardous materials and waste in California. The DTSC has authorized the Sonoma County Fire and Emergency Services Department as the lead agency and CUPA to enforce federal, state, and local laws pertaining to hazardous materials and hazardous waste management.

The Fire and Emergency Services Department enforces Chapter 29 of the Sonoma County Code regarding hazardous materials management, and for preparing a comprehensive hazardous materials and hazardous waste management plan. Chapter 29 regulates the storage, handling, and management of hazardous materials, whether in waste or non-waste form, unless specifically preempted by state or federal law. The Fire and Emergency Services Department is also responsible for emergency response to hazardous materials incidents throughout most of the County in coordination with local fire and police personnel, and enforces portions of the California Fire Code which address hazardous materials, including routine inspections.

Underground Storage Tanks. The State Water Resources Control Board (SWRCB) is vested with the primary authority through the U.S. EPA to enforce federal and state laws pertaining to leaking Underground Storage Tanks containing hazardous substances. The SWRCB has authorized the Sonoma County Department of Health Services as the lead agency and CUPA to enforce federal, state, and local laws pertaining to leaking underground storage tanks in the County.

Pesticides. The California Department of Pesticide Regulation (DPR) is vested with the primary authority through the U.S. EPA to enforce federal and state laws pertaining to the proper and safe use of pesticides in California. DPR's enforcement of pesticide use in the field is largely carried out in California's 58 counties by County Agricultural Commissioner Offices and their staffs. The DPR has authorized the Sonoma County Office of the Agricultural Commissioner as the lead agency and CUPA to enforce federal, state, and local laws pertaining to the use, storage, and sales of pesticides in the County. Additional pesticide restrictions on pesticide use within the Sonoma coastal zone are found in **Policy C-OSRC-7c**.

Oil Spills. The Oil Pollution Act of 1990 (OPA) improved the nation's ability to prevent and respond to oil spills by establishing provisions that expand the federal government's ability, and provide the money and resources necessary, to respond to oil spills. Under the OPA, the U.S. Coast Guard and U.S. EPA are the lead responsible agencies for preventing, preparing for, and responding to oil spills that occur in and around coastal waters and inland waters of the United States, respectively.

The Office of Spill Prevention and Response (OSPR), within the California Department of Fish and Wildlife, serves the responsibilities as public trustee and custodian for the protection, management, and restoration of the fish, wildlife, and plants across the State. As such, it is one of only a few agencies in the United States that both maintains major pollution response authority and public trustee authority for wildlife and habitat. In 2014, Governor Jerry Brown expanded the capabilities of the OSPR to include all state surface waters at risk of oil spills from any source, which more effectively captured possible spills from pipelines, production facilities, and railroad oil shipments (California features more than 7,000 rail crossings over water bodies).

Transport of Hazardous Waste. The California Department of Toxic Substances Control (DTSC) is vested with the primary authority through the U.S. EPA to enforce federal and state laws pertaining to the transport of hazardous waste in California. The DTSC has authorized the California Highway Patrol and Office of the State Fire Marshal to enforce some of the federal, state, and local laws pertaining to the transport of hazardous waste.

To operate in California, hazardous waste transporters must be registered with the DTSC. Unless specifically exempted, hazardous waste transporters must comply with the regulations of the U.S.

Department of Transportation, DTSC, California Highway Patrol, and Office of the State Fire Marshal.

6.1 Goal, Objective, and Policies

GOAL C-PS-6: Prevent unnecessary exposure of people and property to risks of injury or property damage from hazardous materials.

Objective C-PS-6.1: Regulate the handling, storage, use, and disposal of hazardous materials in order to reduce the risks of injury or property damage from hazardous materials.

Policy C-PS-6a: Siting of hazardous waste repositories, incinerators, facilities that use a substantial quantity of hazardous materials, or other similar facilities intended primarily for hazardous waste disposal shall be avoided in any area subject to inundation, flooding, coastal erosion hazards resulting from projected sea level rise and other coastal hazards, and in areas subject to heightened ground shaking during an earthquake event (Modified Mercalli Index (MMI) Ground shaking Intensity Level higher than Strong (VII) as identified on Figures C-PS-1a-c or within one quarter mile of schools. Siting shall be avoided in any area designated for urban residential or rural residential use; on agricultural lands; or near waterways, bays, or the ocean.

Policy C-PS-6b: A use permit shall be required for any commercial or industrial use involving hazardous materials in threshold planning quantities as determined by Federal and State laws. A hazardous materials management plan shall be required as a condition of approval for such permits.

6.2 Program

Program C-PS-6-P1: Create a new hazard combining zone to address impacts related to development and coastal redevelopment in hazard areas and on coastal bluffs in order to protect such development from the effects of coastal bluff erosion.

6.3 Initiatives

Initiative C-PS-6-I1: Continue to educate the general public about and promote the reduction in use of hazardous materials, proper disposal of hazardous materials, and the use of safe alternatives to hazardous materials in County operations and private businesses.

Initiative C-PS-6-I2: Work with applicable regulatory agencies to regulate the use, disposal, and transport of hazardous materials consistent with adopted County policies.

REFERENCES

- National Oceanic and Atmospheric Administration. 2022. Global and Regional Sea Level Rise Scenarios for the United States.
- California Coastal Commission. ~~2018~~ 2024. Sea Level Rise Policy Guidance. Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits. Adopted August 2015. ~~Science~~ Update adopted November ~~2018~~ 2024.
- California Natural Resources Agency. 2018. Safeguarding California Plan: 2018 Update. A report to the Governor of the State of California in response to Executive Order S-13-2008.200 p.244.
- California Ocean Protection Council. ~~2018~~ 2024. State of California Sea-Level Rise Guidance: ~~2018~~ 2024 Update.
- Hartge, E., L. Wedding, J. Reiblich, W. McEnery. April 21, 2016. *Initial General Vulnerability Assessment: Sonoma County*. Center for Ocean Solutions. Prepared for County of Sonoma Permit & Resource Management Department under Ocean Protection Council (OPC) Sea Level Rise Adaptation Planning Grant CO300500. 12 pp.
- Heberger, M., H. Cooley, P. Herrera, P., P.H. Gleick, and E. Moore. 2009. The impacts of sea-level rise on the California coast. Prepared by California Climate Change Center. 101 p.
- National Academies of Science. 2012. Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. Prepared by Committee on Sea Level Rise in California, Oregon, and Washington; Board on Earth Sciences and Resources; Ocean Studies Board, Division on Earth and Life Studies; and National Research Council. The National Academies Press, Washington, D.C. 250 p.
- National Research Council. 2010. Adapting to the impacts of climate change. The National Academies Press, Washington, D.C. 244 p.
- Russell, N. and G. Griggs. 2012. Adapting to sea level rise: a guide for California's coastal communities. University of California, Santa Cruz. Prepared for the California Energy Commission, Public Interest Environmental Research Program. 49 p.

Circulation and Transit Element: Table of Contents

Circulation and Transit Element.....	2
Introduction	2
Purpose.....	2
Relationship to Other Elements	2
Relationship to California Coastal Act.....	2
Section 30211 Development not to interfere with access	2
Section 30270 Sea level rise.....	3
Section 30251 Scenic and visual qualities.....	3
Section 30252 Maintenance and enhancement of public access.....	3
Section 30253 Minimization of adverse impacts.....	3
Section 30254 Public works facilities	3
Scope and Organization	4
Background	4
Circulation and Transit System	4
Existing and Projected Transportation Conditions in 2022.....	4
Traffic and Circulation Conditions	5
Roadway Safety, Maintenance, and Existing Conditions.....	5
Transportation Improvements.....	6
Active Transportation and Transit.....	6
California Coastal Trail.....	7
1. General Transportation	7
1.1 Goal, Objectives, and Policies	7
1.2 Programs.....	8
1.3 Initiative	9
2. Transit and Automobile Trip Reduction.....	9
2.1 Goal, Objectives, and Policies	9
2.2 Program	11

2.3 Initiative	11
3. Bicycle and Pedestrian Facilities	11
3.1 Goal, Objectives, and Policies	11
3.2 Initiative	18
4. Transportation System Carrying Capacity And Safety	18
4.1 Goal, Objectives, and Policies	18
Transportation Design Guidelines Policies	18
Roadway Safety Improvement Policies.....	19
4.2 Programs.....	21
5. Phasing and Funding.....	22
5.1 Goal, Objectives, and Policies	22
5.2 Program	23

Circulation and Transit Element

INTRODUCTION

PURPOSE

The Circulation and Transit Element addresses the planned transportation routes and facilities along the coast, including goals, objectives, and policies affecting the mobility of future residents, businesses, and visitors. Highway 1 is the main route serving the Sonoma Coast, and all modes of transportation and transit in the coastal zone rely on this facility to provide mobility for residents and visitors to the Sonoma Coast. Coastal Act Section 30251 states “that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road.”

The location of Highway 1 along the ocean bluffs puts this highway and nearby local roads at risk from the effects of climate change, including sea level rise, wildfires, and bluff erosion. To improve resiliency of Highway 1, Caltrans, in partnership with the Coastal Commission, developed the “Sonoma State Route 1 Repair Guidelines” that provides guidance for maintaining a resilient transportation facility while avoiding impacts to coastal resources.

In addition to Highway 1, the Circulation and Transit Element also addresses maintenance of local roadways, and challenges associated with reducing reliance on automobile use by residents and visitors to the Sonoma Coast.

RELATIONSHIP TO OTHER ELEMENTS

The Circulation and Transit Element and its implementing measures are coordinated with the Land Use Element to assure that the transportation system serves future travel demand, is resilient to sea level rise, reduces automobile dependency, and helps attain the desired land use plan. Land Use policies that related to these topics are also addressed in the Open Space and Resource Conservation, Public Facilities and Public Access Elements.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

The following California Coastal Act policies inform and guide goals, objectives, policies, programs, and initiatives of the Sonoma County Local Coastal Plan Circulation and Transit Element:

Section 30211 Development not to interfere with access

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30270 Sea level rise

The commission shall take into account the effects of sea level rise in coastal resources planning and management policies and activities in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise.

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30252 Maintenance and enhancement of public access

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomotive circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Section 30253 Minimization of adverse impacts

New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
- (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
- (d) Minimize energy consumption and vehicle miles traveled.
- (e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30254 Public works facilities

New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

SCOPE AND ORGANIZATION

The Circulation and Transit Element contains four sections outlining the goals, objectives, policies, programs, and initiatives for (1) the planned circulation and transit system, (2) public transit, pedestrian and bicycle transportation, and reduction of automobile use, highway system, and phasing and funding of improvements. Programs needed to implement proposed policies are also identified. In addition, the Element calls out ongoing or potential future County initiatives, referred to as “Other Initiatives”, intended to support maintenance and improvement of the transportation system, and promote inter-agency and community collaboration.

BACKGROUND

The road network in the Coastal Zone is a critical component of coastal access, as well as providing essential transportation infrastructure necessary to supply goods, services, and emergency response for residents and businesses located along the Coastal Zone. Coastal roads also provide recreational and transportation opportunities for bicyclists and pedestrians, but use is limited by narrow roadways that lack adequate shoulders, sidewalks and bike lanes.

Numerous public access areas, large areas of protected open space, and attractive public beaches are distributed across over 55 miles of coastline with virtually no public transit available, making automobiles the primary means of transportation for visitors to the coast. This dependency on automobile transportation, combined with limited parking, results in congestion and lack of adequate parking, especially during weekends and holidays.

Safety of all road users, especially bicyclists and pedestrians, remains a challenge in the Coastal Zone due to limited rights of way and the need to balance impacts to coastal resources with road improvements and trail development necessary to improve safety.

CIRCULATION AND TRANSIT SYSTEM

EXISTING AND PROJECTED TRANSPORTATION CONDITIONS IN 2022

The Sonoma Coast/Gualala Basin region has a sparse roadway network due to its remote location and very low population density. The major roadways, all two-lane rural roads, are State Highway 1, State

Highway 116, Bodega Highway, Stewarts Point-Skaggs Springs Road, Coleman Valley Road, Annapolis Road, and Valley Ford-Freestone Road. With the exception of State Highway 1, these roadways run east-west (**Figures C-CT-1a-c**). Other roads serve only as minor access routes, but could be important as alternate routes in emergencies. Daily buses connect the small communities along State Highway 1 to Sebastopol, Santa Rosa, and Mendocino County. With limited public transportation and lack of adequate bicycle and pedestrian facilities, private automobiles are the most common transportation mode to the Coastal Zone.

Full time residential population of the Coastal Zone is low, and the majority of trips are generated by visitors to the coast, particularly on weekends.

Traffic and Circulation Conditions

Traffic volume on State Highway 1 has increased since the first transportation study was conducted for the 1981 Local Coastal Plan. Most traffic is related to tourism, with trips originating outside of the Coastal Zone. The steady increase in tourism has resulted a corresponding increase in traffic and congestion along Highway 1, and is especially acute on the weekends in the region south of Jenner and adjacent to public beaches, trailheads, and campgrounds. This traffic often results in delayed emergency response and residents experiencing difficulty accessing their homes and local businesses.

Table C-CT-1. Traffic Volume Trends Highway 1 2007-2017

<i>Intersection</i>	<i>Peak Hour Increase</i>	<i>Peak Month Daily Average</i>	<i>Annual Average Daily Traffic</i>
Valley Ford Road	150.0%	34.7%	31.0%
Valley Ford/Freestone Road	96.1%	31.8%	28.9%
Bodega Highway	77.8%	136.8%	116.7%
Bodega Eastshore Road	16.9%	-1.8%	-9.6%
JCT. RTE. 116 East	29.0%	7.7%	11.1%
Jenner	51.5%	7.7%	11.1%
Fort Ross, Fort Ross Road	73.9%	6.7%	8.1%
Stewarts Point/Skaggs Springs Road	42.9%	-2.3%	0.0%

The large increase in peak hour volumes at the southernmost intersections shows a growing trend for commuters living in the Sebastopol area to use Highway 1 as an alternative route to job centers in Petaluma and Marin County. The increase in traffic volume between Bodega Highway and Jenner appears directly related to tourism, as commute traffic heading south will generally use Valley Ford / Freestone Road.

Roadway Safety, Maintenance, and Existing Conditions

Highway 1 provides the only north-south transportation corridor in the Coastal Zone, and is extremely vulnerable to erosion from storms, landslides, and sea level rise, as well as damage from wildfires. These hazards are increasing in frequency and severity due to climate change, and maintenance of Highway 1, as well as other roads at risk from sea level rise, must shift from armoring and reinforcement to a strategy of planned retreat, elevated roadway sections, or living shorelines.

Roads in the Coastal Zone have narrow shoulders, inadequate sight lines, narrow travel lanes, and limited opportunity for safe passing, creating unsafe conditions for all road users, especially bicyclists and pedestrians. Improving these conditions will require increasing the overall road prism. Unstable

geologic conditions, Environmentally Sensitive Habitat Areas, and lack of undeveloped land adjacent to the right-of-way in developed areas create a situation where improvements are challenging. Road improvements should be limited to those needed to provide sea level rise resiliency, improve safety, or provide improved facilities for people traveling by bicycle, on foot, or public transit rather than increasing capacity or reducing congestion.

Transportation Improvements

Providing turning lanes at intersections and parking areas is the most effective approach to improving safety along Highway 1 in Jenner, Bodega Bay, and at entrances to public beaches.

Other safety improvements proposed for Highway 1 are sea level rise adaption and resiliency, wildfire hardening, limited widening and road alignments where necessary to improve safety, parking management, enforcement programs; and road improvements such as roadway striping and marking, bicycle lanes and pedestrian pathways. Improvements to Highway 1 such as construction of bicycle paths or widening of shoulders will be necessary to construct portions of the Sonoma County segment of the California Coastal Trail (see discussion below).

Minor road improvements in the community of Bodega Bay will not relieve traffic congestion or improve safety, and establishing a bypass route has proven infeasible. Delays associated with automobile use along this section of Highway 1 will continue until adequate and convenient alternatives to travel by automobile are developed. These alternatives include improved bus transit, installing pedestrian walkways, and providing safe bicycle lanes. Additional measures to improve safety include restricting turning movements across traffic, and reducing vehicle speeds.

Active Transportation and Transit

The Complete Streets Act of 2008, which mandates that all cities and counties modify the circulation element of their general plans to provide for a transportation network that equitably meets the mobility needs of all, including pedestrians, bicyclists, children, students, persons with disabilities, users of public transportation, together with motorists and movers of commercial goods.

A comprehensive, safe, and convenient bicycle and pedestrian transportation network is a critical component of an overall strategy to reduce automobile dependency for residents and visitors, as well helping to meet greenhouse gas (GHG) emissions reduction standards established under the California Global Warming Solutions Act of 2006 (AB 32).

Improving bicyclist and pedestrian safety along the Coastal Zone is critical to enabling people to choose to walk or bike rather than drive. Highway 1 is narrow, winding, and dangerous for bicyclists, and lacks sidewalks in developed areas. The lack of shoulders and sidewalks is especially acute in Bodega Bay, forcing residents to drive even when running short distance local errands.

Class I bicycle paths or multi-use trails along Highway 1 would alleviate these issues therefore separated trails are the preference when feasible and in balance with consideration of other coastal act resources. Reconfiguration of the existing roadway to create larger shoulders should be considered as an option for making roads safer for all users. However, there should be special consideration when reconfiguring shoulders so that shoulders do not impinge on habitat and necessary buffers, as well as continues protection of visual resources.

Public transit is provided by Mendocino Transit Authority and Sonoma County Transit. Mendocino Transit Authority operates bus route 95, which is the only year-round transit service in the Coastal Zone. Service is limited to a single daily trip running southbound to Santa Rosa in the morning and returning in the afternoon. Service frequency and routes must be improved in order to provide a viable alternative to driving for residents of the Coastal Zone.

Sonoma County Transit routes 29A and 29B provide seasonal service on weekends to the Coastal Zone from June through early September. These routes provide several trips per day, with Route 29A connecting Bodega Bay to Sebastopol and Santa Rosa. Route 29B connects Bodega Bay to Jenner, Duncan's Mills, Monte Rio, and Guerneville.

California Coastal Trail

The 1975 California Coastal Plan mandated the California Coastal Conservancy (Coastal Conservancy) to develop and implement the California Coastal Trail, a continuous public trail or system of trails along the length of the coastline, with the exact alignment and location to be determined locally through community input. In some locations, the Sonoma County segment of the California Coastal Trail could also function as a local transportation facility for bicyclists and pedestrians. Details on the California Coastal Trail can be found in the Public Access Element.

I. GENERAL TRANSPORTATION

I.1 Goal, Objectives, and Policies

GOAL C-CT-1: Provide a well-integrated and sustainable circulation and transit network that provides coastal access, protects coastal resources, supports community-centered growth, reduces Vehicle Miles Traveled (VMT) and equitably meets the mobility needs of all.

Objective C-CT-1.1: Reduce the need for automobile use by a combination of infrastructure and transit improvements and incentives that prioritize active transportation over automobile use.

Objective C-CT-1.2: Reduce greenhouse gas emissions by reducing vehicle miles (VMT) traveled, especially VMT associated with vehicles powered by hydrocarbon fuels, such as gasoline and diesel, and providing sufficient charging stations for electric vehicles.

Policy C-CT-1a: Transportation improvements shall first avoid, then lessen, and finally minimize adverse impacts to biotic resource and Environmentally Sensitive Habitat Areas, coastal views, public access, and disruption of neighborhoods and communities. Where improvements cannot avoid impacts to these resources, require appropriate mitigation measures to be identified and implemented prior to project construction.

Policy C-CT-1b: Require new development, when applicable, to include adequate charging stations for electric vehicles and to reduce vehicle miles traveled generated by the development.

Policy C-CT-1c: Reduce vehicle miles traveled by locating new housing near areas where jobs are concentrated.

Policy C-CT-1d: Encourage development of broadband telecommunication infrastructure in the Coastal Zone to support telecommuting.

Policy C-CT-1e: Circulation and transit system improvements shall be done in a manner that is consistent with protection of Coastal resources, preserving community and rural character, and minimizing vehicle miles traveled.

I.2 Programs

Program C-CT-1-P1: Monitor the effectiveness of the planned circulation and transit system on an ongoing basis. Cooperate with the Sonoma County Transportation Authority to establish and maintain an ongoing Countywide traffic modeling program that:

- (1) Maintains a coordinated land use database on an annual basis for cumulative impact analysis of the circulation and transit system;
- (2) Assesses vehicle miles traveled generated and develop strategies for reducing automobile dependency for both tourists and local residents. The model must be capable of considering regional travel demand to accurately forecast trip generation for tourism and visitor serving uses in the Coastal Zone.
- (3) Establishes the nexus for allocating fair share funding of transportation improvements within the Coastal Zone;
- (4) Identifies the impacts of projects and appropriate mitigation measures on the circulation and transit system;
- (5) Assists in the planning of detailed operation improvements in individual communities, and
- (6) Is capable of modeling weekend and off-peak travel demand in order to plan for tourism and special event traffic.

Program C-CT-1-P2: Monitor coastal erosion and flooding to identify road segments that will require realignment, elevation, or abandonment due to sea level rise and climate change. As part of this program evaluate existing development served by these road segments and develop a plan for relocation of development served by the road segment or alternative routes that are adequate to support continued use of existing development. The plan shall establish priorities for these sea level rise resiliency measures and include an evaluation of the useful economic life of development served by a road segment and provide a fiscal analysis of the cost of maintain road connectivity as compared to the economic value of development that is dependent on the road segment. Where road segments are necessary to

support a coastal access point, consider alternative means of access as an alternative to maintaining a roadway designed for motor vehicle use.

Program C-CT-1-P3: Coordinate with Caltrans, California State Department of Parks and Recreation, the California Coastal Commission, Sonoma Public Infrastructure, Sonoma County Regional Parks, and other appropriate entities in developing and implementing guidelines for expediting the review and permitting of road repair and maintenance activities consistent with the policies of the Local Coastal Plan. These guidelines shall contain specific guidance for emergency repairs and procedure for determining if a project can be excluded from needing a Coastal Development Permit.

Program C-CT-1-P4: Classify, designate, and design roadways and trails to meet or exceed the current version of guidelines for road, bicycle and pedestrian facilities, including the Caltrans Highway Design Manual, the State Parks Trails Handbook, publications of the National Association of City Transportation Officials, the American Association of State Highway Transportation Officials and National Access Board's ADA standards. Use flexibility provisions in these standards to reduce adverse impacts on coastal resources and provide maximum safety and convenience for bicyclists and pedestrians.

Program C-CT-1-P5 Require repair of transportation infrastructure in response to wildfire damage use fire resistant materials and that support structures be hardened against wildfire to the maximum extent possible, consistent with avoiding adverse impacts to visual or biotic resources, and work with Coastal Commission staff to identify fire hardening standards that could be excluded from needing a Coastal Development Permit.

1.3 Initiative

Initiative C-CT-1-I1: Work with transportation agencies to maximize funding from Federal and State governments to address existing deficiencies, improve safety, and support ongoing maintenance of the circulation and transit system.

2. TRANSIT AND AUTOMOBILE TRIP REDUCTION

2.1 Goal, Objectives, and Policies

GOAL C-CT-2: Provide opportunities for people to use public transit, walking, and bicycling as an alternative to travel by automobile.

Objective C-CT-2.1: Improve bus transit services to and within the Coastal Zone.

Objective C-CT-2.2: Increase the share of home based work or commute trips taken by public transit.

Objective C-CT-2.3: Design, implement, and maintain a transit system that serves seniors, persons with disabilities, youth and persons with limited incomes so that they may participate in a full range of activities.

Objective C-CT-2.4: Use Transportation Demand Management strategies, which are a program of information, encouragement and incentives provided by local or regional organizations to help people know about and use all their transportation options to optimize all modes in the system and counterbalance the emphasis on roads and parking in the transportation network.

Objective C-CT-2.5: Develop bicycle and pedestrian facilities consistent with the Sonoma County Bicycle and Pedestrian Plan (Appendix H), LCP Public Access Plan (Appendix B), and adopted State and County park master plans to provide alternatives to automobile use.

Policy C-CT-2a: Provide efficient, affordable public transportation service within and to the Coastal Zone and require expansion of active modes of transportation where opportunities are identified.

Policy C-CT-2b: Require development projects, when applicable, to implement measures that favor pedestrians, increase the average occupancy of vehicles, and reduce vehicle miles traveled such as:

- (1) Vanpools or carpools, ridesharing programs for employees, preferential parking, parking subsidies for rideshare vehicles, and transportation coordinator positions, and
- (2) Preferential parking space and fees for rideshare vehicles, flexibility in parking requirements.

Policy C-CT-2c: Require development, when applicable, to include measures that divert automobile commute trips to transit, including:

- (1) Establishment of site design standards to allow for transit access, bus turnouts and passenger shelters, pedestrian access ways between transit stops and buildings, secure bicycle lockers and shower facilities, complementary street layouts and geometrics that accommodate buses and bicycles, and transportation kiosks for tenants of business;
- (2) Programs that promote transit use to existing job centers and schools, such as transit information centers, on-site sale of transit tickets and passes, shuttles to transit stations or stops, transit ticket subsidies for employees and students, private or subscription transit service, parking fees and transportation allowances.

Policy C-CT-2d: Provide incentive programs at businesses and visitor destinations that reduce automobile trips and/or greenhouse gas emissions, such as secure bike parking, shower facilities, telecommuting, flexible schedules, electric vehicle charging stations etc.

Programs may apply to existing employers as well as to new development. Establish measurable goals for these programs, collect data, and provide periodic reports on Vehicle Miles Traveled to and within the coastal zone and on program effectiveness.

Policy C-CT-2e: Provide convenient, accessible transit facilities for youth, seniors, and persons with disabilities, and paratransit services as required by ADA. Promote efficiency and cost effectiveness in paratransit service.

2.2 Program

Program C-CT-2-P1: Work with Sonoma County Transit to increase bus service between Bodega Bay and Jenner with regular connections to inland communities and job centers that will provide an alternative to commuting by automobile. Coordinate routes, schedules, and fares among transit providers to make transfers convenient between the various transit systems during commute periods.

2.3 Initiative

Initiative C-CT-2-I1: Encourage Sonoma County Transit to coordinate with inland transit routes as well as with Mendocino Transit Authority and Marin Transit to improve and expand regional bus service for Sonoma County coast visitors and residents.

3. BICYCLE AND PEDESTRIAN FACILITIES

Bicycle transportation facilities (bikeways) are classified as Class I, II, III, and IV as defined below.

Class I Bikeways are also known as multi-use paths. Class I bikeways provide bicycle travel on an all-weather surface within a right-of-way that is for exclusive use by pedestrians, bicyclists and other non-motorized modes. Class I bikeway surface must be compliant with provisions of the Americans with Disabilities Act (ADA). These bikeways are intended to provide superior safety, connectivity, and recreational opportunities as compared to facilities that share right-of-way with automobiles.

Class II Bike Lanes are on-street bike lanes and provide a striped and stenciled lane for one-way travel on either side of a street or highway. Unlike Class III bikeways (below), Class II bikeways have specific width, geometric, and maintenance standards.

Class III Bike Routes identify roads that are preferred routes for people riding bicycles, and have signs reminding motorists of the California Vehicle Code safe passing regulations and to be aware of bicyclists using the road. By law, bicycles are allowed on all roadways in California except on freeways when a suitable alternate route exists

Class IV Protected Bike Lane is physically separated from the vehicle travel lane by grade separation, flexible bollards or permanent barriers and provide enhanced safety and comfort for people riding bicycle on roadways.

3.1 Goal, Objectives, and Policies

GOAL C-CT-3: Establish a safe and convenient bicycle and pedestrian transportation network, well integrated with transit, to reduce greenhouse gas emissions, increase outdoor recreational opportunities, reduce dependency on automobiles, and improve public health.

Objective CT-3.1: Design, construct and maintain a comprehensive Bikeways Network that links communities, coastal access points, and other major activity centers including, but not limited to, schools, public facilities, commercial centers, recreational areas and employment centers.

Objective CT-3.2: Provide safe, convenient routes for bicyclists and pedestrians with adequate end of trip facilities at workplaces.

Objective CT-3.3: Provide incentives for business and public facilities to increase the use of walking and bicycling by employees for both commuting and daily operations.

Objective CT-3.4: Incorporate Vision Zero strategies into all transportation improvements, with a focus on intrinsically safe roadway design. These strategies include continuous collection and analysis of data to understand trends and potential disproportionate impacts of traffic deaths on certain populations, and using this data to design a transportation network that can achieve a goal of zero deaths and serious injuries.

Objective CT-3.5: Provide a diverse range of recreational opportunities through a well-designed network of bikeways, multi-use trails, single-use trails, sidewalks, and related support facilities.

Objective CT-3.6: Eliminate potential obstacles to walking and cycling by providing continuous and well-connected pedestrian walkways and bicycle facilities, and safe road crossings, with a focus on trips of less than 3 miles within and/or near to developed coastal communities.

Policy CT-3a: Use the adopted Sonoma County Bicycle and Pedestrian Plan, LCP Public Access Plan, and adopted State and County park master plans as the detailed planning document for existing and proposed bikeways and pedestrian facilities in the Coastal Zone.

Policy CT-3b: Use the policies of the Bicycle and Pedestrian Plan, LCP Public Access Plan and adopted State and County Park master plans whenever reviewing development projects to insure that projects are consistent with the Bicycle and Pedestrian Plan and incorporate necessary bicycle and pedestrian improvements identified in the Bicycle and Pedestrian Plan as a condition of project approval.

Policy CT-3c: The Bicycle and Pedestrian Advisory Committee (BPAC) shall be responsible for advising the Coastal Commission, Board of Supervisors, Planning Commission, Board of Zoning Adjustments, Project Review and Advisory Committee, and County staff on the ongoing planning and coordination of the County's bicycle and pedestrian transportation network.

Policy CT-3d: The Regional Parks Department shall be responsible for establishing and maintaining Class I bikeways, and Sonoma Public Infrastructure (SPI) shall be responsible for establishing and maintaining Class II, III, and IV bikeways and pedestrian facilities along County rights-of-way in unincorporated areas. Where the Coastal Trail or a trail is connecting park properties through right of way, agencies shall coordinate and determine appropriate entity for developing and maintaining the facility.

Policy CT-3e: Regional Parks and SPI shall be responsible for periodically collecting bicycle and pedestrian counts at locations shown in the Bicycle and Pedestrian Plan consistent with Metropolitan Transportation Commission standards. The BPAC, in consultation with Regional Parks and SPI, shall review this data to determine effectiveness in applying such data for County improvement projects and update the count locations as needed.

Policy CT-3f: Revise County Traffic Guidelines to require that traffic studies identify impacts to existing and planned bicycle and pedestrian facilities. Consider development of bicycle and pedestrian facilities as mitigation measures for projects generating additional vehicle miles traveled and greenhouse gas emission impacts.

Policy CT-3g: Develop an objective standard for identifying safety and connectivity of the bicycle and pedestrian transportation network within and connecting to the Coastal Zone that takes into consideration travel distance, bicycle and pedestrian transportation needs, and existing network deficiencies and gaps.

Policy CT-3h: Use the performance standard developed by **Policy CT-3g** to evaluate impacts to bicycle and pedestrian facilities that may result from discretionary projects, and identify corrections and/or improvements necessary to mitigate those impacts.

Policy CT-3i: Use the following standards for selection of new routes:

- (1) If the primary purpose of the route is transportation, then the route shall be located along the most direct line of travel that is convenient and safe for bicyclists and pedestrians.
- (2) Routes and bikeway design shall be ADA compliant.
- (3) Minimize routes that cross driveways serving commercial and visitor serving uses. Where no alternative route can be identified, consider reconfiguration of on-street parking and other treatments in these areas to improve safety.
- (4) Pavement surface quality - Bikeways shall be free of surface defects that compromise bicycle safety. Utility covers and drains shall align with the bikeway surface and be located outside of the bikeway when feasible. Drainage grates shall be aligned perpendicular to the direction of travel in order to avoid catching bicycle wheels.

- (5) Where bus stops are located along bikeways, design bus turnouts and the bike lane to conflicts between passengers, buses, and bicycles.
- (6) Identification of a reliable source of funds to support maintenance and operation shall be considered before identifying a new Class I Bikeway alignment.
- (7) Bikeway design and route selection shall maximize public benefit and safety per dollar invested.

Policy CT-3j: Use the most recent version of design guidelines for bicycle and pedestrian facilities, such as those published by NACTO, Chapter 1000 of the Caltrans Highway Design Manual, AASHTO's "Guide for the Development of Bicycle Facilities", and the "California Manual on Uniform Traffic Control Devices" (MUTCD) as general design guidelines for design, construction and maintenance of bikeways.

Policy CT-3k: In addition to the general standards found in **Policy CT-3j** above, use standards found in the most recently adopted Bicycle and Pedestrian Plan for selection, design, construction, and maintenance of Class I, II, III, and IV bikeways.

Policy CT-3l: Where an existing or proposed bicycle route is located on a bridge or over a culvert, bicycle and pedestrian facilities shall be included as part of replacement or major reconstruction. "Major reconstruction" is defined as any activity requiring a Coastal Development Permit, Coastal Development Waiver, and/or Streambed Alteration Agreement. Improvements are required regardless of priority of the remainder of the bicycle route served by the bridge or culvert.

Policy CT-3m: Where several bikeways of different classes follow a similar route or provide similar connectivity, the BPAC shall be consulted when construction of one facility appears to reduce the need or function of other facilities.

Policy CT-3n: Use the following criteria to determine consistency of public and private projects with the Bicycle and Pedestrian Plan:

- (1) Class I bikeways are a component of coastal access, and development of lands traversed or adjoined by an existing or future Class I bikeway shall not preclude establishment of the bikeway, nor conflict with use and operation of the bikeway or adversely affect long term maintenance and safety of the facility.
- (2) Construction, widening, or maintenance of roads with designated bikeways shall be consistent with design and maintenance standards for the appropriate class of bikeway as specified by the Bicycle and Pedestrian Plan.

Policy CT-3o: Design, construct, and improve bikeways consistent with the Bicycle and Pedestrian Plan Project Priority List. This list shall establish the priority, class, and location of Sonoma County bikeways projects.

Policy CT-3p: The following projects shall be referred to the BPAC for a determination of consistency with the Bicycle and Pedestrian Plan and to evaluate potential for creating hazards or barriers to walking or bicycling:

- (1) Road widening projects.
- (2) Road capacity improvement projects.
- (3) Resurfacing, restoration, and/or rehabilitation of roads with existing or proposed Class II, III, or IV bikeways.
- (4) Resurfacing, restoration, and/or rehabilitation of roads that include the installation of rumble strips, AC berms or similar barriers, and/or roadway dots in the shoulder area.
- (5) Traffic calming improvements.
- (6) Discretionary projects adjacent to existing or proposed Class I bikeways and/or roads with existing or proposed Class II, III, or IV bikeways.
- (7) Discretionary projects anticipated to be conditioned with roadway improvements along existing or proposed Class I, II, III, or IV bikeways.

Policy CT-3q: Require that bikeway improvements be included as part of all road maintenance or improvement projects along road segments with existing or proposed bikeways to the maximum extent feasible.

Policy CT-3r: Where nexus exists, require private or public development to plan, design, and construct bicycle and pedestrian facilities to integrate with the existing and planned bicycle and pedestrian network.

Policy CT-3s: Where discretionary projects are found to create additional demand for bicycle travel, require the project to directly provide or participate in the funding of bikeway improvements such as gap closures, shoulder widening, safety improvements and signage that will improve bicycle access to destinations located within 3 miles of the project site.

Policy CT-3t: Require mitigation either through in-lieu fees, or development of alternative facilities that have been recommended by the BPAC, when development projects or road improvements are anticipated to result in a loss of existing bicycle and pedestrian facilities or jeopardize development of future facilities identified in the Bicycle and Pedestrian.

Policy CT-3u: Develop a maintenance reporting system for bikeways with a central point of contact that can be used to report, track, and respond to routine bicycle and pedestrian maintenance issues in a timely manner.

Policy CT-3v: Require road construction projects to minimize their impacts on bicyclists and pedestrians through the proper placement of construction signs and equipment and by providing adequate, safe, well-marked detours. Where it is safe to do so, allow bicyclists and pedestrians to pass through construction areas in order to avoid detours. Where two-way bicycle and pedestrian travel can be safely accommodated in a one-way traffic control zone, adequate signage shall be placed to alert motorists of bicycles and pedestrians in the lane.

Policy CT-3w: Caltrans, State Parks, Sonoma County Regional Parks, Sonoma Public Infrastructure shall coordinate efforts to close gaps in the bikeway network and ensure the system is constructed, and maintained.

Policy CT-3x: Require dedication or purchase of right of way for Class I bikeways when a nexus can be established between the proposed development and Class I bikeway, Coastal Trail, or other trail projects identified by the Sonoma County Bicycle and Pedestrian Plan, LCP Public Access Plan or adopted park master plan. If right of way already exists, require improvements appropriate for the nexus.

Policy CT-3y: Provide adequate bicycle parking as part of all new school, public transit stops, public facilities, and commercial, industrial, and retail development following standards established in adopted Bicycle and Pedestrian Plan.

Policy CT-3z: Require transit agencies to accommodate bicycles on buses.

Policy CT-3aa: The BPAC shall review bicycle parking at transit facilities and accommodations to carry bicycle on-board buses every 2 years to assure that anticipated demand for bicycle parking and on-board accommodations can be met.

Policy CT-3bb: Collect bicycle and pedestrian crash data in the Coastal Zone on an annual basis. The BPAC shall review this data and provide recommendations on infrastructure improvements or policies that will prevent future crashes.

Policy CT-3cc: Give highest priority to constructing safety related pedestrian facilities in the vicinity of schools, public transit facilities, crossings in communities, and coastal access areas.

Policy CT-3dd: Require that Highway 1 improvements in developed areas such as, but not limited to, Bodega Bay and Jenner include pedestrian-oriented street design features such as sidewalks and crosswalks.

Policy CT-3ee: Require centrally located shared parking in local communities whenever feasible for commercial uses rather than requiring individual businesses to provide separate parking areas.

Policy CT-3ff: Where discretionary projects are found to create additional demand for pedestrian travel, require the project to directly provide or participate in the funding of pedestrian improvements such as sidewalks, gap closures, steps, safety improvements, and/or trails that will improve pedestrian access to destinations located within 2 miles of the project site.

Policy CT-3gg: Provide high-visibility crosswalk marking at pedestrian crossings when traffic studies determine it is necessary. When necessary, install pedestrian signalization, refuge islands and signage warning vehicles to stop for pedestrians and watch for bicyclists.

Policy CT-3hh: Inventory safety needs/hazards along routes to and around schools in order to identify improvements necessary to improve safety and create a priority list of projects necessary to correct these hazards.

Policy CT-3ii: Require school districts to participate in providing safe bicycle and pedestrian connections that serve students from surrounding neighborhoods when constructing or improving schools and provide secure bicycle parking areas for students, faculty, and staff. When applicable, require schools to provide continuous pedestrian pathways and bicycle facilities from adjacent residential communities to the school grounds.

Policy CT-3jj: Coordinate Bicycle Safety Education Programs at schools, with law enforcement agencies, school districts, advocacy groups, local bicycle shops, and other interested organizations. The program shall include traffic rules, bicycle handling skills, the importance of good helmets, lights and reflectors, bicycling clothing, and bicycle maintenance courses in cooperation with local bicycle shops and organizations.

Policy CT-3kk: Support constructive efforts from advocacy groups to address bicycle and pedestrian transportation issues.

Policy CT-3ll: Provide the option of flexible work schedules to County employees who live or work in the Coastal Zone in order to accommodate commuting by bicycle, walking, or transit.

Policy CT-3mm: Expand the Guaranteed Ride Program for those who regularly bicycle, walk, vanpool, carpool, or use transit for their trip to work or school. The program encourages uses of alternative transportation modes by providing free transportation in the event of personal emergencies, illness, or unscheduled overtime.

Policy CT-3nn: Develop a long-range strategy to provide long term funding necessary to maintain Class I bikeways and multi-use trails in the Coastal Zone.

3.2 Initiative

Initiative C-CT-3-I1: Encourage ongoing development of the Safe Routes to School program by coordinating efforts of advocacy groups, school districts, and County departments.

4. TRANSPORTATION SYSTEM CARRYING CAPACITY AND SAFETY

4.1 Goal, Objectives, and Policies

GOAL C-CT-4: Provide and maintain a road, transit, and trail system within the carrying capacity of coastal resources that will reduce vehicle miles traveled while equitably meeting the mobility needs of all, including pedestrians, bicyclists, children, students, people with disabilities, users of public transportation, motorists, and commercial transportation.

Objective C-CT-4.1: Develop road, transit, and trail system design standards that avoid impacts to Coastal resources and are resilient to sea level rise and climate change while providing equitable public access and mobility to and within the Sonoma Coast.

Objective C-CT-4.2: Develop a Heritage Road Program for coastal roadways in consultation with the Coastal Commission, Sonoma Public Infrastructure, State Parks, and Caltrans. This program will identify criteria for selecting heritage roads and create special design guidelines to protect the unique character of these roads while maintaining safety, and protecting coastal resources.

Transportation Design Guidelines Policies

Policy C-CT-4a: Use the current version of design guidelines for road, bicycle and pedestrian facilities, such as the Caltrans Highway Design Manual, the State Parks Trails Handbook, and publications of the National Association of City Transportation Officials, American Association of State Highway Transportation Officials functional classification system, and the "California Manual on Uniform Traffic Control Devices" as guidelines for physical design of the highway and trail network.

Policy C-CT-4b: Road and trail design and maintenance activities shall be consistent with the principals of the Complete Streets Act of 2008 and consider the mobility needs of all road users on an equitable basis.

Policy C-CT-4c: The following policies apply to Highway 1 and Highway 116 within the Coastal Zone:

- (1) Repair and maintenance of Highway 1 shall be consistent with 2019 Caltrans "Sonoma State Route 1 Repair Guidelines" found in Appendix K.

- (2) Prohibit development of new driveways along Highway 1 and Highway 116 except where reasonable access cannot be provided by using existing driveways or local roads for access.
- (3) Set and enforce access standards for new driveways and other encroachments to the Arterial Road system. These standards may include functional layout, location, and spacing requirements to minimize side frictions.
- (4) In agricultural areas, include measures such as road signs, wider shoulders, and turnouts or over/under passes to provide safer roads for the agricultural industry, residents, and visitors where compatible with the character of the area, does not impede public access, and does not impact other sensitive coastal resources.

Policy C-CT-4d: Designate and design Local Roads as routes that are intended to provide access to property and to carry local traffic to Highway 1 and Highway 116. The following policies apply to Local Roads:

- (1) Design local roads for access by emergency and service vehicles.
- (2) Design roads to maximize safety of pedestrians and bicyclists.
- (3) Locate horizontal and vertical road alignments to correspond to natural topography, except where these alignments will have an adverse impact on environmentally sensitive habitat areas or create unsafe conditions for road users.
- (4) In agricultural areas, include measures such as road signs, wider shoulders, and turnouts or over/under passes to provide safer roads for the agricultural industry, residents, and visitors where compatible with the character of the area and with protecting visual resources and public access.

Roadway Safety Improvement Policies

Policy C-CT-4e: When a nexus is identified between a project and the need for safety improvements, require the safety improvements as a condition of approval.

Policy C-CT-4f: Road improvements intended to improve safety, especially for pedestrians, bicyclists, and users of public transit, shall be given funding priority over capacity improvements.

Policy C-CT-4g: Provide intersection management improvements at intersections with high crash rates and/or long delays for turning movements. These may include installation of stop signs, traffic signals, signal timing, re-striping, lengthening, turn lane additions, or other improvements, provided the improvements are consistent with the applicable road classifications and protection of coastal resources. Only where clearly identified as necessary to lower crash rates, turn lane additions may be constructed.

Policy C-CT-4h: Construct improvements such as realignment, signalization, roundabouts, turn restrictions, one-way streets, and traffic calming at the following intersections to improve safety at the following intersections:

- (1) Bay Flat Road/Bodega and Cypress Dunes Campgrounds (Sonoma Coast State Beach)
- (2) Bay Flat Road/Eastshore Road
- (3) State Highway 1/Eastside Road
- (4) State Highway 1/Taylor Street
- (5) State Highway 1/ Bay Hill Road
- (6) State Highway 1 / State Highway 116

Policy C-CT-4i: Using a projected 7-foot rise in sea level relative to identify road segments at risk from sea level rise and coastal erosion and routes for realignment or alternative routes in the event that maintaining the roadway is not feasible.

Policy C-CT-4j: Construct the following sets of road improvements to increase safety of State Highway 1 through Jenner:

- (1) *State Highway 1* – from western property line of assessor’s parcel number (APN) 099-150-013 (10990 State Highway 1) to 200 feet from intersection with Burke Avenue; and Burke Avenue - 200 feet: road realignment and widening, curbing, turn lane for parking and Burke Avenue, one-way parking circulation, and parking restrictions.
- (2) *State Highway 1* – about eastern bank of Jenner Creek to about opposite northern property line of APN 099-113-012 (10469 Riverside Drive); Riverside Drive - about 65 feet; and 65 Willig Drive - about 80 feet: road widening, turn lanes, and parking restrictions.
- (3) *Intersection of Highway 1 and 116* – Roundabout, minor realignment to provide more sight distance and/or signalization to improve safety. Consider minor realignment consistent with protection of Coastal resources.

Policy C-CT-4k: Provide turn lanes at The Sea Ranch intersections listed below. An intersection improvement of lower priority could be constructed before an intersection improvement of higher priority if funding is available.

- (1) ***Priority I***
The Stables and North Recreation Center entrance (already widened)
Annapolis Road
Longmeadow Road

Moonraker and Whalebone Reach

(2) ***Priority II***

Lodge Entrance

(3) ***Priority III***

Leeward Spur

Deerfield Road

Breaker Reach

Vantage Road

Pine Meadow

Whitebluff Road

Headlands Reach

Navigators Reach

Lodge Entrance and Halcyon

Policy C-CT-4l: Improve safety at the Bodega Highway / Highway 1 and Freestone-Valley Ford Road / Highway 1 intersections with improvements such as restriping, lane realignment and warning lights.

Policy C-CT-4m: Implement the following safety improvements along State Route 1:

- (1) Reduce vehicle speeds where Highway 1 passes through developed areas to the maximum extent permitted by State law.
- (2) Restrict turning movements at parking areas where necessary to promote safe entry and exit.
- (3) Construct turning lanes and entry improvements at parking areas listed in The Public Access Plan when traffic studies determine it is necessary.

Policy C-CT-4n: Consider traffic calming improvements on Highway 1 in the unincorporated communities of Bodega Bay, Jenner, and Timber Cove.

Policy C-CT-4o: Roads may not be expanded beyond two lanes, except for lanes associated with safety improvements such as turn pockets, center turn lanes, emergency vehicle access, and similar road features.

4.2 Programs

Program C-CT-4-P1: Develop a Heritage Road Program to preserve public roads with unique scenic, historic, recreational, cultural, archeological and/or natural qualities that may be compromised if the road is fully improved to meet current road standards. As part of this program, adopt special design standards to balance necessary improvements, safety, and

maintenance with the unique character of these roads while maintaining coastal access for all road users, protecting coastal resources, and maintaining sea level rise resiliency.

Program C-CT-4-P2: Identify reliable data sources for vehicle counts and parking data and collect this information annually to support Program C-CT-4-P3 as well as provide data for evaluate transportation impacts created by new development, local transportation needs, and tourism. Produce a report every three years that identifies impacted areas, peak days and months, and evaluates trends. Work with the Economic Development Board and Visitor Tourism Bureau to fund this program.

Program C-CT-4-P3: Monitor traffic volumes on County-maintained road segments, and work with Caltrans on similar State Highway 1 segments that are projected to experience high traffic volumes during peak weekend periods, particularly in the summer and fall months, and produce a report summarizing this data and analyzing trends. The report shall be updated every two years and provided to Sonoma County, the Sonoma County Transportation Authority (SCTA), and Caltrans and include forecasts on origin and destination of trips where data exists to support this analysis. Use this information to develop strategies for transportation alternatives, such as shuttle bus routes, to reduce coastal visitor's dependency on automobiles while maintaining convenient and equitable access to the coast for all visitors.

5. PHASING AND FUNDING

5.1 Goal, Objectives, and Policies

GOAL C-CT-5: Integrate the funding and development of planned circulation and transit system improvements with countywide transportation planning efforts and land use planning and development approval. (GP2020)

Objective C-CT-5.1: Equitably allocate the costs of circulation, trail, transit system improvements among the responsible public and private entities responsible for creating the need for system improvements.

Objective C-CT-5.2: Work with the SCTA and Federal and State governments to obtain the necessary funding for the planned circulation, trail, transit system.

Policy C-CT-5a: Require that new development provide project area improvements necessary to accommodate vehicle, pedestrian, bicycle, and transit movement in the vicinity of the project, including safety improvements, traffic calming, right-of-way acquisition, access to the applicable roadway, and other mitigation measures necessary to accommodate the development without inhibiting public access.

Policy C-CT-5b: Carry out on an as needed basis projects that enhance traffic safety but do not measurably increase capacity, including but not limited to traffic control devices (signals

and signs), curvature reduction, turn lanes at intersections, shoulder improvements, reconstruction, and resurfacing. Approval of these projects should be balanced with impacts on coastal resources and be consistent with Coastal Act Policies and this LCP including but not limited to habitat, habitat buffers, as well as view protections.

Policy C-CT-5c: Continue to implement traffic mitigation fees.

5.2 Program

Program C-CT-5-P1: Based upon an established nexus, assign responsibility for funding transportation improvements to new development in the affected area by assessing development fees or fair share contributions.

Public Facilities and Services Element: Table of Contents

Public Facilities and Services Element	3
Introduction	3
Purpose	3
Relationship to Other Elements	3
Relationship to California Coastal Act	3
Section 30118 Special district	3
Section 30114 Public works	4
Section 30212.5 Public facilities; distribution	4
Section 30222 Private lands; priority of development purposes	4
Section 30231 Biological productivity; water quality	4
Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients	4
Section 30234 Commercial fishing and recreational boating facilities	6
Section 30234.5 Economic, commercial, and recreational importance of fishing	6
Section 30250 Location; existing developed area	6
Section 30254 Public works facilities	6
Section 30254.5 Terms or conditions on sewage treatment plant development; prohibition	6
Section 30504 Special districts; submission of plans	7
1. General Public Facilities	7
1.1 Goal, Objectives, and Policies	7
1.2 Programs	8
2. Water and Wastewater Treatment Facilities	8
Water Supply	8
Public Water Systems	9
Wastewater Treatment and Disposal Services	14
On Site Wastewater Treatment Systems	14

2.1 Goal, Objectives, and Policies.....	15
2.2 Programs	20
3. Parks and Recreation.....	21
3.1 Goal, Objectives, and Policies.....	22
3.2 Program.....	22
3.3 Initiative.....	22
4. Public Education.....	22
Schools.....	22
Elementary Schools	22
High Schools	24
4.1 Goal, Objective, and Policy	24
4.2 Initiatives	24
5. Fire Protection and Emergency Medical Services.....	25
Emergency Medical Services	26
5.1 Goal, Objectives, and Policies.....	26
5.2 Programs	27
6. Law Enforcement Services.....	28
6.1 Goal, Objective, and Policy	29
7. Solid Waste Management Services.....	29
7.1 Goal, Objective, and Policies	30
8. Public Utilities And Telecommunications.....	32
8.1 Goal, Objective, and Policy	33
8.2 Initiatives	33
9. Youth and Family Services.....	33
9.1 Goal, Objectives, and Policies.....	34
9.2 Program.....	35
9.3 Initiative.....	35

Public Facilities and Services Element

INTRODUCTION

PURPOSE

The Public Facilities and Services Element addresses nine types of public services mainly related to the physical development of the Sonoma County coast. These services include: water, wastewater disposal, public education, fire protection, law enforcement, medical, solid waste management, public utilities, and youth and family services.

The purpose of this Element is to lay the groundwork for future decisions related to these public services and infrastructure, to establish future policy regarding providing facilities for these services, and to integrate public service concerns into land use decision making. This Element is designed to increase the likelihood that public services will be available when needed to serve the residents and businesses of the Sonoma County coast.

The Public Works policy of the 1976 California Coastal Act allows, consistent with the General Plan, development of public works capacity to accommodate needs identified by the Local Coastal Plan. Where the capacity of basic public works is limited, development of land uses encouraged by the Coastal Act, such as coastal dependent industry, receive priority over other uses.

The Public Facilities and Services Element describes the current status of public services in terms of service capacity and demand in relation to projected growth. It is divided into sections providing policy direction for each type of public facility or service. Programs needed to implement proposed policies are also identified. In addition, the Element calls out ongoing or potential future County initiatives, referred to as “Other Initiatives,” that support the provision and maintenance of adequate public facilities and services within the Coastal Zone.

RELATIONSHIP TO OTHER ELEMENTS

Highway and public transportation needs are identified and addressed in the Circulation and Transit Element. Water supply and water quality issues are addressed in the Water Resources Element. Needed park and recreation facilities are identified and addressed in the Public Access Element.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

Section 30118 Special district

"Special district" means any public agency, other than a local government as defined in this chapter, formed pursuant to general law or special act for the local performance of governmental or

proprietary functions within limited boundaries. "Special district" includes, but is not limited to, a county service area, a maintenance district or area, an improvement district or improvement zone, or any other zone or area, formed for the purpose of designating an area within which a property tax rate will be levied to pay for service or improvement benefiting that area.

Section 30114 Public works

"Public works" means the following:

- (a) All production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission, except for energy facilities.
- (b) All public transportation facilities, including streets, roads, highways, public parking lots and structures, ports, harbors, airports, railroads, and mass transit facilities and stations, bridges, trolley wires, and other related facilities. For purposes of this division, neither the Ports of Hueneme, Long Beach, Los Angeles, nor San Diego Unified Port District nor any of the developments within these ports shall be considered public works.
- (c) All publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any development by a special district.
- (d) All community college facilities.

Section 30212.5 Public facilities; distribution

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30222 Private lands; priority of development purposes

The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

Section 30231 Biological productivity; water quality

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
- (4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
- (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
- (6) Restoration purposes.
- (7) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where the improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30234 Commercial fishing and recreational boating facilities

Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

Section 30234.5 Economic, commercial, and recreational importance of fishing

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Section 30250 Location; existing developed area

- (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.
- (b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.
- (c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

Section 30254 Public works facilities

New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

Section 30254.5 Terms or conditions on sewage treatment plant development; prohibition

Notwithstanding any other provision of law, the commission may not impose any term or condition on the development of any sewage treatment plant which is applicable to any future development

that the commission finds can be accommodated by that plant consistent with this division. Nothing in this section modifies the provisions and requirements of Sections 30254 and 30412.

Section 30504 Special districts; submission of plans

Special districts, which issue permits or otherwise grant approval for development or which conduct development activities that may affect coastal resources, shall submit their development plans to the affected local government pursuant to Section 65401 of the Government Code. Such plans shall be considered by the affected local government in the preparation of its local coastal program.

I. GENERAL PUBLIC FACILITIES

I.1 Goal, Objectives, and Policies

Goal C-PF-1: Ensure that water supply and wastewater treatment and disposal, park and recreation, public education, fire protection and emergency medical, law enforcement, medical, and solid waste management services and public utility sites are available to meet the future needs of Coastal Zone residents and visitors.

Objective C-PF-1.1: Limit water supply and wastewater treatment and disposal, parks and recreation, public education, fire protection and emergency medical, law enforcement, solid waste management, and public utilities facilities and services to those needed for projected demand from existing development.

Objective C-PF-1.2: Help County Service Areas and Special Districts to provide needed public facilities and services.

The following policies, in addition to those in the Water Resources and Open Space and Resource Conservation Elements, shall be used to achieve these objectives:

Policy C-PF-1a: Water supply and wastewater treatment and disposal, parks and recreation, public education, fire protection and emergency medical, law enforcement, solid waste management, and public utilities facilities and services shall be planned, designed, and constructed in accordance with projected demand from existing development as identified by Local Coastal Program (LCP) land use policies and the Chapter 3 requirements of the Coastal Act.

Policy C-PF-1b: New Special Districts shall only be established within defined Urban Service Areas and Rural Community Boundaries as designated in the Local Coastal Plan. Special districts shall only be formed or expanded where assessment for, and provision of, service would not induce new development inconsistent with policies of the LCP.

Policy C-PF-1c: Install charging stations for, electric, or other alternative fuel vehicles at public facilities and other visitor serving uses, and park facilities where compatible.

I.2 Programs

Program C-PF-1-P1: Work with the County Service Areas and Special Districts to provide local parks and recreation, public education, fire and emergency medical, law enforcement, solid waste management, and public utilities facilities and services.

2. WATER AND WASTEWATER TREATMENT FACILITIES

On the Sonoma County coast, development is concentrated in Urban Service Areas and Rural Communities. The Coastal Act mandates that new development be located in close proximity to developed areas with public facilities and services. To delineate the areas appropriate for development in the Coastal Zone, Urban Service Areas have been established on the Local Coastal Plan Land Use Map (C-LU-1a thru 1k) and include The Sea Ranch and Bodega Bay. Rural Community Boundaries, areas that were previously subdivided or developed with public water and private Onsite Waste Water Treatment Systems (OWTS, also known as “septic systems”), have also been established on the Land Use Map and include Duncans Mills, Jenner, Sereno del Mar/Carmet, Salmon Creek, Timber Cove, and Valley Ford.

On the coast expansion of public sewer beyond the boundaries of Urban Service Areas and expansion of public water or public sewer beyond the boundaries of Rural Communities are prohibited except under when necessary to mitigate impacts to coastal resources and public health created by a failing OWTS serving existing development. Development infill is expected where water and OWTSs or sewer regulations can be met. Part of the development infill strategy is to encourage consolidation of adjacent lots in high hazard areas or visually and environmentally sensitive areas in accordance with Coastal Act policies to protect views and coastal resources and minimize public safety hazards.

Water Supply

An adequate and healthful water supply is essential if the Sonoma County coast is to sustain its residential population and its economic stability. As noted above, the Water Resources Element establishes goals, objectives, and policies addressing a broad range of water-related issues, including water quality and supply pertaining to private wells and public water systems. This section is intended to address issues regarding improving water systems for moderate expansion of planned communities, developing new water systems, and extending water services to new areas not currently served.

The Sonoma Coast is a water scarce area, and developing reliable water sources for urban development is very difficult. Several wells or springs may be needed to produce even modest water yields. Most of the water systems on the coast are small and substandard in some respect. The main problems are insufficient water and limited financial capability. Water sources are generally wells or creeks which may run low in summer months when demand is highest. Most coastal wells produce only a limited

amount of water at any time due to the geology of the area. The owners of small water systems cannot afford extensive search for and development of additional water supplies.

No additional sources of water supply appear feasible for the communities of Jenner, Rancho del Paradiso, Bridgehaven, West Beach, and Valley Ford. The Salmon Creek subdivision has marginally adequate water supplies for existing development. If adequate water supplies are not available, some lots in the existing subdivisions may be unbuildable. Water system development and improvement continues at The Sea Ranch, Timber Cove, Sereno del Mar, Carmet, and Bodega Bay. Water supplies sufficient for subdivision buildout or moderate additional expansion appears limited to these five areas and Duncans Mills.

Maintaining the quality of water in small water systems, especially surface springs and storage tanks, is problematic because it requires periodic monitoring and testing. Several older small water systems are poorly designed or maintained resulting in inadequate water pressure. The firefighting capability of most of the systems is inadequate because of limited water supplies or low water pressure.

Public Water Systems

The definitions of a public water system and different types of public water systems are given below. These definitions are in Section 116275 of the California Safe Drinking Water Act which is contained in Part 12, Chapter 4 of the California Health and Safety Code:

116275. Definitions.

(h) **“Public water system”** means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. A public water system includes the following:

- (1) Any collection, treatment, storage, and distribution facilities under control of the operator of the system that are used primarily in connection with the system.
- (2) Any collection or pretreatment storage facilities not under the control of the operator that are used primarily in connection with the system.
- (3) Any water system that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

(e) **“Human consumption”** means the use of water for drinking, bathing or showering, handwashing, oral hygiene, or cooking, including, but not limited to, preparing food and washing dishes.

(i) **“Community water system”** means a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system.

(j) **“Noncommunity water system”** means a public water system that is not a community water system.

(k) **“Nontransient noncommunity water system”** means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year.

The Sonoma County coast has ~~about 16~~ 19 water systems that fall under the regulatory authority of the State Water Resources Control Board (Water Resources Board) as a “public water system”, ranging in size from The Sea Ranch Water Company, a Community system with 1,872 connections; to the Blue Heron Restaurant, a Non-Community Transient system with one connection. **Table C-PF-1** provides general information about the public and private water systems on the coast.

Table C-PF-I. Characteristics of Public Water Systems Regulated by the State Water Resources Control Board¹
Information supplied by system operator and California Water Resources Control Board Division of Drinking Water

<i>Water System</i>	<i>Type</i>	<i>Uses Served</i>	<i># Connections/ Lots Served</i>	<i># Vacant Lots or Lots Not Served</i>	<i>Source of Water Supply</i>	<i>Adequacy of Water Supply</i>
Bodega Bay Public Utilities District	Community	Residential Commercial Industrial	1,215	194	Salmon Creek (2 wells) Roppolo wellfield - 3 wells Sand Dunes wellfield - 2 wells	Adequate for existing development
Fort Ross School District	Non-Transient Non-Community	School	2	0	Groundwater well onsite	Adequate for existing development
Sonoma County County Service Area (CSA) 34 - Jenner	Community	Residential Restaurant Hotel/Motel Public (297 parcels total)	136	174	Jenner Creek	May be inadequate for existing development. Surface water source vulnerable to climate change
Sonoma County CSA 41 - Salmon Creek	Community	Residential Public (130 parcels total)	99	36	Groundwater well on Maryana Drive; Spring - general subsurface flow of water from hills east of Salmon Creek; water collection and treatment system improvement project constructed in 2014	Adequate for existing development. Water collection and treatment system improvement project constructed in 2014
Timber Cove County Water District	Community	Residential	187	129	Timber Cove Creek, water stored in reservoir at 22108 Timber Cove Road constructed in 1997	Adequate for existing development and future development of vacant residential parcels. Reservoir volume adequate to supply 4 months water supply at build-out
Blue Heron Restaurant	Transient Non-Community	Restaurant	1	0	Groundwater well	Adequate

¹ Water systems that provide water for human consumption through pipes or other constructed conveyances with 15 or more service connections **or** regularly serving more than 25 individuals per day for least 60 days per year. See introduction above this table for detailed information on public water systems.

Table C-PF-1. Characteristics of Public Water Systems Regulated by the State Water Resources Control Board¹
Information supplied by system operator and California Water Resources Control Board Division of Drinking Water

<i>Water System</i>	<i>Type</i>	<i>Uses Served</i>	<i># Connections/ Lots Served</i>	<i># Vacant Lots or Lots Not Served</i>	<i>Source of Water Supply</i>	<i>Adequacy of Water Supply</i>
Bridgehaven Trailer Park	Community	Recreation	31	0	Spring about 150 yards uphill from water treatment building at trailer park Stream about 100 yards from south end of bridge at Jenner (from Red Hill)	Adequate supply. Surface water diversion may require additional treatment.
Casini Ranch Campground Water System	Transient Non-Community	Recreation	14	0	2 wells 1 spring	Adequate for existing and future expansion of campground
Duncans Mills Camping Company Duncans Mills Trading Company	Transient Non-Community Transient Non-Community	Recreation Restaurant Retail	20	0	Well 1,400 feet from Russian River	Adequate for existing development. Supply may not be adequate for expansion of existing commercial uses.
Fort Ross Lodge & Store	Transient Non-Community	Restaurant Hotel/Motel	2	0	Well below lowest unit of lodge	Adequate for existing use and future expansion.
Rancho Del Paradiso - California Water Service Company	Community	Residential	60	8	Intertie pipeline to Sweetwater Springs Water District facility in Monte Rio constructed in 2006	Adequate for existing development and future development of vacant residential parcels.
Russian River Utility Sereno Del Mar Water Company - Sereno del Mar	Community	Residential	136	9	9 wells - two gallery inlets from underflow of Scotty Creek, seven wells 70 feet deep; One spring about half mile east	Adequate for existing development and future development of vacant residential parcels.
Russian River Utility Carmet-by-the-Sea Mutual Water System - Carmet	Community	Residential	64	0	2 horizontal wells on hillside east of subdivision	Adequate for existing development. May be inadequate for future development.
Russian River Utility Sereno Del Mar Water Company - Gleason Beach	Community	Residential	6	15	50-meter wells and Carmet-by-the-Sea springs	Adequate for existing development. No potential for future development due to bluff collapse.

Table C-PF-I. Characteristics of Public Water Systems Regulated by the State Water Resources Control Board¹
Information supplied by system operator and California Water Resources Control Board Division of Drinking Water

<i>Water System</i>	<i>Type</i>	<i>Uses Served</i>	<i># Connections/ Lots Served</i>	<i># Vacant Lots or Lots Not Served</i>	<i>Source of Water Supply</i>	<i>Adequacy of Water Supply</i>
The Sea Ranch Water Company	Community	Residential Commercial	1,872	605	Gualala River	Adequate for existing development and future development of vacant residential parcels.
Timber Cove Inn	Non-Transient Non-Community	Hotel/Motel	3	N/A	Timber Cove County Water District	Adequate for existing development.
Valley Ford Water Association	Community	Residential Commercial	23	0	3 wells south of community along north side of Estero Americano	Adequate supply, inadequate quality for existing development. Inadequate for expansion of existing uses.
Valley Ford Hotel	Transient Non-Community	Commercial	1	0	Groundwater well on site	Adequate for existing development. Inadequate for expansion of use.
Stillwater Cove Regional Park	Transient Non-Community	Recreation (campground w/22 sites, Ranger residence, office)	2	0	Canyon well – winter & spring (next to Regional Parks office driveway) Creek well – summer & fall (next to Stockholm Creek)	Adequate for existing use but vulnerable to drought. May be inadequate for future development.

Wastewater Treatment and Disposal Services

Untreated or improperly treated wastewater contains bacteria, viruses, chemicals, and nutrients that can cause human diseases; kill or injure plants and animals; and produce surface waters that are contaminated, discolored, or odorous. Since all wastewater is eventually returned to the environment, the public has a vital interest in assuring proper wastewater management. The Water Resources Element establishes goals, objectives, and policies pertaining to water quality and wastewater management. This section of the Public Facilities and Services Element addresses issues regarding improving existing wastewater treatment systems, developing new wastewater treatment systems, and extending wastewater treatment services to new areas not currently served.

On Site Wastewater Treatment Systems

An on-site wastewater treatment system (OWTS) is an individual wastewater treatment and dispersal system, small community collection, treatment and dispersal systems, or alternative collection and dispersal systems that use subsurface dispersal. These systems are commonly referred to as “septic systems”. OWTSs do not include graywater systems pursuant to the Health and Safety Code Section 17922.12.

A standard OWTS consists of a tank and leachfield (subsurface treatment and disposal of wastewater) and may include a diversion valve and/or pump. Wastewater enters the tank and is retained long enough so that large solid particles and very small solid particles joined together settle to the bottom. Bacteria digest the solids that accumulate in the tank at the bottom (sludge); and the fats, oils, grease, and other materials that float to the surface (scum); the resulting solids must be pumped out periodically. The partially treated wastewater (effluent) leaves the tank in pipes and is discharged below the ground surface into the leachfield, which consists of perforated pipes laid over gravel in trenches (leachlines). The effluent flows along the length of the pipes where it gradually percolates into the soil. The effluent receives secondary treatment through natural physical and microbiological processes in the soil.

New and replacement OWTSs shall be located, designed, constructed, and operated in a manner to ensure that sewage effluent does not surface at any time, that is protective of public health, safety and the environment and that percolation of effluent into the soil will not adversely affect beneficial uses of the waters of the State of California. (OWTS Manual)

The Sonoma County OWTS Manual establishes standards for all on-site wastewater systems in Sonoma County. These standards implement provisions of the Porter Cologne Water Quality Control Act, the State Water Resources Control Board OWTS Policy, and applicable sections of Sonoma County Code Chapters 7 and 24. California Water Code 13282 authorizes counties to adopt and enforce regulations, conditions, restrictions, and limitations regarding the dispersal of waste. The Sonoma County OWTS Manual is the local implementation of this authority.

On coastal parcels, meeting OWTS standards is often the limiting factor for development. On many lots it is difficult to meet the setbacks to property lines, road cuts, streams, drainage courses, cliffs, and the 10-year floodplain due to the small size of the lots, which in many cases were created prior to current OWTS regulations. For example, on small lots in Carmet, Jenner, Sereno del Mar and Salmon Creek, even if the soil has an adequate percolation rate, there is not enough room for even a one-

bedroom OWTS. A lot fronting Salmon Creek that is 40 feet long will not meet the required 100-foot setback from the 10-year floodplain. Steep slopes and shallow fractured bedrock also contribute to inadequate conditions for OWTS, as the effluent can move laterally and break out to the surface along the slope.

On Site Wastewater Treatment Systems Regulations

The State Regional Water Quality Control Boards (Regional Board) is responsible for establishing standards for OWTSs to protect water resources and public health. Permit Sonoma is the delegated authority for implementation and enforcement of State and County specific OWTS regulations. New OWTSs must meet standards for slope, soil depth, depth to groundwater, percolation rate, and system setback distance.

In areas where failure of OWTSs are likely to cause health hazards or impair water quality, Permit Sonoma or the pertinent Region Board (North Coast or San Francisco Bay) may issue an Order to prohibit any waiver of existing OWTS installation regulations in a specific area. This Order referred to as a “Waiver Prohibition Area,” is intended to decrease the likelihood of failure of new OWTSs. Jenner, Rancho del Paradiso, Sereno del Mar, Carmet, and Salmon Creek are in Waiver Prohibition areas.

On May 13, 2013, the North Coast Regional Board amended their Basin Plan to adopt the OWTS Policy. This policy establishes minimum standards for OWTSs that are constructed or replaced or are subject to a major repair. The OWTS Policy also includes minimum operating requirements for OWTSs that include requirements for siting, construction, and performance; OWTSs near certain waters listed as impaired under Section 303(d) of the Clean Water Act; corrective action; monitoring; exemption criteria; determining when an existing OWTS is subject to major repair; a conditional waiver of waste discharge; and authorizing local agency implementation of the OWTS Policy.

OWTS Monitoring and Maintenance Program (On-Site Wastewater Disposal Zone). An OWTS monitoring and maintenance program, also referred to as an on-site wastewater disposal zone, is another alternative to individual OWTSs. Such a program does not make more lots buildable, rather has the potential for extending the useful life of OWTS and promptly correcting operational problems. A public agency which is authorized to acquire, construct, maintain, or operate sewage treatment systems may run such a program. Once an on-site wastewater disposal zone is established, the agency has the power within that zone to acquire, design, own, construct, install, operate, monitor, inspect, and maintain individual OWTSs. The potential for this type of program is widespread on the Sonoma Coast.

A wastewater system monitoring and maintenance program is required for The Sea Ranch. In the late 1980s The Sea Ranch Association and the County of Sonoma created an On-Site Wastewater Disposal Zone (Zone) to address problems with about 1,570 on-site individual OWTSs at The Sea Ranch. In July 1989 the Zone was created under the agreement that the Board of Supervisors would contract with The Sea Ranch Association to operate, monitor, inspect, and maintain the OWTSs. In July 1995 the Zone was designated as CSA 41 and came under the direction of Permit Sonoma.

2.1 Goal, Objectives, and Policies

GOAL C-PF-2: Ensure that growth and development match existing water and wastewater treatment and disposal capacities.

Objective C-PF-2.1: Plan for growth and development to match existing water and wastewater treatment and disposal capacities and facilities.

Objective C-PF-2.2: Operate County water and wastewater treatment and disposal facilities in compliance with applicable State and Federal standards.

Objective C-PF-2.3: Help resolve water problems resulting from proliferation of small water systems.

Objective C-PF-2.4: Limit extension of public water and sewer services into rural areas.

Policy C-PF-2a: Growth and development shall be planned in accordance with existing water and wastewater treatment and disposal capacities. Development, including land divisions, shall be prohibited unless a master plan consistent with Policy C-PF-2d identifies adequate water and wastewater treatment and disposal capacities and facilities to accommodate such development. In acting on any Coastal Development Permit, determine that adequate capacity is available and reserved in the system to serve priority land uses as shown in Land Use Element Table C-LU-1. In areas with limited service capacity, new development for a non-priority use, including land divisions, is prohibited unless adequate capacity remains for Coastal Act priority land uses within the service area.

Policy C-PF-2b: A public water or wastewater district shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with the Local Coastal Plan in accordance with California Coastal Act Section 30254. New development within the service boundary of a public water or wastewater district shall be required to connect to the district for water or wastewater service.

Policy C-PF-2c: A Coastal Permit shall be required for water or wastewater management facility expansion or improvement projects unless otherwise exempt by the Local Coastal Program, or the Coastal Act. Development of new or expansion of existing water or wastewater management facilities shall be in phase with the availability of other public works infrastructure.

Policy C-PF-2d: Master plans or equivalent documentation shall be prepared for all water and wastewater management systems prior to approval of facility expansion or improvement projects. All facilities shall be designed and constructed in accordance with the existing and planned development in the applicable jurisdictions. In the event that a master plan or monitoring fails to show adequate facilities or supplies for existing development, moratoria on zoning changes, building permits, or other entitlements in order to protect services to existing residents shall be applied as appropriate.

The minimum contents necessary for an adequate master plan or equivalent documentation are:

- (1) Maps showing potential future service area boundaries in accordance with California Coastal Act Section 30254.
- (2) Existing development within the existing and potential future service area boundaries.
- (3) Impact that sea level rise and climate change will have on existing and proposed facilities.
- (4) Projected growth and the related service and facility needs;
- (5) Estimated costs and revenues for needed improvements;
- (6) System design parameters and assumptions;
- (7) A program for water use reduction; and
- (8) A program to reduce stormwater infiltration.

Policy C-PF-2e: Extension of public sewer services outside of the boundary of The Sea Ranch and Bodega Bay Urban Service Areas shall be avoided. Exceptions to this policy shall be considered, to the extent allowed by law, only:

- (1) Where necessary to resolve a public health hazard resulting from existing development (i.e., contamination of land, surface water, or groundwater resulting from failure of an existing OWTS or other wastewater management system); or
- (2) Where appropriate to allow for development of public park or recreation facilities.

Policy C-PF-2f: Where several failing OWTSs or other health and safety problems which pose a significant hazard to human health and safety exist outside an Urban Service Area that could be addressed by extension of public sewer service, use Outside Service Area Agreements which limit the use of existing development. The evaluation should assure sufficient capacity to serve existing connections and potential buildout in the existing Urban Service Area.

A Coastal Development Permit shall be required for extension of public sewer services outside of an Urban Service Area.

Policy C-PF-2g: The following guidelines shall be used for any exception allowed by **Policy C-PF-2e:**

- (1) The property must adjoin the Urban Service Area Boundary, or the proposed connection to a public sewer system must be no more than 200 feet from the Urban Service Area Boundary;
- (2) Size sewage facilities to serve development consistent with the Local Coastal Plan;
- (3) Require written certification by the service provider that adequate service capacity, consistent with the facility master plan, is available for the use to be connected to the system; and
- (4) Use agreements, covenants, and zoning to limit the growth inducement potential of extension of public sewer services.

Policy C-PF-2h: Extension of public water service to a property that is outside the boundary of an Urban Service Area or Rural Community (i.e., Duncans Mills, Jenner, Sereno del Mar, Carmet, Salmon Creek, Timber Cove, and Valley Ford) shall be avoided. Exceptions to this policy shall be considered, to the extent allowed by law, only:

- (1) Where necessary to resolve a public health hazard resulting from existing development (i.e., failure of water wells or contamination of land, surface water, or groundwater resulting from failure of an existing OWTS or other wastewater management system); or
- (2) Where appropriate to allow for development of public park and recreational facilities.

A Coastal Permit shall be required for extension of public water service.

Policy C-PF-2i: The following guidelines shall be used for any exception allowed by **Policy C-PF-2g:**

- (1) Size facilities to serve development consistent with the Local Coastal Plan;
- (2) Require written certification that adequate service capacity is available for the economic life of the development to be connected to the system or planned to be connected in the future; and
- (3) Use out-of-service area agreements that limit the use to existing development rather than annexations.

Policy C-PF-2j: Applications for subdivision of land or new development or uses within a water or wastewater service area shall be required to include written certification from the service provider that existing water and wastewater services are available to serve the new parcels, development, and uses; or that the service provider will make improvements to the water or wastewater systems necessary to accommodate the new development and uses prior

to final project approval. The proposed project shall not be considered for approval if this written certification is not provided.

Policy C-PF-2k: When considering formation of new water service agencies, systems owned and operated by a governmental entity shall be favored over privately or mutually owned systems. New privately or mutually owned systems shall be authorized only if system revenues and water supplies are adequate to serve existing and projected growth for the life of the system, which shall be ensured through agreements or other mechanisms that set aside funds for long-term capital improvements and operation and maintenance costs.

Policy C-PF-2l: Approval of new wastewater treatment and disposal systems owned and operated by a governmental entity shall be considered only when necessary to resolve an existing public health hazard.

Policy C-PF-2m: New privately owned package treatment plants which serve multiple uses or serve separate parcels shall be avoided. Use of package treatment plants to serve affordable housing or other projects on a single parcel under one ownership shall be allowed provided that they comply with the following criteria:

- (1) The package treatment plant must comply with water quality and health standards and protect water resources;
- (2) The design and appearance of package treatment plants located in agricultural and other rural areas must be compatible with the rural area's character;
- (3) The project must include provisions for the long-term operation, maintenance, and eventual replacement and/or removal of the package treatment plant; and include adequate financing for these provisions through bonds, sinking funds, or other mechanisms; and
- (4) The package treatment plant is not to be used as a basis for approving a new affordable housing development in Rural Communities or on other rural land, or amending the Local Coastal Plan to allow for more intensive development.

Policy C-PF-2n: Consider use of alternative (non-standard) sewage disposal systems only to serve a single land use on a single parcel, and only if the availability of the system does not result in new development, except as allowed by the Local Coastal Plan.

Policy C-PF-2o: Any waiver of Regional Board standards for on-site wastewater disposal in Jenner, Carmet, Rancho del Paradiso, Sereno del Mar, and Salmon Creek shall be prohibited.

Policy C-PF-2p: Consider development or expansion of a community wastewater treatment system in areas with widespread OWTS problems that are a health concern and cannot be

addressed by an on-site wastewater maintenance and management program, in compliance with the policies of this Local Coastal Plan.

Policy C-PF-2q: Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development in accordance with California Coastal Act Sections 30222 and 30254. The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority consistent with coastal priority land uses of the Coastal Act.

Policy C-PF-2r: Prohibit desalination utility projects except where necessary for preservation of health and safety for existing development.

2.2 Programs

Program C-PF-2-P1: Create a total water supply and use budget for the Sonoma County Coastal Zone that considers future impacts on water including, but not limited to: loss of groundwater to salt water intrusion, potential droughts, increased water usage for increased development, and fire suppression. Use this information guide land use planning and identify adequacy of individual water districts and suppliers. Once developed, review and update this information every 5 years.

Program C-PF-2-P2: Develop and implement programs that include obtaining grants for supporting and assisting communities in upgrading failing OWTs or developing on-site wastewater maintenance and management districts, community leachfields, or community wastewater treatment systems.

Program C-PF-2-P3: Consider development of on-site wastewater maintenance and management districts in areas with OWTs problems.

Program C-PF-2-P4: Consider the following and develop improvement plans where appropriate:

- (1) A community leachfield at Duncans Mills.
- (2) Relocation of the OWTs at Bridgehaven and Rancho del Paradiso.
- (3) A community wastewater collection and treatment system or a package wastewater treatment plant at Jenner.
- (4) A community wastewater collection and treatment system or a package wastewater treatment plant at Carmet.

At Salmon Creek and Wrights Beach: construction of a package wastewater treatment plant, relocation of the OWTs away from houses, or construction of a community leachfield.

3. PARKS AND RECREATION

Outdoor recreation contributes to the tourism economy, enhances the quality of life for County residents and visitors, and conserves unique natural and cultural resources. The Public Facilities and Services Element describes the current status of public recreation in general terms of service capacity and demand in relation to projected growth. The needed park and recreation facilities are identified and addressed in the Public Access Element.

The various types of parkland found in Sonoma County are based on the Board of Supervisors approved parkland classification system. County planning staff considers a variety of factors in determining the need for local parks (e.g., Neighborhood and Community Parks) and the more intensively developed park and recreation facilities (e.g., Regional Recreation Areas). These factors include, but are not limited to, community preference, nearby population densities, proximity to other recreational areas and facilities, local and regional tourism, and accessibility, among others. Parkland needs for the resource-based park and recreation facilities (e.g., Regional Open Space Parks, Preserves, and Trails) are determined by these and other criteria, and are described in the Public Access Element.

3.1 Goal, Objectives, and Policies

Goal C-PF-3: Provide adequate park and recreation services on the Sonoma County coast.

Objective C-PF-3.1: Provide an adequate supply and equitable geographic distribution of regional and local park and recreation services based on population projections, estimated user demand, and Local Coastal Plan resource objectives.

Objective C-PF-3.2: Use guidelines established by the Board of Supervisors as the minimum standards for determining park needs.

Policy C-PF-3a: The Public Access Element and Plan shall be used to determine regional park needs, including County regional open space parks, County trails, and State parks in order to support recreation in the Coastal Zone.

Policy C-PF-3b: The proposed accessway, park, and trail descriptions in the Public Access Plan shall be used to determine Local Coastal Plan consistency of proposed accessways, parks, and trails as consistent with the Public Access Element.

Policy C-PF-3c: Continue to implement park impact mitigation that allows for the dedication of land, the payment of fees, or both as a condition of approval for development projects.

Policy C-PA-3d: Allow park residences in areas visible to the public where necessary for security reasons and when impacts on views are mitigated.

Policy C-PA-3e: Allow extension of sewer service to parklands only where consistent with policies of the Public Facilities and Services Element of this Local Coastal Plan.

Policy C-PA-3f: Provide restrooms at significant recreational areas to protect coastal resources and public health and safety. Consider use patterns and the proximity of other nearby public restrooms when determining facility needs.

Policy C-PA-3g: Encourage the California Department of Parks and Recreation to install emergency communication facilities at Goat Rock.

3.2 Program

Program C-PF-3-P1: Where there is an unmet need for local park facilities in an area, and County Regional Parks does not have plans for facilities in the area, encourage the existing or formation of new County Service Areas or other Special Districts to meet the need, if economically feasible.

3.3 Initiative

Initiative C-PF-3-I1: Promote State funding of costs for patrolling new parks and public accessways which are mandated by the California Coastal Act.

4. PUBLIC EDUCATION

SCHOOLS

As the Sonoma County coast has relatively low population densities, schools are widely spaced in five Elementary School Districts and three High School Districts, and tend to be small with combined classes. Specialized education facilities are minimal. Each school district has its own revenue base, elected board, and administration. The Sonoma County Office of Education provides some administrative and business services to all districts. **Figures C-PF-1a to C-PF-1c** show the Public School Districts on the coast.

A major issue in planning for new facilities is the need for increased coordination between land use and facilities planning. Districts must be aware of the projected residential growth in their service area so that new school needs can be accurately forecast. An important source of financing for new school facilities is the "school impact" fee on new residential construction. State law now authorizes local school districts to charge development fees for permanent facilities. However, funding will likely continue to depend on State sources. California law also enables a County to acquire new school sites by dedication as a condition of subdivision approval.

Elementary Schools

All elementary school districts must meet minimum state requirements regarding class sizes. Maximum class sizes for grades K-8 vary per California Education Code sections 41376 and 41378,

which prescribe the maximum class sizes and penalties for districts across California. For Kindergarten, the average class size must not exceed 31 students, with no class larger than 33 students; for grades 1-3, the average class size must not exceed 30 students, with no class larger than 32 students; for grades 4-8, the average class size must not exceed either 29.9 students or the average of the district in 1964, whichever is smaller. Additional classrooms are usually constructed only when these limits are reached.

Horicon Elementary School District. Horicon Elementary School District consists of one school, Horicon Elementary School, which is located in the community of Annapolis. Enrollment at Horicon Elementary School decreased from 80 students in four classrooms in 1979 to 47 students in four combined classrooms at the start of the 2015-2016 school year. According to the District, the number of students has been declining, as is common with general school enrollment trends statewide. Over the last eight school years, the student population has fluctuated between 70 students in 2011, 57 students in 2012, 60 students in 2013, 66 students 2014, 61 students in 2015, 47 students in 2015-2016 school year, 59 students in the 2016-2017 school year, 62 students in the 2017-2018 school year before reaching a total of 69 students in the 2018-2019 school year. The school serves students from the communities of The Sea Ranch and Annapolis. According to the District, there is no anticipated growth or need for additional facilities.

Fort Ross School District. The Timber Cove Subdivision is the largest planned residential development in, and the main growth area for, the Fort Ross School District. Enrollment at the Fort Ross Elementary School decreased from 53 students in two classrooms in 1979 to 32 students in two classrooms during the 2014-2015 school year, to 28 students in two classrooms during the 2015-2016 school year. Since then, the student population continues on the downward trend having 24 students in the 2016-2017 school year, 19 students in the 2017-2018 school year, and finally 21 students for the current school year. The District has seen a fluctuation within the last few years between 27 and 32 students, but generally the District enrollment has been steadily declining over the last 20 years. The District has a preschool site within a classroom at the Fort Ross Elementary School which is run by River to Coast Children's Services based in Guerneville. However, there is no current enrollment at the preschool. When enrollment resumes, the River to Coast Children's Services would remain responsible for running the preschool program at the school.

Monte Rio School District (outside Coastal Zone). Coastal areas are not expected to contribute significant numbers of new students to the Monte Rio School District. Enrollment at Monte Rio Elementary School decreased from 219 students in eight classrooms in 1979 to 112 students in six classrooms in 2005. There has been an additional decrease in student population figures, with 84 students using nine classrooms in 2015. The District believes that the decline in enrollment is due to the decrease in families moving to the area. The 2015-2016 school year brought one additional student to make 85 students for the school year, 90 students in 2016-2017, the 2017 to 2018 school year had 89 students, and 84 students in the school year of 2018-2019. The District projects a decrease in enrollment in the future for the same reason.

Shoreline School District. South Coast students attend Bodega Bay Elementary School for grades K-5, and are bused to Tomales Elementary School (outside of Sonoma County Coastal Zone) for grades 6-8. As most students attending Bodega Bay Elementary School are from the immediate area, construction of additional classrooms would be needed to accommodate additional Bodega Bay area growth. Enrollment at the Bodega Bay Elementary School decreased from 70 students in three classrooms in

1979 to 40 students in three classrooms in a new school in 2005, to 19 students using two classrooms in 2015-2016 school year. Since then there was a slight increase to 25 students for the 2016-2017 school year, 26 students in 2017-2018, and 23 students in the school year 2018-2019. The District believes that enrollment numbers could fluctuate because of interdistrict transfers largely from Coast Guard families.

High Schools

The Sonoma County coast is served by three high schools in three school districts, however, none of the high schools are located within the Sonoma County coastal zone. Students from Annapolis, The Sea Ranch, and Stewarts Point attend Point Arena High School in Mendocino County; students from Fort Ross through Bodega Bay attend Analy High School in Sebastopol, and South Coast students attend Tomales High School in Marin County.

Impacts of growth on high schools are not as severe as for elementary schools and are harder to estimate. Class sizes, schools, and district areas are larger. High schools have more flexibility in handling increments of students from specific development areas without adding classrooms or teachers.

4.1 Goal, Objective, and Policy

Goal C-PF-4: Provide school facilities adequate to meet the future needs of Sonoma County coast residents.

Objective C-PF-4.1: Accommodate new school sites as needed, consistent with protection of coastal resources.

Policy C-PF-4a: Continue to implement school impact mitigation that allows for the dedication of land, the payment of fees, or both as a condition of approval for development projects.

4.2 Initiatives

Initiative C-PF-4-I1: Work with school districts to provide safe walking and bicycle paths around schools and neighborhoods.

Initiative C-PF-4-I2: Encourage schools to offer recreation programs and before-school and after-school care whenever possible.

Initiative C-PF-4-I3: Work with Community Service Districts, Park & Recreation Districts, and School Districts to meet local community park needs.

Initiative C-PF-4-I4: Assist school districts in estimating the amount, rate, and location of projected population growth in their attendance areas.

5. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

Fire protection and emergency medical and rescue services are essential to the protection of life and property in the unincorporated areas of Sonoma County. They are provided by four types of agencies. The California Department of Forestry and Fire Protection (CalFire) provides services to State Responsibility Areas. Fire Protection Districts provide services with revenues from property taxes, and are usually created to provide a reliable funding source to sustain a stable and/or increased level of fire protection services to certain areas of the County. Volunteer fire companies provide local services in rural communities. Community Service Areas (CSAs) and Community Service Districts (CSDs) are areas of the County that have approved special tax assessment for particular types of extended services, such as structural fire protection. **Figures C-PF-2a to C-PF-2c** show the Fire Districts that provide primary emergency response in the coastal zone.

Fire protection services are highly dependent on paid on-call, paid part-time, and volunteer personnel. Although this dependency remains, the number of volunteer firefighters has fallen off in recent years. While the County generally has been receiving acceptable levels of fire protection services, problems have resulted from the condition of existing equipment and matching the type of equipment and staff training to the type of fire. Sonoma County Fire District Station 10, and North Sonoma Coast Fire Protection District South Station, staffed by CalFire personnel funded through CSA 40, provide the only fire protection services by full time staff on the Sonoma County coast.

CSA 40 is a County entity that provides a moderate amount of funding and relies primarily on volunteer staff in various CSAs. CSA 40 also provides management oversight for, directs, and coordinates the various volunteer fire companies; and supplies training, safety equipment, and insurance coverage for voluntary staff.

The County has established the Department of Fire and Emergency Services (DES) to coordinate the fire protection service agencies in the County. DES contracts with various Fire Protection Districts and municipal fire agencies to provide support services including code enforcement, construction plan checking, and fire safe planning.

Demand for increased fire suppression and emergency medical services will not be generated by housing, population, or job growth alone. Increases in tourism, increases in level of service expectations, and changes in the population mix will also affect demand.

The primary tasks with regard to fire services planning are to ensure that needed organizational changes occur in a timely and cost effective manner, and to secure adequate revenue sources. Emergency medical services should also be evaluated, since the growth in medical calls over the first half of the decade has consistently outpaced fire emergency calls.

Structural fire protection on the coast has general inadequacies common to many rural areas. The Sea Ranch, Timber Cove, and Bodega Bay are the only areas with adequate water supply and water pressure for firefighting. Most departments lack paid staff and up-to-date firefighting equipment. The average age of fire apparatus is 26 years. Most of the fire stations are in need of maintenance and repair, and some need to be replaced. Fire protection response areas tend to be large, with limited

road access. These factors combined with volunteer fire departments make for relatively long response times.

Increases in coastal development are not likely to bring about substantial changes in the organization of coastal fire departments because the costs for fire protection are too high. Only The Sea Ranch and Bodega Bay are expected to reach levels of development where minimal paid staffing levels would be possible. However, increased development and public access to the Sonoma Coast will increase fire risk and demand for emergency medical services. The aging demographics of coastal communities will make the recruitment of young volunteers problematic. Increasingly limited funds at Federal, State, and local levels make acquisition of fire equipment difficult, especially for departments that have relatively low call volume.

Emergency Medical Services

The Sonoma County Coastal Zone lacks any hospitals, trauma centers, or health care clinics, with the exception of limited services provided by the Gualala Health Center located just north of the county line in Gualala. Medical emergencies require patients to be stabilized by fire protection district first responders and transported to medical facilities located inland along the Highway 101 corridor by ambulance or helicopter, with transport times of up to two hours. Maintaining emergency medical services is critical to protecting the health and safety of residents and visitors to the Sonoma Coast, and fire protection districts struggle with inadequate staffing, resources, and financial support.

The Coast Life Support District (CLSD) is a special tax district charged with providing basic and advanced life support ambulance services north of the Fort Ross Store, and includes the communities of communities of The Sea Ranch, Annapolis, Stewarts Point, Timber Cove, and Fort Ross. CLSD serves a large geographic area from the town of Gualala in Mendocino County. Because of the large area, ambulance service from the Russian River Fire Protection District in Guerneville supplements the ambulance services provided by CLSD. The Russian River Fire Protection District also provide ambulance services to the central Coastal Zone between Fort Ross and Shell Beach near Wright Hill Road.

Sonoma County Fire District provides emergency medical and advanced life support ambulance service to the South Coast, from the Russian River south to Tomales Bay and Dillon Beach in Marin County. This area includes most of the population and accounts for the majority of calls for service in the Coastal Zone. Sonoma County Fire District responds to 750 calls per year for medical emergencies, with the majority of these calls related to rescue and emergency medical services for visitors to the Coastal Zone. Maintaining Sonoma County Fire District's 24-hour paid staff of emergency medical technicians and paramedics is an important component of providing the public with safe access to the Sonoma Coast.

5.1 Goal, Objectives, and Policies

Goal C-PF-5: **Ensure that adequate fire protection and emergency medical services are provided to meet the future needs of Coastal Zone residents and visitors.**

Objective C-PF-5.1: Improve fire protection services to the Sonoma County coast.

Objective C-PF-5.2: Promote cooperation among fire protection and emergency medical service agencies in the area of public education and awareness, especially in those areas isolated from emergency service providers either by distance or topography.

Objective C-PF-5.3: Encourage more effective use of existing fire protection and emergency medical services by emphasizing an integrated response system on the Sonoma County coast.

Objective C-PF-5.4: Maintain health, emergency medical, and other medical services to the Sonoma County coast, particularly to the South Coast.

Policy C-PF-5a: Emergency Services shall review and comment on any proposed changes in the boundaries of areas of State and local responsibility for wildland fire protection, and the service boundaries of local Fire Protection Districts and volunteer fire companies.

Policy C-PF-5b: Prior to project approval, require written certification from the applicable fire service agency that the project meets or exceeds current fire regulations and that fire protection and related services customarily provided to comparable uses are adequate and available or will be available prior to occupancy for projects within the service area.

Policy C-PF-5c: Support establishment of a health clinic in Bodega Bay or another location on the southern portion of the Sonoma County coast.

Policy C-PF-5d: Continue to coordinate fire protection services and planning with all other related agencies.

Policy C-PF-5e: Support actions, including consolidation of fire districts and increased tax revenue that will provide sustainable fire protection and emergency medical services. Identify funding opportunities that will require visitor serving uses to provide support to emergency service providers that is proportional to the demand for service created by visitors to the Coastal Zone.

5.2 Programs

Program C-PF-5-P1: Establish an adequate and reliable source of funding for fire protection agencies that would provide for adequate staffing, adequate volunteer support, and purchasing and maintaining modern fire equipment. Consider new or amended impact fees for new subdivisions or development as a means of funding improved fire protection services and facilities in the Coastal Zone.

Program C-PF-5-P2: Support establishment of a regional fire protection district that provides adequate and reliable sources of funding for fire protection services.

Program C-PF-5-P3: Support the work of the County Fire Services Advisory Committee and its rural firefighting network assessment. Prepare a Fire Services Master Plan for urban and

rural areas in cooperation with the State and other fire service agencies. The Master Plan shall be incorporated into the Local Coastal Plan. The minimum contents necessary for an adequate Master Plan are:

- (1) A statement of objectives, policies, and programs.
- (2) A forecast of growth.
- (3) Projected fire protection and emergency medical service needs.
- (4) A level of service assessment.
- (5) A discussion of fire regulations and policies for “defensible space” consistent with California Coastal Act sections applicable to Environmentally Sensitive Habitat Areas (ESHAs).

6. LAW ENFORCEMENT SERVICES

Law enforcement on the Sonoma County coast is the responsibility of the California Highway Patrol, Sonoma County Sheriff's Department, and State and County Park Rangers. The Sea Ranch maintains a private security force.

The coast is a large, sparsely populated area with limited access roads and rugged terrain. As such, provision of law enforcement services is necessarily limited. Resident Sheriff deputies are stationed at The Sea Ranch, Fort Ross, Timber Cove, and Bodega Bay. They investigate criminal complaints and respond to service calls, including search and rescue calls. Each deputy is on call five days a week and deputies alternate days off. Manpower is very limited.

The California Highway Patrol (CHP) has no regular beat along the Sonoma Coast. The traffic levels and accident rates are too low to merit one, and the region is too remote for efficient deployment of manpower. The CHP responds to accidents or other service calls on coastal roadways, but response times vary depending on where officers are and what else is happening at the time the call comes in.

State and County Park Rangers enforce park regulations which include vehicle parking, camping, and park use restrictions. They also render assistance and respond to emergencies on State and County park property.

Park Ranger staffing at State and County Parks on the Sonoma County coast in 2015 was as follows:

- (1) Bodega Bay Area Regional Parks (Doran and Westside Parks): 5 rangers
- (2) North Coast Regional Parks (Stillwater Cove and Gualala Point): 2 rangers
- (3) Salt Point State Park and Kruse Rhododendron Preserve, and Fort Ross State Historic Park (State): 3 rangers
- (4) Sonoma Coast State Beach, Armstrong State Reserve, and Austin Creek State Recreation Area (State): 7 rangers

New development on the coast will increase pressure for additional law enforcement protection by the County Sheriff and CHP. Residents in rural subdivisions often do not realize that urban emergency response times cannot be provided at isolated locations in rural areas, and become dissatisfied with the service levels. Even existing service levels cannot be maintained with an increase in service calls unless additional manpower is available.

Parking management is another law enforcement responsibility which may increase as a result of implementation of this Local Coastal Plan. Policies call for closing small or poorly located parking turnouts, prohibiting parallel parking along parts of State Highway 1, and enforcing parking restrictions. Only park rangers presently enforce parking restrictions, and their responsibility is limited to park lands. On peak weekends when park rangers are busiest with service calls and parking problems are greatest, parking enforcement receives low priority and little attention. The Sheriff and CHP currently do not enforce parking, since there is only one restricted parking area along Highway 1.

Acquisition and development of additional park land and public accessways, mandated by the California Coastal Act, will require increases in park rangers and other staff to maintain and operate them. The expected growth in park use will also cause an increase in ranger responsibilities. Law enforcement agencies are concerned about these expected increases in responsibilities. However, they have little recourse other than to request additional staff when service levels deteriorate. One option would be to pursue State funds for law enforcement services needed to patrol the new park land and public accessways.

6.1 Goal, Objective, and Policy

Goal C-PF-6: **Ensure that law enforcement services are provided to meet the future needs of Coastal Zone residents and visitors.**

Objective C-PF-6.1: Improve law enforcement services to the Sonoma County coast, particularly patrolling State Highway 1, parks, and public accessways.

The following policy shall be used to achieve these objectives:

Policy C-PF-6a: Encourage an increase in traffic patrol of State Highway 1 through use of a CHP helicopter and any other feasible means.

7. SOLID WASTE MANAGEMENT SERVICES

The Sonoma County Waste Management Agency (SCWMA) is the joint powers authority of the nine incorporated cities (Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, and Windsor) and the County of Sonoma, and this agency manages waste diversion throughout the County per AB 939. Along with standard waste diversion, the programs that SCWMA provides include household hazardous waste removal, composting, wood waste recycling, planning, and education.

Along the Sonoma County coast north of the Russian River/Jenner, solid waste collected by a licensed hauler is delivered to the Annapolis Transfer Station, from which it is transferred to the Central Disposal Site in Petaluma. Solid waste hauled by self-haul customers could be taken to the Annapolis Transfer Station or the Guerneville Transfer Station, from which it is transferred to the Central Disposal Site. On the coast south of the Russian River, solid waste collected by a licensed hauler is delivered to the Guerneville Transfer Station or directly to the Central Disposal Site. Solid waste hauled by self-haul customers would likely be taken to the Guerneville Transfer Station and could be taken directly to the Central Disposal Site. In 2013, the County entered into a long-term (effective April 1, 2015 for a 20-year term) Master Operations Agreement with Republic Services of Sonoma County, Inc. for operations of the Central Disposal Site and the County's solid waste transfer stations (Sonoma, Healdsburg, Guerneville, and Annapolis).

State law requires cities and/or counties to prepare a Countywide Integrated Waste Management Plan (CoIWMP) to identify and reserve sites for solid waste facilities, and ensure that land uses adjacent to or near solid waste facilities are compatible with those facilities. Sonoma County, in cooperation with the cities in the County, prepared a CoIWMP in 1994. The most recent amendment to the CoIWMP was approved by the California Department of Resources Recycling and Recovery in May 2010.

The CoIWMP is the principal planning document for solid waste management in the County. Solid waste management facilities located in unincorporated areas, including landfills and transfer stations, are designated in the Land Use Element. Issues pertaining to solid waste management addressed in the CoIWMP include:

- (1) The need to temporarily close the Central Landfill and transition from a landfill based system to an outhaul based system (truck and/or rail transport) due to the expense and regulatory uncertainty associated with expanding the Central Landfill and securing flow-control agreements from the cities.
- (2) The need to accommodate the sludge disposal needs of wastewater treatment facilities serving both cities and unincorporated areas; and other types of waste matter, including compostable yard waste and organic matter, recyclable inorganic products (plastic, glass, metal, etc.) and non-compostable organic matter, by treating them as a resource rather than a waste product.
- (3) Reduction of the quantity of waste deposited in landfills by 50% or greater after 2000, based on waste generation rates of 1990.

The CoIWMP contains goals, policies, and short, medium, and long-range objectives, together with measures designed to guide solid waste management and disposal actions of the County and other applicable agencies. The Public Facilities and Services Element is intended to complement the adopted policies of the CoIWMP and any subsequent amendments thereto.

7.1 Goal, Objective, and Policy

Goal C-PF-7: Ensure that solid waste management facilities are sited to minimize adverse impacts on the Coastal Zone environment.

Objective C-PF-7.1: Locate solid waste management facilities to minimize adverse effects on natural and scenic resources.

Policy C-PF-7a: The application of biosolids generated in Sonoma County to agricultural lands in the County shall be allowed if it meets all of the following criteria. In the event that one or more of the criteria are not met, a Local Coastal Plan amendment shall be required.

- (1) The project's primary purpose is to enhance agricultural use. The rate of biosolid application shall be designed to enhance existing agricultural operations or designed in conjunction with a detailed management plan for proposed agricultural use.
- (2) The rate of biosolid application shall not result in any future limitations on the potential agricultural use of the area of application.
- (3) The project shall be subject to the approval of the applicable Regional Water Quality Control Board.
- (4) A use permit and, if necessary, a solid waste facility permit, shall be obtained.
- (5) A permit shall be obtained from the local solid waste enforcement agency.
- (6) The biosolids to be applied to agricultural lands shall be limited to those originating from an approved Sonoma County biosolids source.
- (7) The project shall include provisions for periodic review and evaluations of long-term impacts on soils, water, and agricultural production.
- (8) The site for biosolids application does not contain and is at least 100 feet from wetlands and other ESHAs.

In the event that the biosolids generated in the County is inadequate to address the agricultural demand for biosolids, the County may consider site specific Local Coastal Plan text amendments for the application of biosolids generated outside of the County, provided that the above criteria 1-5 and 7-8 are met and that:

- (1) The applicant can satisfy local public health officials that the method of production and content of the biosolids will not be detrimental to public health.
- (2) The applicant demonstrates that traffic and other impacts of the proposed project are mitigated to the maximum extent feasible.
- (3) The applicant demonstrates that there are no alternative sources of biosolids in the County.
- (4) The applicant demonstrates as part of the analysis that solid waste management facilities will not have a significant adverse effect on coastal resources and will mitigate against any potential impacts.

7.2 Program

Program C-PF-7-P1: Encourage and seek funding from the Economic Development Board and Visitor Tourism Bureau for the siting and development of publicly accessible restrooms, waste receptacles, and potable water.

8. PUBLIC UTILITIES AND TELECOMMUNICATIONS

The Land Use Element designates existing public utilities as Public/Quasi-Public. Public utilities such as electricity, natural gas, broadband, and telephone services, require transmission and maintenance facilities that may affect natural and scenic resources or neighborhood character. The need for expanded and improved telecommunications services such as fiber and wireless broadband on the Sonoma County coast has been identified by residents and businesses.

In October 2006, Governor Schwarzenegger signed Executive Order S-23-06 to streamline approvals for building broadband networks; ensure all government agencies are using the best technologies to serve the people; and create a broadband task force that lets experts from government and business work together to identify and eliminate obstacles to making broadband internet access ubiquitous in the State. One of the issues raised at the Local Coastal Plan public workshops at The Sea Ranch and Jenner in May and June 2013 is the need for expansion and improvement of telecommunications services, including wireless broadband, on the Sonoma and Mendocino county coasts to provide access to emergency, medical, and educational services; improve the economy; and close the gap in the fiber-optic cable between AT&T on the North Coast and Verizon on the South Coast. In June 2015 The Sea Ranch filed an application for a Coastal Permit and Use Permit to build 59.8 miles of fiber optic telecommunications network, which is now in service providing broadband to residents of The Sea Ranch.

Expansion and improvement of broadband on the Sonoma County coast would close the “digital divide” by providing equality of opportunity for rural residents and businesses to have the same information and resources provided online to urban residents; boost the coast economy by allowing large, small, and home-based businesses to have a more level playing field from which to compete for a fair share of the market; increase opportunities for education, training, and employment of residents; and save lives and improve healthcare by decreasing emergency response times and increasing opportunities for telemedicine (the remote diagnosis and treatment of patients by means of telecommunications technology).

The “Economic Development Strategy and Jobs Plan - November 2011” developed by the Sonoma County Economic Development Board includes “Strategic Objective 6 – Facilitate Broadband Development in Rural Parts of the County”. The project and associated action steps are described in the “Economic Development Strategy and Jobs Plan” as follows:

Access to broadband is becoming increasingly important to rural areas of the county, particularly for businesses such as hospitality, wine, agriculture, food processing and professional services. State funding has become available for consortia to participate in consortiums to develop three year plans for broadband deployment (training, promotion, and adoption) and there soon may be funds available for “middle mile” and “last mile” deployment. The County has joined with the North Bay North Coast Broadband Consortium

(NBNCBC) in their planning efforts, and should position itself to seek funds for middle and last mile broadband deployment locally, as well as be prepared for funds that may arise for further service. Extending broadband services into unserved and underserved areas would greatly benefit the current population of tourist destination wineries, creative professionals, and others, and provide opportunities as infrastructure needed for economic development is made available.

8.1 Goal, Objective, and Policy

Goal C-PF-8: Provide access to broadband telecommunications throughout the Coastal Zone.

Objective C-PF-8.1: Extend broadband services into unserved and underserved areas in the Coastal Zone to serve residents and tourists, and reduce greenhouse gas emissions by making telecommuting possible throughout the Coastal Zone.

The following policy shall be used to achieve this objective:

Policy C-PF-8a: Identify underserved broadband areas and support efforts of the Economic Development Board through its Access Sonoma Broadband division to coordinate countywide broadband planning and broadband deployment, grant application development, and outreach.

8.2 Initiatives

Initiative C-PF-8-I1: Encourage the providers of telecommunication services, including broadband, to expand and improve services to the Sonoma County coast, based on areas of identified need, including closure of the gap in existing fiber-optic cable between the north and south coast.

Initiative C-PF-8-I2: Support the Sonoma County Economic Development Board and the Broadband Alliance of Mendocino County in their efforts to expand and improve wireless broadband services on the Sonoma and Mendocino County coasts.

9. YOUTH AND FAMILY SERVICES

The traditional focus of the Local Coastal Plan has been on land use, housing, open space, and other land use related matters. While youth, family, and other social services are not typically considered in this context, many local jurisdictions are beginning to acknowledge the valuable contribution that these services make to a community's quality of life. Issues such as housing, recreation, and child care have a direct link to land use and applicable policies have been developed and are presented in this section. Other issues, such as neighborhood security, youth participation in government, child abuse, drug and alcohol prevention, etc. are not as directly related to land use but, nonetheless, Sonoma County recognizes the importance of these issues and will continue to solicit Federal and State funding to address a full range of health and human service programs designed to create an environment where the County's children, youth and families, senior citizens, and persons with

disabilities live in secure and healthy communities. The County would continue to support programs intended to address such significant issues as the prevention of child abuse, youth violence, and drug and alcohol use by minors; as well as those programs which enhance diversity, promote parent education and support services, affordable child care, youth recreation programs, neighborhood revitalization, school based health services, and programs which provide for the needs of low income seniors and disabled persons.

9.1 Goal, Objectives, and Policies

Goal C-PF-9: Provide a full range of health and human services to create secure and healthy communities.

Objective C-PF-9.1: Promote living conditions in homes and neighborhoods that support safety and security for residents of unincorporated areas.

Objective C-PF-9.2: Encourage the development of quality child care facilities, including large and small family child care homes, and public and private daycare centers, in order to provide a wide range of alternatives that meet the diverse needs of children and parents.

Objective C-PF-9.3: Foster a safe living environment that encourages independence, promotes opportunities for socialization, and facilitates the creation of adequate and affordable housing options for seniors and persons with disabilities that consider all levels of care, including independent living, assisted living, board and care, skilled nursing facilities, and day care options.

Policy C-PF-9a: Public spaces shall be designed to reflect the needs of children, youth, families, seniors, and persons with disabilities; and to protect their safety. In designing park and recreational facilities, recognize that accessibility will vary depending on the location and purpose of the facility, consistent with State and Federal guidelines.

Policy C-PF-9b: Consider the potential negative impacts of proposed projects involving the selling or serving of alcohol or tobacco products or any other controlled substance of a similar nature. When reviewing new proposals, consider the site's proximity to other such uses and to youth serving facilities, and consider denial of Use Permit applications that would result in negative impacts.

Policy C-PF-9c: Encourage and support the availability of sites for community based health services, including school based health services and facilities.

Policy C-PF-9d: Encourage and support the availability of sites for alcohol, drug, and mental health treatment; as well as housing for persons receiving such treatment.

Policy C-PF-9e: Encourage opportunities for safe physical activity as an important component in the design and development of parks and public spaces.

Policy C-PF-9f: Child care facilities shall be allowed in all land use designations and encouraged in underserved areas.

Policy C-PF-9g: Child care facilities shall be allowed in new housing or office/industrial developments, and required in large projects where a legal nexus between the new development and the need for childcare can be established.

Policy C-PF-9h: Consider the needs of youth in transportation planning. Seek youth participation in such decisions.

Policy C-PF-9i: New housing and public facilities which provide youth, family, and senior services shall be sited near transit stops when feasible.

Policy C-PF-9j: Consider the needs and limitations of senior citizens and persons with disabilities when planning for public transit routes and equipment.

Policy C-PF-9k: Consistent with the Land Use Element, provide seniors and persons with disabilities with access to affordable housing by continuing to assist in the planning and construction of such housing.

9.2 Program

Program C-PF-9-P1: Consider streamlining zoning regulations, for which a Local Coastal Plan Amendment would be required, and reducing fees for large family child care homes and day care centers. Cooperate with the Sonoma County Child Care Planning Council and non-governmental organizations in creating a uniform and simplified review process for childcare facilities.

9.3 Initiative

Initiative C-PF-9-I1: Collaborate with stakeholders to establish long-term goals for improving the living conditions of children, youth, families, senior citizens, and persons with disabilities; and continue to monitor available data regarding their status.

Cultural and Historic Resources Element: Table of Contents

Cultural and Historic Resources Element	2
Introduction	2
Purpose	2
Relationship to Other Elements	2
Relationship to California Coastal Act	2
Section 30244 Archaeological or paleontological resources	3
1. Cultural and Historic Resources	3
1.1 Goal, Objectives, and Policies	3
1.2 Programs	6

Cultural and Historic Resources Element

INTRODUCTION

PURPOSE

The Sonoma County Coastal Zone has a rich cultural history and contains significant archaeological and paleontological resources as well as historic structures and sites. These resources serve important social, commercial, recreational, and educational roles in the community. Cultural resources are also tied to the identity and practices of Native American peoples, and their relationship to these resources is much different than the relationship the general non-native community has to them. The Sonoma County coast is rich in cultural resources tied to the identity, history, and practices of tribal peoples, and their unique relationship to the landscape.

“Cultural resources” refers collectively to archaeological and paleontological resources, including Native American cultural and sacred sites, tribal cultural resources, artifacts, and remains. In addition “Tribal cultural resources” includes but is not limited to views, vistas, landscape features, living vegetation, and species used for cultural practices and subsistence.

“Historic resources” refers to structures, sites and artifacts associated with colonization, settlement, and development of the Coastal Zone by non-Native American cultures. Historic resources are generally structures, sites and artifacts associated with non-Native American cultures during and after the Russian and Spanish colonial periods, but these sites may also contain Native American cultural and sacred sites, tribal cultural resources, artifacts, and remains.

RELATIONSHIP TO OTHER ELEMENTS

Policies that address protection and preservation of significant archaeological, historical, and tribal cultural sites apply to all coastal development policies found in the Land Use Element as well as ground disturbing development related to the Circulation and Transit, Public Fac. Policies for protection of resources from sea level rise and the effects of climate change are found in the Public Safety Element.

RELATIONSHIP TO CALIFORNIA COASTAL ACT

The following California Coastal Act policies inform and guide goals, objectives, policies, programs, and initiatives of the Sonoma County Local Coastal Plan Cultural and Historic Resources Element:

Section 30244 Archaeological or paleontological resources

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

I. CULTURAL AND HISTORIC RESOURCES

I.1 Goal, Objectives, and Policies

GOAL C-CH-1: Protect and preserve historical, archaeological and paleontological resources, including federally and non-federally recognized California Native American Tribes (Tribes) cultural and sacred sites, tribal cultural resources, artifacts, and remains.

Objective C-CH-1.1: Establish and maintain a respectful and effective means of communicating and consulting with Tribes with regard to identification, protection, preservation of, and access to these resources.

Objective C-CH-1.2: Require coastal development projects to identify, preserve, and protect historic and Tribal cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Ensure appropriate treatment of Native American and other human remains discovered during the project.

Policy C-CH-1a: Refer all applications for coastal development permits to the Northwest Information Center at Sonoma State University to determine if the project site may contain archaeological or historic resources. If a project site is likely to have archeological, or tribal cultural resources the project is to be referred to Tribes which are traditionally and culturally affiliated with the geographic for review and response regarding whether mitigation is required to ensure there are no impacts to cultural resources.

Policy C-CH-1b: Refer applications for coastal development permits that involve the removal, demolition, or alteration of a building, structure, site, cemetery, feature, or object identified in a Historic Resource Survey to the Sonoma County Landmarks Commission for review and mitigation, with the exception of such projects within The Sea Ranch, which shall be referred to The Sea Ranch Design Committee. Measures for removal or demolition may include reuse, relocation, preparation of as-built drawings, and photo-documentation.

Policy C-CH-1c: Development projects resulting in new ground disturbance, including but not limited to building, grading, or demolition projects shall provide a study prepared by a qualified professional evaluating historical, archaeological and paleontological resources, including Native American cultural and sacred sites, tribal cultural resources, artifacts, and remains. Studies will be referred to Tribes for early and frequent comment and confirmation of adequacy. If a site is likely to have archaeological, cultural or tribal resources, a field survey and an archaeological resources report that contains the results of the survey and

includes appropriate mitigation measures shall be required. If the site is likely to have historic resources, a field survey and an historic resources report that contains an evaluation of whether the historic resources are significant under state and federal criteria shall be required.

Policy C-CH-1d: State law regarding tribal consultation shall be considered the minimum standard of review for Local Coastal Program amendments, implementation of programs and initiatives, review of coastal development permits, and CEQA review and shall follow the principles found in Policy C-CH-1e.

Policy C-CH-1e: To establish and maintain a respectful and effective means of communicating and consulting with Tribes the following principles shall be followed when evaluating coastal development projects:

- (1) Communicate and consult with federally and non-federally recognized California Native American Tribes in a manner that is considerate, respectful, and cognizant of the Tribes individual rights and interests. Seek tribal input regarding the identification of potential issues, possible means of addressing those issues, and appropriate actions, if any, to be taken by the County.
- (2) Assess the potential impact of proposed County actions on Tribal rights and interests and ensure, to the maximum extent feasible and required by law, that tribal concerns are considered before such actions are taken, such that impacts are avoided, minimized, or mitigated in conformity with Coastal Act and other applicable legal requirements.
- (3) Provide Tribes with meaningful opportunities to respond and participate in County decision-making processes that affect Tribal rights and Interests. Consult with Tribes early and often to ensure Tribal rights and interests are protected and enforced.
- (4) Acknowledge and respect both the confidential nature of information concerning cultural practices, traditions, beliefs, tribal histories, and Tribal lands, and legal protections of the confidentiality of certain tribal cultural information (e.g., Gov. Code §§ 6254(r), 6254.10, Pub. Res. Code § 21082.3(c)). The County will take all lawful and necessary steps to ensure confidential information provided by a Tribe is not disclosed without the prior written permission from the Tribe.
- (5) Encourage collaborative and cooperative relationships with Tribes in matters affecting coastal resources.
- (6) Acknowledge and seek ways to accommodate Tribes with limited financial and staffing resources, and staffing resources of the County and the California Coastal

Commission to ensure effective communication and consultation, including joint consultation with the Coastal Commission Tribal Liaison staff.

- (7) Identify and recommend means to remove procedural impediments to working directly and effectively with Tribes.
- (8) Consultation should not be viewed as a one-time, one-meeting activity, but rather an iterative process.

Policy C-CH-1f: New development shall avoid impacts to cultural resources through siting and design measures to the extent feasible or required by law. Any unavoidable impacts, disturbance, or substantial adverse changes caused by development on cultural resources shall be mitigated through measures such as preservation in place or site sampling and salvage in coordination with Tribal representatives. The preferred and required alternatives for mitigating impacts, if feasible, are avoidance or preservation in place. Consult with affected Tribe(s) on appropriate alternatives.

Policy C-CH-1g: Coastal Development Permits conditions of approval shall require~~ing~~ notification and evaluation in the event of the discovery of a burial or suspected human remains or other cultural resources, including consultation with the Most Likely Descendant as identified by the California Native American Heritage Commission, in the event that the remains are determined to be Native American.

Policy C-CH-1h: Require all known and newly discovered cultural resources to be reported to the appropriate tribe or tribal community, agency, or organization. These may include but are not limited to the California Native American Heritage Commission, the State Historical Resources Commission, or the California Office of Historic Preservation.

Policy C-CH-1i: Require all known and newly discovered cultural resources to be reported to the appropriate tribe or tribal community, agency, or organization. These may include but are not limited to the California Native American Heritage Commission, the State Historical Resources Commission, or the California Office of Historic Preservation.

Policy C-CH-1j: Ensure that cultural resources are protected from the impacts of environmental hazards, including sea level rise and climate change, especially risk from wildfire. Work with the State Historic Preservation Officer to identify actions such as mitigation and monitoring programs to protect archaeological and paleontological resources including Native American artifacts at risk from hazards such as erosion, inundation, and sea level rise in a manner consistent with the policies of the LCP and other applicable provisions of the Coastal Act.

Policy C-CH-1k: Where a project has the potential to impact a tribal cultural resource a cultural conservation easement may be utilized as a potential means of mitigation. Tribal access easements shall be encouraged.

Policy C-CH-1l: Require projects to maintain and preserve the integrity of historic structures and features associated with or may be affected by the proposed project.

I.2 Programs

Program C-CH-P1: In coordination with Tribes develop a comprehensive procedure for review of projects and activities including public land acquisitions that may impact archeological or cultural resources or have the potential to provide opportunities to increase and protect the access of the Tribes to cultural resources. This procedure should include referral processes for projects which are potentially exempt from formal consultation under state law, and identify best management practices for ensuring the protection of cultural resources.

Program C-CH-P2: Create an inventory of historic resources that are at risk from neglect and/or the effects of sea level rise and climate change. This inventory would identify preservation priorities based on historic significance, current condition, level of risk, and funding needs as well as strategies for preservation, consistent with protection of coastal natural resources.

Glossary

Unless the context clearly implies a contrary meaning or unless a rigid application of the definition would be contrary to the law, the following words, when used in the Local Coastal Plan, shall be construed as follows:

Goals, Objectives, Policies, Programs, and Initiatives

Goals: General guidelines that explain what the County seeks to achieve through Local Coastal Plan implementation.

Objectives: Statements that set forth strategies or implementation measures to help attain the stated goals.

Policies: Statements that bind or directly guide the County's actions and establish the standards of review for determining whether land use and development decisions, zoning changes, or other County actions are consistent with the Local Coastal Plan.

Programs: Ongoing or future actions necessary or potential steps for implementation of the Local Coastal Program; for example, further study and development of plans of ordinances.

Initiatives: Non-binding and/or advisory statements of intent, encouragement, or pledges of support for specific endeavors, programs, partnership or outcomes; and which may set guidelines and priorities for County actions.

Definitions and Commonly Used Terms

Abut: To touch along a border or with a projecting part; to border on.

Accessory Building: A structure that is incidental and subordinate to existing development that supports the principally permitted use on a parcel. Garages, workshops, and accessory dwelling units are examples of accessory structures in a residential land use.

Accessory Dwelling Unit: An attached or detached residential dwelling unit provided in compliance with Section 26C-325.1, which provides complete independent living facilities for one (1) or more persons, and includes separate permanent provisions for entry, living, sleeping, eating, cooking and sanitation on the same parcel as a single-family dwelling. An accessory dwelling unit may also be provided as an efficiency dwelling unit and/or a manufactured home, as defined in this section. Also known as Second Dwelling Units.

Adaptive Reuse: The process of reusing an existing building for a purpose other than which it was originally built or designed for.

Adjacent: Having a common border.

Adjoin: Lie next to or in contact with.

Affordable Housing: Housing which costs no more than 30 percent of a low or very low income household's gross monthly income. For rental housing, the residents pay up to 30 percent of gross income on full-service rent (including utilities) or the combination of rent and separate utility costs. For home ownership, residents pay up to 30 percent on the combination of mortgage payments, taxes, insurance, and utility costs.

Agricultural Area: Land used to produce food, fiber, or plant materials, and its immediate surrounding area. See Agricultural Production Area

Agricultural Employee Housing: See Farmworker Housing

Agricultural Farmstay: See Farmstays

Agricultural Land: Land designated within an agricultural land use category.

Agricultural Operation: Agricultural operation" means and includes, but shall not be limited to, the cultivation and tillage of the soil, dairying, the production, irrigation, frost protection, cultivation, growing, harvesting, processing, and storing of any agricultural commodity, including viticulture, horticulture, timber, or apiculture, the raising of livestock, fur bearing animals, fish, or poultry, and any commercial agricultural practices performed incident to or in conjunction with such operations, including preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market.

Agricultural Production Activities: Those activities directly associated with agriculture, but not including agricultural support services, processing, and visitor serving uses. This is the act of changing an agricultural product from its natural state to a different form, activities include growing, harvesting, crop storage, milking, etc.

Agricultural Production Area: Land used to produce food, fiber, or plant materials, and its immediate surrounding area.

Agricultural Support Services: Processing of food and fiber grown within the Sonoma County coastal zone, maintenance and repair of farm machinery and equipment, veterinary clinics, contract farming and farm management services, agricultural waste handling and disposal services, and other similar services that directly support agriculture within the coastal zone.

Agricultural Tourism: An activity carried out on a farm or ranch that allows members of the general public, for recreational, entertainment or educational purposes, to view or participate in agricultural activities such as farming, processing of agricultural products, ranching or similar natural activities and attractions that are directly related to the production of food or fiber.

Agriculture: The production of food, fiber, plant materials, and the raising and maintaining of livestock, horses, donkeys, and similar farm animals.

Alluvium: clay, silt, sand, gravel, or similar detrital material deposited by running water

Alternative Septic System: Also known as an alternative sewage disposal system. These are non-standard engineered septic and leach field systems that Sonoma County authorized by the most recent Onsite Wastewater Treatment Systems (OWTS) manual. Installation of these systems may require quarterly monitoring, an easement allowing the County to conduct annual monitoring of these systems, and an annual operating permit.

Alternative Transportation Mode: Transportation alternatives to travel by automobile other than public transit. Examples include bicycles, walking, and personal electric assist vehicles such as e-bikes and electric scooters.

Animal Husbandry: The raising, breeding, and maintaining of livestock, horses, donkeys, and similar farm animals. Also known as Farm Animal Production

Aquaculture: That form of agriculture devoted to the propagation, cultivation, maintenance, and harvesting of aquatic plants and animals in marine, brackish, and fresh water. "Aquaculture" does not

include species of ornamental marine or freshwater plants and animals not utilized for human consumption or bait purposes that are maintained in closed systems for personal, pet industry, or hobby purposes. Aquaculture products are agricultural products, and aquaculture facilities and land uses shall be treated as agricultural facilities and land uses in all planning and permit-issuing decisions governed by the California Coastal Act.

Aquifer: A geologic formation that stores, transmits, and yields significant quantities of water into wells and springs.

Arterial: Medium to high capacity roadway serving primarily through traffic.

Base Zone: The zoning district which describes and regulates the predominant use of the land to which additional combining districts may be applied.

Bikeway: Any facility that explicitly provides for bicycle travel. Bikeways are classified into three types denoting a degree of separation from the highway, as follows: Class I (completely separated right-of-way designated for the exclusive use of bicycles), Class II (a restricted right-of-way designated for the exclusive or semi exclusive use of bicycles), and Class III (a shared right-of-way designated by signing or stenciling on pavement).

Biosolids: Sewage sludge that has been treated, tested and shown to be capable of being used beneficially as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities.

Biotic Resource Area: Unique or significant plant or animal communities, including estuaries, fresh and salt water marshes, tideland resources, riparian corridors and certain terrestrial communities.

Bluff: A high bank or bold headland with a broad, precipitous, sometimes rounded cliff face overlooking a plain or body of water. A bluff may consist of a steep cliff face below and a more sloping upper bluff above.

Bluff Edge: The line of intersection between the steeply sloping coastal bluff face and the flat or more gently sloping coastal bluff top; or the upper termination of a coastal bluff, cliff, or seacliff. In cases where the top edge of the coastal bluff is rounded away from the face of the coastal bluff as a result of erosion processes related to the presence of the steep coastal bluff face, the coastal bluff line or edge shall be defined as that point nearest the bluff beyond which the downward gradient of the surface increases more or less continuously until it reaches the general gradient of the coastal bluff. In a case where there is a step-like feature at the top of the coastal bluff face, the landward edge of the topmost riser shall be taken to be the coastal bluff edge. Coastal bluff edges typically retreat landward due to coastal erosion, landslides, development of gullies, or by grading (cut). In areas where the coastal bluff top or coastal bluff face has been cut or notched by grading, the coastal bluff edge shall be the landward most position of either the current or historic coastal bluff edge. In areas where fill has been placed near or over the historic coastal bluff edge, the original natural coastal bluff edge, even if buried beneath fill, shall be taken to be the coastal bluff edge.

Bluff Top: The upper surface of a coastal bluff or cliff.

Bodega Harbor Tideflats: A marshy, sandy or muddy nearly horizontal coastal flatland which is alternately covered and exposed as the tide rises and falls. Vegetation is limited to algae and some other wetland vegetation.

Building Envelope: A defined location or locations on a parcel.

Build out: A theoretical level of development which assumes that every parcel of land will develop to

the maximum allowed by a plan or zoning.

Campground: An area for temporary overnight occupancy consisting of sites for tents or shelters of natural or synthetic material, unsheltered sleeping bags or bedding material, motor vehicles, motor homes, trailers, or moored vessels. Campgrounds also may include parking areas, restroom facilities, and other support amenities directly related to supporting overnight visitors using the area.

Channelization: The straightening and/or deepening of a water course for purposes of stream runoff control or ease of navigation. Channelization often includes the lining of stream banks with retaining material such as concrete.

Circulation: The movement of goods and people within a region.

Clear cutting: A method of timber harvest as defined by the California Department of Forestry and Fire Protection.

Clustered Development: Development in which a number of dwelling units are placed in closer proximity than usual, or are attached, with the purpose of retaining an expanse of undeveloped or less developed land.

Coast: The part of the land near the sea; the edge of the land.

Coastal Bluffs: Area between the cliff edge and the highest high tide line. Bluffs or cliffs are scarps or steep faces of rock, decomposed rock, sediment or soil resulting from erosion, faulting, folding or excavation. When the top edge of the cliff is rounded away from the face of the cliff, the edge shall be defined as that point nearest the cliff beyond which the downward gradient of the land surface increase more or less continuously until it reaches the general gradient of the cliff.

Coastal County: A county or city and county which lies, in whole or in part, within the coastal zone.

Coastal-Dependent Development or Use: Any development or use which requires a site on, or adjacent to, the sea to be able to function at all.

Coastal-Related Development: Any use that is dependent on a coastal-dependent development or use.

Coastal Development Permit: A permit for any development within the coastal zone that is required pursuant to subdivision (a) of Section 30600 of the California Coastal Act.

Coastal Plan: The California Coastal Zone Conservation Plan prepared and adopted by the California Coastal Zone Conservation Commission and submitted to the Governor and the Legislature on December 1, 1975, pursuant to the California Coastal Zone Conservation Act of 1972 (commencing with Section 27000).

Coastal Redevelopment: ~~Development located between public trust lands and a point 100 feet inland of the top of a coastal bluff, adjoining or near the ocean and land interface, or at very low lying elevations along the shoreline that consists of alterations including:~~

- (1) Additions to an existing structure;
- (2) Exterior and/or interior renovations; and/or
- (3) Demolition or replacement of an existing ~~coastal bluff top~~ home or other principal structure, or portions thereof, which results in either:
 - (a) Alteration and/or replacement (including demolition and renovation) of 50 percent or more of one or more major structural components including exterior walls, floor and roof structure, and/or foundation; or a 50 percent increase in gross floor area. Alterations are not additive between individual major structural components; however,

changes to individual major structural components are cumulative over time from the effective date of the Coastal Act (January 1, 1977).

(b) Demolition, renovation, alteration, or replacement of less than 50 percent of a major structural component where the proposed alteration would result in cumulative alterations exceeding 50 percent% or more of that a major structural component, taking into consideration previous alterations/replacement work undertaken and/or approved on or after the effective date of the Coastal Act (January 1, 1977); or an alteration that constitutes a less than 50 percent increase in gross floor area where the proposed alteration would result in a cumulative addition of greater than 50 percent of the floor area, taking into consideration previous additions undertaken and/or approved on or after the effective date of the Coastal Act(January 1, 1977).

In all cases, policies that apply to 'new development' shall also apply to 'redevelopment'.

Coastal Prairie and Grassland: Discontinuous grassland usually within 100 km of the coast; usually on southerly facing slopes or terraces. This habitat type is characterized by a mixture of heavily grazed, introduced annual grasses and some native perennial grasses, generally underlain by sandy to clay loam surface soils. This mapping category does not indicate pristine coastal prairie.

Coastal Woodland: Category grouping the redwood, mixed evergreen, closed cone pine, and oak woodland forests.

Coastal Zone: That land and water area of the State of California from the Oregon border to the border of the Republic of Mexico, specified on the maps identified and set forth in Section 17 of that chapter of the Statutes of the 1975-76 Regular Session enacting this division, extending seaward to the state's outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. The coastal zone does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, established pursuant to Title 7.2 (commencing with Section 66600) of the Government Code, nor any area contiguous thereto, including any river, stream, tributary, creek, or flood control or drainage channel flowing into such area.

Collector: A relatively low speed, low volume roadway which provides circulation within and between neighborhoods which is intended to collect trips from local streets and distribute them to the arterial network.

Combining District: A zoning designation which is superimposed over a base zoning district to modify the regulations in the base zoning district.

Commercial Fishing: See Marine Industrial

Community Noise Exposure Level (CNEL): CNEL is a measure of the cumulative effect of individual noise events averaged over a 24-hour period and weighted by the time of occurrence.

Compatible, Congenial, Harmonious with: As used in the land use and other elements, referring to land uses and types of development that can exist together without creating a conflict.

Conservation: The management of natural resources to prevent waste, depletion, destruction, or neglect.

Constraints: Impediments to development, such as slope instability, lack of adequate water.

Countywide: Sonoma County in its entirety; both the unincorporated areas and the Cities.

Cultivation: The act of preparing the soil for the raising of crops.

Cultural Resources: Physical evidence or place of past human activity: site, object, landscape, structure; or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it.

Cumulative Effect: The incremental effects of an individual project which shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Defensible space: A buffer zone created between a building on your property and the grass, trees, shrubs, or any wildland area that surrounds the building in order to slow or stop the spread of wildfire to protect your building from catching fire.

Critical Infrastructure: Public water infrastructure, including water utilities, such as water tanks, municipal wells, and major sewer and water service mains and pumps; transportation infrastructure, such as roads and highways; utility infrastructure, including telecommunication and electrical distribution facilities; emergency preparedness and response facilities, including police and fire stations; and public schools.

Density: As generally used in the land use element, the term refers to the number of acres per residential dwelling unit or the number of dwelling units per acre.

Development: On land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). As used in this definition, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.

Discretionary Project or Permit: A project or permit which the decision making body may approve, approve with conditions or deny.

Disruption of Habitat Values: Physical removal, destruction, damage, disturbance, fragmentation, or contamination of air, land, water, soil, and vegetation of an area which cause the plant and animal habitats in the area to be removed, replaced by other habitats, or degraded to the point where the habitats are functionally unable to support the plant and animal species originally present.

Drainage Basin: A drainage basin is any area of land where precipitation collects and drains off into a common outlet, such as into a river, bay, or other body of water.

Dunes and Coastal Strand: Coastal dunes are sandy beach materials formed into dunes by the wind. Most of the ground is bare sand, either actively moving or stabilized by a vegetative cover: low growing annual or perennial herbs with low water requirements and a high salt tolerance. (Coastal Strand is the plant community found on sandy beaches and dunes scattered along the entire coast).

Dwelling Unit: A residence containing cooking, sleeping and sanitation facilities used to house the members of a household. While Accessory Dwelling Units, Junior Accessory Dwelling Units, Farmworker and Farm Family Housing are dwelling units, they do not count towards allowed residential land use density.

Earthquake Epicenter: The point on Earth's surface directly above the focus point of where the earthquake is originating underground.

Easement: Usually the right to use property owned by another for specific purposes.

Easement; Conservation, Scenic, or Open Space: An interest in real property whereby open space is secured.

Effluent: Liquid waste or sewage discharged into a river or the sea

Embankment: A man-made ridge, bank, mound, or dike of earth, gravel, or stone that carries a road or railway or confines or holds back water in a waterway.

Emergency Service: Emergency services conducted by public agencies or private firms including the following:

- (1) Fire services including wildland fire suppression
- (2) Police services
- (3) Medical services

Energy Facility: Any public or private processing, producing, generating, storing, transmitting, or recovering facility for electricity, natural gas, petroleum, coal, or other source of energy.

Environment: The circumstances, objects, or conditions by which one is surrounded. The physical conditions including both natural and man-made, which exist within an area including land, air, water, minerals, flora, fauna, noise, and objects of historic or aesthetic significance.

Environmentally Sensitive Habitat Area: Defined by the California Coastal Act Section 30107.5 as "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."

In the Sonoma County Local Coastal Plan, environmentally sensitive habitat areas include those areas which meet one or more of the following criteria:

- (1) Habitats containing or supporting "rare and endangered" species as defined by the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service.
- (2) Perennial and intermittent rivers, streams, their tributaries, and associated riparian habitat.
- (3) Coastal tide lands and marshes.
- (4) Coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting and feeding.
- (5) Marine mammal haul out areas.
- (6) Areas used for scientific study and research concerning fish and wildlife.
- (7) Lakes and ponds including associated shoreline habitat.
- (8) Wildlife refuges and reserves.

(9) Sand dunes.

Environmental Justice: Defined by the California Coastal Act Section 30107.3 as

(a) “Environmental justice” means the fair treatment and meaningful involvement of people of all races, cultures, -incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

(b) “Environmental justice” includes, but is not limited to, all of the following:

(1) The availability of a healthy environment for all people.

(2) The deterrence, reduction, and elimination of pollution burdens for populations and communities experiencing the adverse effects of that pollution, so that the effects of the pollution are not disproportionately borne by those populations and communities.

(3) Governmental entities engaging and providing technical assistance to populations and communities most impacted by pollution to promote their meaningful participation in all phases of the environmental and land use decision making process.

(4) At a minimum, the meaningful consideration of recommendations from populations and communities most impacted by pollution into environmental and land use decisions.

Environmentally Suitable: Having minimal or insignificant adverse impact on the environment.

Environmental Review: The identification and analysis of the potential adverse impacts of a proposed development on the environment conducted pursuant to the California Environmental Quality Act and the National Environmental Policy Act for project receiving Federal funds or when required by Federal resource agencies.

Erosion: The loosening and transportation of rock and soil debris by wind, rain, or other running water or the gradual wearing away of the upper layers of the earth.

Estuary: The lower course of a river or stream where tidal influence is noticeable; the mixing zone of fresh and salt waters near the mouth of a river or stream.

Farm Animal Production: The raising, breeding, and maintaining of horses, donkeys, and similar livestock and farm animals. Also known as Animal Husbandry.

Farm Retail Sales: A small-scale retail facility for year-round sales of agricultural products grown or raised on the site or other properties owned or leased by the farm operator, and pre-packaged goods processed from onsite agricultural production, excluding alcoholic products. Examples include dairy and meat products that require refrigeration. Small-scale farm retail sales must be in compliance with the County Code. Sampling of products grown or processed on-site may be allowed with a Retail Food Facility Permit. Incidental sales of merchandise or goods not produced onsite is limited to ten percent (10%) of the floor area up to a maximum of fifty (50) square feet.

Farm Stand: An area for the temporary or seasonal sales and promotion of agricultural products that are grown or raised on the site and pre-packaged, shelf stable goods processed from onsite agricultural production, excluding alcoholic products. Examples include: produce, eggs, honey, jams, pickles, nuts, olive oil, and similar products. Farm stands must be consistent with Section 47050 of the Food and Agricultural Code and Section 113778.2 of the Public Health and Safety Code. Sampling of products grown on-site may be allowed with a Retail Food Facility Permit. Incidental sales of merchandise or goods not produced on site is limited to ten percent (10%) of the floor area up to a maximum of fifty (50) square feet.

Farmland of Local Importance: Farmland other than Prime Farmland, Farmland of Statewide

Importance, or Unique Farmland. This land may be important to the local economy due to its productivity or value, as defined by the Board of Supervisors.

Farmstay: Transient lodging accommodations containing five or fewer guestrooms in a single- family dwelling or guest quarters provided as part of a farming operation, with an on-site farmer in residence, that includes all meals provided in the price of the lodging, and that meets all of the standards in the County Code.

Farmworker Housing: A dwelling unit or dwelling units occupied by persons employed by agricultural operations, and their dependents.

Feasible: Defined by California Coastal Act Section 30108 as “That which is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal and technological factors.”

Federal Coastal Act: The Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.), as amended.

Fill: Earth or any other substance or material, including pilings placed for the purposes of erecting structures thereon, placed in a submerged area.

Fish or Wildlife Corridor: A habitat linkage that joins two or more areas of fish or wildlife habitat, allowing for fish passage or the movement of wildlife from one area to another.

Flood, 100-year: The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or one percent, chance of occurring in any given year.

Flood Control: Measures that are taken to increase the hydrologic capacity of a natural water course or to create new man-made channels or reservoirs to drain and contain precipitation that otherwise exceeds the capacity of the water course, in an effort to reduce flood damage, usually to man made improvements.

Flood Plain: The land area adjacent to a watercourse, drainage way, or creek which has been or may be covered by floodwaters. The boundaries of a flood plain are typically described in terms of the magnitude of a flood event such as the "100 year flood plain".

Floodway: The portion of a stream channel and the adjacent flood plain that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface more than one foot. The Flood Insurance Rate Maps show floodway boundaries for those streams studied as part of that program.

Fluvial: Of, pertaining to, inhabiting, or produced by the action of a river, creek, stream or other natural waterway.

Goal: A general statement of a desired end toward which an effort will be directed.

Guest Ranch: The guest ranch, also known as a dude ranch, is a type of ranch oriented towards visitors or tourism on working ranches. It is also another form of Agritourism.

Guest Quarters: Also known as a “Guest House”. An accessory building to a single family dwelling which consists of a detached living area of a permanent type of construction. A guest house may contain a full or half bathroom, but may not contain provisions for appliances or fixtures for the storage and/or preparation of food, including, but not limited to, refrigeration, dishwashers or cooking facilities. The building shall not be leased, subleased, rented or sub-rented separately from the main dwelling except that a legal, fully permitted guest house may be used as a hosted rental. The floor area of a guest house shall be a maximum of six hundred forty (640) square feet. Floor area shall

be calculated by measuring the exterior perimeter of the guest house and the length of any common walls. In the case of straw bale or similar construction, floor area may be calculated using interior dimensions. For the purpose of calculating the maximum size of a guest house, any storage area attached to the guest house, excluding garage, shall be included. A guest house shall be located closer to the primary dwelling on the subject lot than to a primary dwelling on any adjacent lot. The guest house shall not be located more than one hundred feet (100') from the primary dwelling on the subject lot, except where the planning director determines that a greater setback is appropriate in light of topography, vegetation or unique physical characteristics.

Habitat Connectivity Corridor: A linkage needed to allow movement of wildlife across the landscape.

Headway: The time interval between transit vehicles, such as trains busses or ferries, moving in the same direction on a particular route. A lower headway indicates more frequent service.

Heritage Road: A public road with unique scenic, historic, recreational, cultural, archeological and/or natural qualities that may be compromised if the road is fully improved to meet current road standards.

High Public Occupancy: A building or structure with an occupant load of 300 or more persons, as determined by the occupant load calculation in the current adopted California Building Code.

Hosted Rental: A single family dwelling, with an owner in residence, where no more than one (1) bedroom, sleeping area or guest quarters, is available, used, let or hired out for transient use, subject to standards in the County Code. See also Vacation Rental.

Household: The year round occupants of a dwelling unit.

Indemnity: Is a contractual obligation of one party to compensate the loss occurred to the other party due to the act of the indemnitor or any other party.

Impaired Surface Waters: A surface body or segment of water that does not meet applicable water quality standards of the State Water Resources Control Board.

Implementation: Actions, procedures, programs, or techniques that carry out policies.

Implementing Actions: The ordinances, regulations, or programs which implement either the provisions of the certified local coastal program or the policies of this division and which are submitted pursuant to Section 30502 of the California Coastal Act.

Incidental Sales: Sales of goods and products that are accessory and subordinate to the primary use of a property and conducted so as not to significantly change the character, appearance, or operation of the primary use.

Indicators: Quantifiable parameters and representative measurements of demographic, economic, social, environmental, and other conditions related to the quality of life and the effectiveness of General Plan goals, objectives, and policies.

Infill Development: Development of vacant or under used land (usually individual lots or left-over properties) within areas which are already largely developed.

Infrastructure: Public services and facilities, such as sewage disposal systems, other utility systems, and roads; generally refers to physical improvements as opposed to social services.

Junior Accessory Dwelling Unit: A living space not exceeding five hundred (500) square feet in size and contained entirely within a legally established bedroom within the walls of an existing, fully permitted single-family dwelling. A junior accessory dwelling unit shall include an efficiency kitchen, and may

include separate sanitation facilities or share sanitation facilities with the existing structure.

Land Use: The occupation or utilization of land or water area for any human activity or purpose.

Land Use Plan: The relevant portion of a local government's general plan, or local coastal element which are sufficiently detailed to indicate the kinds, location, and intensity of land uses, the applicable resource protection and development policies and, where necessary, a listing of implementing actions.

Lateral Accessway: An accessway that extends from the mean high tide line landward to a defined line, such as the intersection of the sand with the toe of a revetment, vertical face of a seawall, toe of a bluff, or other feature.

Lead Agency: Means the public agency which has the principal responsibility for carrying out or approving a project.

Level of Service: An evaluation of emergency response time, staffing, equipment, and emergency services offered by a fire department or organization providing initial response to emergencies.

Level of Service also refers to a method used in the past that evaluated traffic impacts based on congestion and delay. Level of Service as a metric for evaluating traffic impacts has been superseded by Vehicle Miles of Travel (VMT), which measures cumulative miles traveled by private vehicles, such as an automobile, van, pickup truck, or motorcycle. Each mile traveled by a vehicle is counted as one vehicle mile regardless of the number of persons in the vehicle.

Liquefaction: Occurs when a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress such as shaking during an earthquake or other sudden change in stress condition, in which material that is ordinarily a solid behaves like a liquid.

Live-Work Use: Conduct of a business within a dwelling unit or accessory structure by occupants of the dwelling unit and employees, with the business activities being subordinate to the residential use of the site. Live/work is distinguished from home occupation, primarily in that the use involves more intensive activities and includes employees other than the residents of the dwelling. All live/work uses shall be conducted in accordance with the County Code.

Local Agency Formation Commission (LAFCO): A County commission that reviews and evaluates all proposals for the formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts, merger of districts with cities, and setting of spheres of influence. Each county's LAFCO is empowered to approve, disapprove, or conditionally approve these proposals.

Local Area: Any of the unincorporated communities within the County or a geographic area, such as a valley, that is lesser in area than the planning area in which it is located.

Local Coastal Element: That portion of a general plan applicable to the coastal zone which may be prepared by local government pursuant to this division, or any additional elements of the local government's general plan prepared pursuant to Section 65303 of the Government Code, as the local government deems appropriate.

Local Coastal Program: A local government's (a) land use plans, (b) zoning ordinances, (c) zoning district maps, and (d) within sensitive coastal resources areas, other implementing actions, which, when taken together, meet the requirements of, and implement the provisions and policies of, the California Coastal Act at the local level.

Local Government: Any chartered or general law city, chartered or general law county, or any city and county.

Lot: See Parcel

Lot Size, Minimum: The smallest size parcel which is permitted to be created if a lot can be subdivided.

Major Employment Center: An area that is exclusively industrial and/or commercial with a total employment of 500 persons or more.

Major Subdivision: The division of any parcel or parcels of improved or unimproved land into five (5) or more parcels, pursuant to the provisions of the Subdivision Map Act (Government Code 66410 et seq) and the Subdivision Ordinance (Sonoma County Code, Chapter 25).

Marine Industrial: Land designated for or occupied by marine industrial development. The MI land use category encompasses land to accommodate a variety of commercial, light to medium industrial, and service uses which support the commercial fishing and other coastal dependent industries which depend on the marine environment and resources.

Maximum Single-event Noise Level (Lmax): Lmax is a measure that indicates the maximum noise level reached during a single event (i.e., aircraft overflight), expressed in dBA, at a specified point of measurement.

Minor Subdivision: The division of any parcel or parcels of improved or unimproved land into four (4) or fewer parcels, pursuant to the provisions of the Subdivision Map Act (Government Code 66410 et seq) and the Subdivision Ordinance (Sonoma County Code, Chapter 25).

Mitigate: To ameliorate, alleviate, or avoid to the extent reasonably feasible.

Mitigation Measure: An action or series of actions designed to avoid or lessen the extent of an adverse impact of a project, pursuant to the provisions of the California Environmental Quality Act Guidelines (14 Cal. Adm. Code Sec 15370).

Moratorium: Is a temporary suspension of an activity or a law until future events warrant lifting the suspension or issues regarding the activity have been resolved.

National Hydrography Dataset (NHD): The National Hydrography Dataset (NHD) is a combined dataset that provides hydrographic data for the United States. The NHD is the culmination of recent cooperative efforts of the U.S. Environmental Protection Agency (USEPA) and the U.S. Geological Survey (USGS). It combines elements of USGS digital line graph (DLG) hydrography files and the USEPA Reach File (RF3). The DLG Hydrography layer is primarily focused on flowing water, standing water, and wetlands. According to the USGS, these data are digital vector representations of cartographic information derived from USGS maps and related sources.

National Wetland Inventory (NWI): The NWI is a nationwide inventory of U.S. wetlands to provide biologists and others with information on the distribution and type of wetlands to aid in conservation efforts. The NWI maps show the location and type (classification) of wetlands and deepwater habitats (streams, lakes, and estuaries) based on the official FWS wetland classification system (Cowardin et al. 1979).

Natural Resource: Something (such as minerals, soil, water, sunlight, plants, or animals) that occurs in nature.

Noise: Unwanted sound produced by human activity that interferes with communication, work, rest, recreation, speech, and sleep.

Non-Conforming Use: A lawful use existing on the effective date of a zoning ordinance restriction and continuing since that date in nonconformance to the restriction.

Objective: A specific detailed statement of a desired future condition toward which the County is committed and progress is measurable.

Old Growth Forest: A forest with the following characteristics: (1) trees at least 200 years old present in the overstory, (2) storied canopy including a variety of tree species in the lower levels, (3) openings that allow light into the forest floor where dense vegetation thrives, (4) presence of snags, (5) coarse woody debris on the ground, and (5) the absence of stand-altering disturbance by humans.

Onsite Wastewater Treatment Systems: An individual wastewater treatment and dispersal system, small community collection, treatment and dispersal systems, or alternative collection and dispersal systems that use subsurface dispersal. These systems are commonly referred to as “septic systems”.

Open Space: Any parcel or area of land or water which is essentially unimproved and devoted to an open space use as defined in Section 65560(b) of the Government Code.

Overnight Accommodations, Higher Cost: Hotel, motel, and similar such overnight accommodations with an average daily room rate greater than or equal to 125% of the annual statewide average daily room rate as provided by Smith Travel Research or an analogous data source.

Overnight Accommodations, Lower Cost: Hotel, motel, and similar such overnight accommodations with an average daily room rate less than or equal to 75% of the annual statewide average daily room rate as provided by Smith Travel Research or an analogous data source.

Overnight Accommodations, Moderate Cost: Hotel, motel, and similar such overnight accommodations with an average daily room rate between 75% and 125% of the annual statewide average daily room rate as provided by Smith Travel Research or an analogous data source.

Parcel: A legally defined lot, or contiguous group of lots, in single ownership or under single control, usually considered a unit for purposes of development.

Peak Hour: For any given roadway, the daily 60-minute period during which traffic volume is highest.

Performance Standards: Standards or criteria for regulating or determining the acceptability of certain land uses based upon the performance of the use.

Permit: Any license, certificate, approval, or other entitlement for use granted or denied by any public agency which is subject to the provisions of the California Coastal Act.

Permitted Use: A typical land use that is allowed within a particular Local Coastal Plan Land Use category. A permitted use is considered to be consistent with and to further the objectives of the Local Coastal Plan and the California Coastal Act. Such a use may also be subject to performance or other development standards and approvals in the zoning ordinance.

Person: Any individual, organization, partnership, limited liability company, or other business association or corporation, including any utility, and any federal, state, local government, or special district or an agency thereof.

Pesticide: Pesticides, herbicides, rodenticides, fungicides, and all chemicals falling under Food and Agriculture Code section 12753.

Passive Recreation: Recreational use or activities that require no special or formal facilities or are natural areas. Passive recreation activities include, but are not limited to, bicycle riding, walking, hiking, bird watching, etc.

Places of Public Assembly: Meeting halls, schools, hospitals, and other associated medical facilities, mosques, temples, or other places of religious worship.

Policy: Specific statement that guides decision making in order to achieve a goal or objective.

Practical: See Feasible.

Preservation: Restoration or protection from deterioration of features having environmental, cultural, historic, or other resource value.

Principally Permitted Use: Within the context of the California Coastal Act, a principally permitted use is a single category of development identified for each land use category that clearly carries out the intent of that land use category and development associated with that use is consistent with the Coastal Act. An example of a principally permitted use would be a single family home within the Rural Residential land use. By designating development as principally permitted, such development will only be appealable to the Coastal Commission if it is otherwise appealable based on its geographic location.

Prime Agricultural Land: Those lands defined in paragraph (1), (2), (3), or (4) of subdivision (c) of Section 51201 of the Government Code.

Productive Agricultural Land: Land currently used or capable of being used for the production of food, fiber or plant materials.

Public Services: Infrastructure, including roads, sanitary sewers, storm drains and water mains and social services, including police, fire, health, schools, transit, recreation and libraries.

Public Works: (a) All production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission, except for energy facilities; (b) All public transportation facilities, including streets, roads, highways, public parking lots and structures, ports, harbors, airports, railroads, and mass transit facilities and stations, bridges, trolley wires, and other related facilities; (c) All publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any development by a special district; and (d) All community college facilities.

Public Utility Facility: A facility for the provision of water, light, heat, communications, power, or for sewage collection, treatment, or disposal.

Public Water Supplier: One of the following types of entities:

- (1) Sonoma County Water Agency
- (2) Incorporated Cities
- (3) The following suppliers for Urban Service Areas:
 - Bodega Bay Public Utility District
 - The Sea Ranch Water System
- (4) The following County-operated community systems:
 - Sonoma County Service Area 41 - Jenner
 - Sonoma County Service Area 41 - Salmon Creek
 - Timber Cove County Water District
- (5) The following other community system serving more than 500 year-round residents:
 - Russian River County Water System

(6) Any new public water suppliers which meet any of the following criteria:

Incorporated cities

Suppliers for urban service areas

County-operated community systems

Community systems serving more than 500 year-round residents

Public Water System: A connected system of pipelines, pumps, valves, treatment plants, storage tanks, reservoirs and related facilities providing water to multiple users. The California Department of Water Resources, Division of Drinking Water, defines a public water system as any that provides water for human consumption to 15 or more connections or regularly serves 25 or more people daily for at least 60 days out of the year. Public water system can include entities that provide their own water, such as schools, parks, and restaurants, as well as public water districts.

Qualified Professional: A practicing professional with experience or education needed for required technical study, assessment, scientific opinion, or peer review, as determined by the Director.

Recreation Use – Active: Swimming pools, tennis courts, golf courses, driving ranges, community centers, and similar facilities.

Recreation Use – Passive: Outdoor amenities for hiking, viewing, surfing, fishing, swimming, picnicking, non-motorized boating, trail riding, and similar activities.

Recycled Water: Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

Redevelopment Project: An activity undertaken by a Redevelopment Agency set up under State law to revitalize blighted areas as defined by the Health and Safety Code.

Residential Accessory Structure: All structures on parcels with residential land use designation other than the primary home.

Responsible Agency: As defined by the State CEQA guidelines, the term Responsible Agency includes all public agencies other than the lead agency which have discretionary approval power over a project.

Resource Agency: A federal or state agency having jurisdiction by law over natural resources affected by an activity or use. Resource agencies include the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, NOAA Fisheries, California Department of Fish and Wildlife, North Coast and San Francisco Bay Regional Water Quality Control Boards, State Water Resources Control Board, and other similar federal and state agencies.

Ridgeline: A line connecting the highest points along a ridge.

Right of Way: The strip of land required to build certain transportation and public use facilities, such as roadways, railways, and public utility lines.

Riparian: Associated with or dependent upon a river, stream or other water body.

Riparian Corridor: In general, the area occupied by rivers or streams and related plant and animal communities. A line or belt of vegetation following the course of a river or stream on the immediate banks and appearing visually and structurally separate from the surrounding landscape. Boundaries are delineated by the outer edge of riparian vegetation. Riparian vegetation consists of that vegetation in or adjacent to permanent or intermittent freshwater streams and other freshwater bodies where at

least 50 percent of the cover is made up of species such as alders, willows, cottonwoods, box elders, ferns, and blackberries. As used in the Open Space and Resource Conservation Element, the areas occupied by rivers or streams designated on **Figures C-OSRC-2a** through **C-OSRC-2k** and related plant and animal communities.

Riparian Functions: The beneficial uses of areas in and along streams, including: providing food, water, and breeding, egg deposition and nesting areas for fish, amphibians, reptiles, birds, insects, and mammals; providing protective cover, shade and woody debris to stream channels as habitat for coho salmon, steelhead, freshwater shrimp, and other protected and common aquatic-dependent species; providing movement opportunities, protective cover, and breeding, roosting, and resting habitat for terrestrial wildlife; filtering sediment and pollutants in runoff into streams; providing erosion protection for stream banks; and facilitating groundwater recharge.

Rocky Intertidal: Coastal rocky shore between the highest high tide line and the low tide line.

Rural: Areas where land use is primarily agricultural, parkland, or low density residential that are not intended for relatively high intensity urban land use.

Scenic Corridor: As designated on **Figures C-OSRC-1a** through **C-OSRC-1k** of the Open Space and Resource Conservation Element, a strip of land of high visual quality along a certain roadway.

Scenic Highway: Those roadways in Sonoma County that have been so designated by the State of California.

Scenic Landscape Unit: A landscape of special scenic importance in Sonoma County which provides important visual relief from urban densities or preserves scenic vistas at landscape level.

Sea: The Pacific Ocean and all harbors, bays, channels, estuaries, salt marshes, sloughs, and other areas subject to tidal action through any connection with the Pacific Ocean, excluding non-estuarine rivers, streams, tributaries, creeks, and flood control and drainage channels. "Sea" does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, established pursuant to Title 7.2 (commencing with Section 66600) of the Government Code, including any river, stream, tributary, creek, or flood control or drainage channel flowing directly or indirectly into such area.

Sea Level The locally corrected mean high water level referenced to the average of all the high water heights observed over the 1983-2001 National Tidal Datum Epoch at the National Oceanic and Atmospheric Administration Point Reyes Station Datum, Station ID 9415020.

Sea Level Rise The increase in the level of the world's oceans due to the effects of global warming. ~~An increase of 7 feet above the locally corrected sea level, as defined above, is used by the Local Coastal Plan for the purpose of development policies, coastal hazard evaluation, and protection of coastal resources.~~

Second Dwelling Unit: An attached or detached residential dwelling unit provided in compliance with Section 26C-325.1, which provides complete independent living facilities for one (1) or more persons, and includes separate permanent provisions for entry, living, sleeping, eating, cooking and sanitation on the same parcel as a single-family dwelling. A second dwelling unit may also be provided as an efficiency dwelling unit and/or a manufactured home, as defined in this section. Also known as Accessory Dwelling Units.

Secondary Use: As used in the General Plan land use categories, a use permitted within a special land use category based on its compatibility with the primary or predominant use therein.

Seiche: A seiche has to occur in an enclosed body of water such as a lake, bay or gulf. A seiche is a standing wave that oscillates in a lake as a result of seismic or atmospheric disturbances creating huge fluctuations of water levels.

Sensitive Coastal Resource Areas: Those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity, including the following:

- (a) Special marine and land habitat areas, wetlands, lagoons, and estuaries as mapped and designated in Part 4 of the coastal plan.
- (b) Areas possessing significant recreational value.
- (c) Highly scenic areas.
- (d) Archaeological sites referenced in the California Coastline and Recreation Plan or as designated by the State Historic Preservation Officer.
- (e) Special communities or neighborhoods which are significant visitor destination areas.
- (f) Areas that provide existing coastal housing or recreational opportunities for low- and moderate-income persons.
- (g) Areas where divisions of land could substantially impair or restrict coastal access.

Setbacks: The distance a building or use must be withdrawn from a road right-of-way, watercourse, parcel boundary or other designated feature.

Side Friction: The movement of vehicles outside of the main flow of traffic which may interrupt the efficient flow of traffic such as parking and entering or leaving driveways.

Silviculture: A branch of forestry dealing with the development and care of forests.

Single-Event Noise Exposure Level (SENEL): SENEL is a measure of the noise generated by a single aircraft overflight. It includes the loudness of the event during the time interval that the event is above the threshold level.

Single Room Occupancy Units: A cluster of residential units, each unit being substantially smaller in size than a typical apartment unit, within a residential hotel, motel, or similar facility providing sleeping or living facilities in which sanitary and kitchen facilities may be either shared within the project or provided in each unit. Single Room Occupancy Units are for the purpose of providing affordable housing, and not for the purpose of serving recreational or travel needs.

Smart Growth, Planned Growth: Development that is environmentally sensitive, economically viable, community-oriented, and sustainable. These goals are reached through planning that incorporates the following principles:

- (1) Encourage infill development of urbanized communities
- (2) Create range of housing opportunities and choices
- (3) Encourage compact building design
- (4) Protect agriculture and open space
- (5) Create walkable neighborhoods
- (6) Enable choice in transportation modes that are integrated and consistent with land use

objectives

(7) Create fair and equitable rules for development

Sonoma County Stream Identification: The Digital Line Graph (DLG) files from the National Hydrography Dataset are the primary source of stream mapping in Sonoma County. Review of the digital mapping for Sonoma County indicates that the DLG does not map all of the streams within each watershed, particularly smaller tributary streams and those in the uppermost reaches of each watershed. National Wetlands Inventory (NWI) maps are based on the location of wetland habitat and contain comprehensive information on the location and type (classification) of deepwater habitats (streams, lakes, and estuaries). NWI data is more comprehensive than the United States Geological Survey DLG Dataset for identifying the likely location of water-oriented habitat resources within the drainage network. As such, the Local Coastal Plan makes use of NWI in addition to DLG data to identify streams within the Coastal Zone.

Sound: Variations in air pressure at frequencies that the ear can detect.

Special District: Any public agency, other than a local government as defined in this chapter, formed pursuant to general law or special act for the local performance of governmental or proprietary functions within limited boundaries. "Special District" includes, but is not limited to, a county service area, a maintenance district or area, an improvement district or improvement zone, or any other zone or area, formed for the purpose of designating an area within which a property tax rate will be levied to pay for service or improvement benefiting that area.

Special Treatment Area: An identifiable and geographically bounded forested area within the coastal zone that constitute a significant habitat area, area of special scenic significance, and any land where logging activities could adversely affect public recreation area or the biological productivity of any wetland, estuary, or stream especially valuable because of its role in a coastal ecosystem.

Specimen Tree: Means a tree which has departed in some respect from the standard characteristic of the species and has developed a character of shape, size, or branch structure that gives it special interest.

Stream: For purposes of this LCP, stream shall be defined as any blue line stream as mapped by 1) USGS on the 7.5-minute quadrangle series, 2) the USGS National Hydrography Dataset (NHD), 3) the USFWS National Wetlands Inventory (NWI), or 4) any local government-approved stream resource maps. This stream definition shall be used in all LCP contexts when referring to streams. Stream data from the three statewide/national sources in addition to any high resolution local stream mapping sources shall be used to determine the location and identification of streams.

Subdivision: The division of any unit or units of improved or unimproved land, or any portion thereof, shown on the latest equalized county assessment rolls as a unit or as contiguous units contiguous units, for the purpose of purpose of lease, sale or financing, whether immediate or future.

Sustainability: That which meets our current needs without compromising the ability of future generations to meet their needs.

Sustainable yield: The amount of water that can be used without exceeding the replenishment rates over time or causing long term declines in available surface or groundwater resources.

Telecommunication Facility: Facility that sends and/or receives electromagnetic signals, including antennas and towers to support receiving and/or transmitting devices along with accessory structures, and the land on which they are all situated.

Temporary event: An activity or use that constitutes development as defined in Section 30106 of the Coastal Act; and is an activity or function of limited duration; and involves the placement of non-permanent structures; and/or involves exclusive use of a sandy beach, parkland, filled tidelands, water, streets, or parking areas which is otherwise open and available for general public use;

Traffic Analysis Zones: A statistical geographical unit for information related to traffic generation and transportation modeling.

Traffic Calming: A combination of alterations and improvements to the road network intended to reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users. The purpose of traffic calming is to reduce the speed and volume of traffic to acceptable levels for the functional class of a street and the nature of existing uses along the street in order to improve traffic safety and preserve community character.

Transient Use or Transient Occupancy: Means occupancy of a lodging facility or residence by any person other than the primary owner by concession, permit, right of access, license, gift or other agreement for a period of thirty (30) consecutive calendar days or less, counting portions of calendar days as full days.

Transit: The conveyance of persons from one place to another on a public transportation system.

Transit Center: An area that is designed for several bus and/or rail routes. Transit centers will usually have multiple passenger facilities, such as shelters and benches, and also will usually have some form of information available for the passengers, this may include a staffed information center where passengers can buy passes and get printed schedules.

Transmission line: A conductor for transmitting electrical or optical signals or electric power such as a cable or power line.

Transportation: The conveyance of goods and people from one place to another.

Transportation Demand Management (Federal Highway Administration) or Traffic Demand Management (Caltrans): Programs and strategies that reduce congestion through reduction of demand, rather than increasing capacity or supply. The goal of TDM is to reduce the number of vehicles using highway facilities while providing a wide variety of mobility options for those who wish to travel. Examples of TDM are:

- (1) High occupancy vehicle lane
- (2) Alternative work hours
- (3) Ride sharing programs
- (4) Telecommuting
- (5) Land use policies that reduce distance between jobs and housing.

Unincorporated Community: Areas within the County's jurisdiction that have some or all urban services that support urban level densities.

Urban: Contrasting with rural, pertaining to uses of land typically occurring within cities, such as high density residential, commercial, and industrial uses.

Urban Development: Development occurring within urban land use categories (urban residential, commercial, industrial and public/quasi-public categories within Urban Service Areas).

Urban Growth Boundary: A voter designated limit to the urban development of a city. No

incorporated cities or Urban Growth Boundaries are within the Coastal Zone.

Urban Service Area: The geographical area within the Urban Service Boundary that is designated for urban development on **Figures C-LU-1a** and **C-LU-1b** of the Land Use Element.

Urban Services: The full range of public services and infrastructures including sewer, water, police and fire protection, roads and transit etc.

Urban Service Boundary: A designated limit to the urban development of the cities and unincorporated communities of the County.

Use Permit: Required for the use of land or land development when required by the Zoning Ordinance, typically for projects that have potential for negative impacts on the surrounding land uses.

Short Term Rentals (Vacation Rental): A property with a single-family home intended for permanent occupancy that is occupied for transient use by any person other than the primary owner; or is otherwise occupied or used on a transient basis. Vacation rental does not include occasional home exchanges that are not otherwise subject to Transient Occupancy Tax, hosted rentals, or a bed and breakfast inn permitted and operated in accordance with the Sonoma County Zoning Code Regulations.

Vegetation Removal: Vegetation means all natural, non-cultivated growth of plant life including the root system, the stem, trunk, crown or branches or leaves or blades. Vegetation removal is the cutting, breaking, burning or uprooting of vegetation or the application of herbicide to vegetation, or the covering over of vegetation with earth or the compacting of the soil under, around or over said vegetation.

Vehicle Miles of Travel (VMT): A metric for evaluating traffic impacts by measuring or predicting cumulative miles traveled by private vehicles, such as an automobile, van, pickup truck, or motorcycle for trips associated with a project. Each mile traveled by a vehicle is counted as one vehicle mile regardless of the number of persons in the vehicle. (TECHNICAL CORRECTION)

Viable: For land uses, this means a site has the physical characteristics necessary for the intended use or development, regardless of cost or time, consistent with the provisions of the Coastal Act and Local Coastal Plan.

Visitor Serving Commercial Facility: Development that provides basic support services for visitors such as motels, restaurants, grocery stores, auto service stations, and public restrooms. Most of these facilities on the Sonoma County coast are both visitor-serving and local-serving.

Viewshed: The area visible from a defined observation point.

Visitability: A characteristic of residential development and design incorporating barrier-free design to create homes that are safe and accessible for everyone, regardless of age, physical ability, or stature.”

Wastewater: Used water discharged from any combination of domestic, industrial, commercial or agricultural activities, surface runoff / storm water, and any sewer inflow or sewer infiltration.

Watershed: The area of land that includes a particular river or lake and all the rivers, streams, and creeks that flow into it.

Water User: A person or entity whose diversion, appropriation, extraction, acquisition, storage or usage of water meets all applicable legal requirements.

Wetland: Section 30121 of the California Coastal Act defines a wetland as:

“Wetland means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens.”

More detail is provided by the California Coastal Commission Administrative Regulations (Section 13577 (b)):

“Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such

wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats.”

In the California coastal zone, the California Coastal Commission (CCC), with the assistance of the Department of Fish and Wildlife (DFW) is responsible for determining the presence of wetlands subject to regulation under the California Coastal Act. As the primary wetland consultant to the CCC, the DFW essentially relies on the United States Fish and Wildlife Service (FWS) wetland definition and classification system, with some minor changes in classification terminology, as the methodology for wetland determinations. However, one important difference in the DFW delineation process compared to the FWS process, is that the DFW only requires the presence of one attribute (e.g., hydrology, hydric soils, or hydrophytic vegetation) for an area to qualify as a wetland, as opposed to FWS and the U.S. Army Corps of Engineers who require all three attributes to be present.

Wildlife Corridor: see Fish or Wildlife Corridor

Williamson Act: The California Land Conservation Act of 1965 (as it may be amended from time to time) that allows Counties to establish agricultural preserves through agreements with property owners to maintain agricultural uses in exchange for property tax benefits.

Zoning District: A designated section of the County for which prescribed land use requirements and building and development standards are uniform.

Zoning Ordinance: An ordinance authorized by Section 65850 of the Government Code or, in the case of a charter city, a similar ordinance enacted pursuant to the authority of its charter.

AASHTO Road Classification

A system of road classification based on the intended function of roads within the context of the overall road network. Arterial roads are intended to provide high capacity and mobility between cities, and other major population and job centers. Collectors connect local homes, job, and retail centers to the arterial network. Local roads serve individual homes, farms and businesses, and feed into the collector network. The road network functional hierarchy can be further refined by subdividing collectors and arterials into major and minor subclassifications.

There are slight differences in road geometry between rural and urban road classifications. The principal difference is the proportion of each class in the road network: Urban areas contain a relatively high number of arterials, whereas rural road networks have a fewer arterial and a relatively large number of collectors. In all classifications road width is flexible, and can be modified to suit local conditions, where necessary.

The following are road width standards for two lane roads unless otherwise noted:

Rural Local Road: For roads with design speeds of less than 40 mph and volumes under 400 vehicles per day, the standard road width is 22 feet, with the exception of steep or hilly terrain, where the width may be reduced. Road width for maximum speed (60 mph) and volume (over 2000 vehicles per day) is 40 feet.

Rural Collector (Major or Minor): For roads with design speeds of less than 40 mph and volumes under 250 vehicles per day, the standard road width is 22 feet. Road width for maximum speed (60 mph) and volume (over 2000 vehicles per day) is 40 feet.

Urban Collector (Major or Minor): Standard width is the same as Rural Collectors, with additional allowances for bicycles, sidewalks, curbs, drainage, setbacks for public utilities, street lighting, and parking.

Rural Arterial (Major or Minor): For roads with design speeds of less than 55 mph and volumes under 400 vehicles per day, the standard road width is 30 feet. Road width for maximum speed (75 mph) and volume (over 2000 vehicles per day) is 40 feet. Additional width is suggested if significant truck traffic is anticipated. Arterials are often multi-lane, and may be divided. Parking and individual driveways are discouraged.

Urban Arterial (Major or Minor): For roads with design speeds of less than 45 mph, the standard road width is 30 feet. Standard road width for maximum speed (75 mph) and volume (over 2000 vehicles per day) is 40 feet. Additional width is suggested if significant truck traffic is anticipated. Arterials are often multi-lane, and may be divided. On street parking and individual driveways are discouraged. Allowances should be made for sidewalks, curbs, drainage, setbacks for public utilities, and street lighting. Where urban arterials intersect collectors or local roads, grade separations should be used when feasible.

Freeway: Design speed is in excess of 55 mph. Access is limited and the road is grade separated at all intersections. Travel and breakdown lanes are 12 feet wide. Maximum grade is 6%, with less than 3 percent preferred. Design of bridges, culverts, walls, tunnels, other structures should be in accordance with current Caltrans standards and AASHTO Standard Specification for Highway Bridges.

The following are horizontal road clearance standards:

Rural Local Road: 7 feet clearance from the edge of the traveled way to unyielding objects such as trees, buildings, or other fixed objects that might severely damage an out of control vehicle. The benefits of removing obstructions should be weighed against environmental or aesthetic impacts.

Collectors (Rural and Urban): 10 feet clearance from the edge of the traveled way to unyielding objects such as trees, buildings, or other fixed objects that might severely damage an out of control vehicle. The benefits of removing obstructions should be weighed against environmental or aesthetic impacts.

Arterial (Rural and Urban): Roadside should be clear and unobstructed as described in the AASHTO Roadside Design Guide. This standard involves detailed road specific calculations, but as a general rule, a clear zone of 20 feet is standard for roads with a 55 mph design speed.

APPENDIX A: DESIGN GUIDELINES



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX A: DESIGN GUIDELINES

TABLE OF CONTENTS

1.	COASTAL DESIGN GUIDELINES	1
1.1	Development	1
1.2	Residential Building Design	4
1.3	Commercial Building Design	5
2.	BODEGA BAY DESIGN GUIDELINES	7
2.1	Bodega Bay Core Design Guidelines	7
2.2	Bodega Bay Non-Core Design Guidelines	8
3.	HEIGHT, SITE AND BULK CRITERIA FOR THE SEA RANCH	9

This page intentionally left blank

APPENDIX A: DESIGN GUIDELINES

1. COASTAL DESIGN GUIDELINES

1.1 Development

Development shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

New Development. The following design components shall be incorporated into site planning for new development:

- (a) Open space for important historic and natural features
- (b) Pedestrian use and movement
- (c) Spaces and opportunities for social interaction with community members
- (d) Visibility of access/entrances to buildings and use areas
- (e) Landscaping

Design and Siting. The following guidelines shall be used for design and siting of new structures and development:

- (a) Structures shall be sited and designed to preserve unobstructed broad views of the ocean and minimize visual impacts.
- (b) Development in open fields shall be prohibited.
- (c) In inland valleys, development outside of existing communities shall be located on the edge of the valley or within or behind existing tree stands or groupings, leaving the valley floor and agricultural land open.
- (d) Structures shall be clustered to the extent feasible.
- (e) Structures shall be sited behind or near existing vegetation or topographic relief to screen them from view from public roads and use areas; if not possible, native trees and shrubs which will not grow to block views to the coastline but will provide full screening of structures within 5 years shall be planted.
- (f) New development shall be sited and designed to minimize removing trees. Trees shall be retained to the extent possible. Structures shall be located within or behind wooded areas, tree stands, or tree groupings to screen them from view.

- (g) On ridgelines, pruning or removing tree stands or groupings shall be prohibited if doing so would make structures more visible from public roads and use areas. Removing tree Windbreaks shall be prohibited unless it is necessary to remove diseased trees.
- (h) On hillsides, new structures shall be sited and designed such that they do not project above the hillside or silhouette against the skyline. On ridgelines, development which would project above the ridgeline shall be prohibited.

Development Scale. Development shall be designed to complement and be in scale with the site and the surrounding environment and community.

Building Height. The following criteria shall be used for building height:

- (a) West of State Highway 1: Building height shall be limited to 16 feet. An increase in height to a maximum of 24 feet shall be permitted if (a) the structure is no higher than 16 feet above grade directly across from the building site, and (b) the structure will neither affect views to the ocean or rivers nor be out of character with surrounding structures.
- (b) East of State Highway 1: Building height shall be limited to 24 feet. An increase in height to a maximum of 35 feet shall be permitted if (a) the structure is no higher than 24 feet above grade directly across from the building site, and (b) the structure will neither affect views to the ocean or rivers nor be out of character with surrounding structures.

Minimize Development Impacts. New development shall be sited and designed to minimize the impacts of noise, light, glare, and odors on adjacent properties and the larger community.

Utility Lines. All extensions of utility distribution lines to serve new development shall be placed underground.

Grading and Topography. The following guidelines shall be used for grading/topographic alteration:

- (a) Roads, buildings, and other structural improvements shall be designed and constructed to fit the natural topography.
- (b) Development shall be concentrated on level areas so that steeper hillsides are left undisturbed. Grading and development shall be discouraged on hillsides with a slope of more than 30 percent.
- (c) Grading shall be minimized to the extent necessary to site new structures.
- (d) Grading and construction shall follow the natural contours of the landscape.

- (e) Alteration of natural landforms as a result of grading, cutting, or filling shall be minimized. New development which requires grading, cutting, or filling that would significantly alter or destroy the appearance of natural landforms shall be prohibited.
- (f) On hillsides, structures shall be designed to fit the site rather than altering the natural landforms to accommodate buildings designed for level sites.
- (g) Natural landforms shall be restored as completely as possible after any permitted temporary alteration during construction.

Passive Solar. Passive solar design should be used for new development. Passive solar design involves the use of various techniques in siting and designing new buildings to capitalize on heat and light from the sun and reduce the need for mechanical and electrical systems for internal lighting, heating, and cooling. These techniques shall include placing buildings to maximize solar orientation for both winter heating and summer cooling; placing windows or other openings and reflective surfaces so that during the day natural light provides effective internal lighting (i.e., daylighting); large south-facing windows; natural shading and ventilation; and building materials that absorb heat from the sun and slowly release it to warm the building.

Impervious Surfaces. Paved and other impervious surfaces shall be minimized to allow for infiltration of stormwater to groundwater.

Agricultural Structures. Large agricultural structures shall be sited out of view. Encourage use of designs and exterior finish materials and colors that blend with the natural vegetation.

Exterior Building Material and Finishes. The following guidelines shall be used for exterior finish materials and colors:

- (a) Non-reflective, natural materials and earth colors that blend with the vegetation shall be used on the site unless the building is historic or an historic reproduction, in which case the colors shall be in keeping with the historic style.
- (b) Composition shingle and shake roofs in dark natural or earthen colors compatible with the exterior finish colors of the buildings shall be used.
- (c) Wood or shingle siding shall be used.
- (d) Metal window frames shall not be used unless they are bronze anodized aluminum or baked enamel.
- (e) Dark and non-reflective driveway materials shall be used.

Landscape Design. The following guidelines shall be used for landscaping:

- (a) Landscaping shall be used to integrate the manmade and natural environments and to screen and soften the visual impact of new development.
- (b) Landscaping shall be designed to blend in with the character of the site and area.
- (c) Existing vegetation, topography, rock outcrops, and natural water bodies shall be incorporated into the landscaping plan.
- (d) Native and drought-tolerant plant materials shall be used in landscaping, especially where it is visible from public roads.
- (e) Must meet Water Efficient Landscape Ordinance.
- (h) The following features shall be shown on the landscaping plan: outdoor lighting, signs, trash bins, fencing, utility equipment, paving, and outdoor furniture.
- (i) Landscaping shall be used to screen parking areas from view.
- (j) Planting vegetation west of State Highway 1 which could grow to block views to the coastline shall be prohibited.

Fences. Fences shall be discouraged on property lines. Fences shall be designed to be extensions of the main building, constructed of materials that complement the main building, and to be less than six feet unless they are used for screening service areas or for privacy. Fences are development subject to a coastal development permit and shall not be constructed to obstruct coastal views.

Parking. Parking areas shall be sited and designed so that they are out of view or screened from view. Screening may include planting of trees and shrubs.

Exterior Lighting. Exterior lighting shall be designed to be functional, subtle, and architecturally integrated with the style and exterior finish materials and colors of the buildings. This lighting shall be fully shielded, directed downward, and use bulbs that do not exceed 700 lumens and color temperature less than 3000 Kelvin. Light trespass shall not exceed one lux at the property line when all exterior lighting is operated. Night lighting that would increase existing ambient light levels in Environmentally Sensitive Habitat Areas (ESHAs) shall be prohibited.

1.2 Residential Building Design

The following additional guidelines shall be used for design of residential development:

- (a) Traditional architectural styles of the Sonoma County coast shall be used in older development areas and contemporary styles in newer subdivisions.

- (b) Structures shall be designed to be compatible with the characteristics of the community; and shall be related in size, scale, shape, and style to that of existing adjacent and nearby structures and to natural features.
- (c) Non-reflective, pitched roofs shall be used, and roof slopes shall be related to those on existing adjacent and nearby structures.
- (d) Accessory buildings shall be designed to be consistent with the architecture and exterior finish materials and colors of the main building.

Private Roads and Driveways. Development shall be designed for sharing of private roads and driveways.

1.3 Commercial Building Design

The following additional guidelines shall be used for design of commercial buildings:

- (a) Buildings shall be compatible with the predominant design of existing buildings in the area.
- (b) Building height shall be limited to 24 feet unless a greater height would not have an adverse impact on coastal views and there are overriding considerations.
- (c) Wood or shingle siding and natural or earth colors shall be used.
- (d) Pitched, non-reflective roofs shall be used unless the building is an historic reproduction.
- (e) Exterior lighting shall be functional, subtle, and integrated architecturally with the building style, materials, and colors.
- (f) Parking areas shall be screened from view through siting, design, and landscaping.

Signs. The following guidelines, in addition to coastal sign regulations found in the Coastal Zoning Code, shall be used for signs:

- (a) The use of outdoor signs shall be minimized.
- (b) The number of signs on a site shall be limited to one attached sign per building side which faces the site access road(s).
- (c) Signs shall be designed in terms of location, size, height, shape, color, and illumination so that they relate to and are compatible with the surrounding land uses, complement the design of existing and proposed buildings, and are compatible with nearby conforming signs. Signs shall be designed to be unobtrusive.
- (d) Signs shall be designed to be simple and easy to read.
- (e) Signs shall be designed to be vandal-proof and weather-resistant.

- (f) Signs not attached to buildings shall be of monument style and have landscaping at the base. The maximum height of monument signs shall be six feet (6') above ground level.
- (g) Signs attached to buildings shall be integral to the building design. Attaching signs on towers, spires, roofs, or roof fascias shall be avoided.
- (h) On attached signs, signs comprised of individual letters applied directly to the building surface shall be preferred over attached box or cabinet signs.
- (i) Use of struts, braces, kickbacks, or guy wires to support signs shall be avoided.
- (j) On internally illuminated signs, illumination shall be limited to letters and graphic elements with an opaque background.
- (k) On externally illuminated signs, the source of illumination shall be dark sky compliance and shielded from adjacent roads and properties.
- (l) For multiple occupancy buildings a Master Sign Program shall be developed to promote design consistency and facilitate processing permits.
- (m) Along designated scenic corridors signs shall be for onsite advertising purposed only.

2. BODEGA BAY DESIGN GUIDELINES

2.1 Bodega Bay Core Design Guidelines

New development located within the Bodega Bay Core Area shall be consistent with the Bodega Bay Core Design Guidelines in addition to the Coastal Design Guidelines, and **Policy C-OSRC-4e**. In the case of conflicts, the Bodega Bay Core Area Design Guidelines shall supersede the Coast Community Design Guidelines.

For the Bodega Bay Core Area (area including Taylor Tract and the planned residential area south of Taylor Tract; State Highway 1; and the area that was proposed for the former State Highway 1 bypass), the following design guidelines shall be used in addition to the Coastal Design Guidelines. In the case of conflicts, the Bodega Bay Core Area Design Guidelines shall supersede the Coast Community Design Guidelines.

Building Siting. Structures shall be sited and designed to take advantage of bay views without blocking bay views of neighboring structures.

Building Height. Building height shall be limited to 16 feet except that in major developments up to 15 percent of the units may exceed the height limit. Height for residential structures is measured as the vertical distance from the average level of the highest and lowest points of that portion of the lot covered by the building to the topmost point of the roof.

Building Design. The following guidelines shall be used for building design:

- (a) The traditional building forms of Sonoma County coast buildings shall be used, including Greek Revival, Salt Box, and simple cottage styles similar to existing homes.
- (b) Pitched roofs shall be used. Flat roofs may be appropriate where compatible with the roofs on existing structures.
- (c) Where a building is between two existing structures, the design of that building should act as a transition between the two existing structures.

Exterior Building Material and Finish. The following guidelines shall be used for exterior finish materials and colors:

- (a) Wood or shingle siding shall be used.
- (b) Painted exteriors in colors similar to those on structures in Bodega Bay shall be used (i.e., rust, red, white, green, beige, brown, gray, yellow, and blue). The Design Review Committee must approve other colors. Natural wood exteriors may

be intermixed with painted exteriors but shall not dominate the new development area.

- (c) Wood windows frames painted in a contrasting but harmonizing color shall be used.

Fences. Fences over three feet high shall be discouraged on property lines. Traditional picket fences shall be encouraged.

Street Width. A minimum width for paved streets shall be encouraged, consistent with circulation, safety, and parking requirements, to provide a sense of continuity between new development and the original town of Bodega Bay.

Bike Paths and Walkways. Separated bike paths and pedestrian walkways shall be required on one side of the street in areas of new development.

Setback Variation. Variation in setbacks shall be encouraged.

Detached Garages. Detached garages shall be encouraged in and adjacent to the Taylor Tract. Single-car garages may be appropriate.

2.2 Bodega Bay Non-Core Design Guidelines

Policy C-OSRC-4d: New development located within Bodega Bay outside of the Bodega Bay Core Area shall be consistent with the following Bodega Bay Non-Core Design Guidelines in addition to the Coastal Design Guidelines. In the case of conflict, these community specific guidelines shall supersede the Coast Community Design Guidelines:

- (1) The exterior of structures shall be designed to reflect the nautical character of the harbor with wooden exteriors, stained or painted white or subdued earth colors.
- (2) For heavy commercial structures, textured metal in subdued colors with proper architectural detailing and landscaping shall be encouraged to add visual interest and soften building lines.

3. HEIGHT, SITE AND BULK CRITERIA FOR THE SEA RANCH

(Adopted by Board of Supervisors' Resolution #71611, April 20, 1982)

Subsection 30610.6 (e) of the Coastal Act charges the Executive Director with the duty of specifying design criteria for the height, site and bulk of any developments visible from areas where scenic view easements have been established. The purpose of such criteria is to ensure that new development will not substantially detract from the scenic view areas identified in compliance with Subsection 30610.6 (d). Below are the criteria designated pursuant to this new portion of the Coastal Act. Enforcement of these standards shall be the responsibility of the County of Sonoma.

1. Site

- a. Structures should be located upon lots to take maximum advantage of topographical features and existing tree masses. This is particularly true of those lots nearest to Highway One, since a poorly sited structure in close proximity to a public viewing area may have a substantial adverse impact on views to the coast. When sites are designated as 'tree' or 'topo' sites, this means that special attention to the noted condition of the lot shall be incorporated into the design of the project. Similarly, 'frontage' or 'low' site designations indicate that a proposed dwelling must be placed on the identified portion of the lot (generally the point furthest away from Highway One), in order to minimize obstruction of coastal views.
- b. Definitions
 - i. Low Site - Designates lots on which the home shall be sited on the lowest portion of the lot.
 - ii. Frontage Site - Designates lots on which the house shall be sited on the portion of the lot nearest the frontage road.
 - iii. Topo Site - Designates lots on which the home shall be sited in such a manner as to promote shielding of the home from public view by the terrain.
 - iv. Tree Site - Designates lots on which the home shall be sited to promote shielding of the home from public view by hedgerows and other existing trees.

2. Height

Height is measured as follows: From the natural grade on the highest side of the improvement to the highest point of the roof or any projection therefrom.

3. Bulk

Bulk is determined by calculating the gross square footage of the proposed structure or structures (i.e., garages are included). Bulk control is basically intended to reduce visual impacts on the landscape; therefore, different categories have been developed to reflect the degree of exposure of the site under consideration. Bulk limits in each category are as follows:

Category 1: 1250 square feet (highly visually sensitive lots)

Category 2: 1760 square feet (less visually sensitive lots adjacent to Highway One)

Category 3: 2250 square feet

Absent a specific designation of either Category 1 or 2, Category 3 shall apply to all lots west of Highway One.

4. Specific Designations

Specific design criteria have been established using the definitions and policies discussed above for each lot which is both visible from a scenic view easement and subject to a design recommendation in the Commission's Overall Conditions and Findings. Subject to the exception detailed below, houses on sites for which specific design criteria have been established must conform to these designations. The County shall have the responsibility for enforcing these criteria, using whatever review process it deems most effective.

A variance to a height, site and/or bulk designation may be allowed where the County makes a written finding that the house design is consistent with Coastal Act view protection objectives. Such variances, however, shall be subject to the following restrictions:

Height and Bulk - variations in these categories shall not exceed 25% of the height or bulk limit designated for the site.

Siting - alternate siting is permissible where the designated portion of the lot is the only area feasible for installation of a septic system. However, even in this situation the siting of the house shall attempt as far as possible to conform with the site designation.

Specific Height, Site and Bulk Designations

UNIT 1	Block 1	Lots 1-4, 7-9	tree site
	Block 5	Lots 1-5	16' height, Cat 2
	Block 6	Lots 2-5, 7, 8	16' height
	Block 7	Lots 4, 6, 13, 14	tree site
UNIT 7	Block 1	Lots 1, 3-5	16' height
	Block 2	Lots 1, 1, 4-9	frontage site, 16' height, Cat 2
	Block 3	Lots 7-8	16' height
		Lots 1-4, 6-8	tree site
	Block 4	Lots 1-4, 6-8	16' height
	Block 5	Lots 1-4, 12-16	24' height
		Lots 5-7	16' height
UNIT 15		Lots 3-5	16' height
		Lots 6-7	topo site, 16' height
		Lots 9-10	16' height
UNIT 17		Lots 44-46, 48	frontage site, 16' height, Cat 2
		Lots 53-55	16' height
		Lot 56	topo site, 16' height
UNIT 18		Lots 14-15, 18-19	tree sites
		Lots 20-24	low site, 16' height
		Lots 25-28, 30, 32-33, 35	16' height
		Lot 36	24' height
		Lots 39-42	frontage site, 16' height, Cat 2
		Lot 43	16' height
		Lots 44-45	topo site, 16' height
		Lots 46-48	16' height
		Lots 97-99	tree sites, 24' height
		Lots 101-102	frontage site, 16' height, Cat 2
UNIT 21		Lots 1-4	frontage site, 16' height, Cat 2
		Lots 6-9, 12, 14, 16	16' height
		Lots 16, 17, 19-23, 25-27	24' height
		Lots 29-32, 34	16' height
		Lots 36-40	frontage site, 16' height, Cat 2
		Lot 42	tree site, 16' height, Cat 2
		Lots 43-44	frontage site, 16' height, Cat 2
		Lots 45-46	tree site, 24' height
		Lots 52-58	tree sites, 24' height
		Lots 59, 61, 65	16' height
		Lot 68	trees site
		Lots 70, 72-75, 77-83, 85, 87-92	16' height
		Lot 94	24' height

UNIT 21 (cont.)		Lots 95-98, 104-107, 109, 111-117, 119, 120, 123, 125	16' height
		Lots 127-128	16' height
		Lot 130	tree site, 24' height
		Lots 132-141-143	topo site, 24' height
		Lot 146	24' height
		Lot 147	topo site, 16' height
		Lot 148-152	16' height
		Lot 154	frontage site, 16' height
Unit 24		Lot 1	16' height
		Lots 36, 38-42	24' height
		Lots 52-54-56, 62-67, 73-76	16' height
		Lots 78-79	24' height
		Lots 81-87-89	16' height, Category 2
		Lots 95-99, 101-103, 105-112, 114-118, 120, 121, 124-127, 129-131, 133-135	16' height
		Lots 136-148	24' height
		Lots 158, 159	16' height, Category 2
Unit 28		Lot 2	frontage site, 16' height, Category 2
		Lots 4, 6, 7, 9-11	topo site, 16' height, Category 2
		Lots 15-17	16' height
		Lot 19	tree site, 24' height
		Lots 21-23, 25-28, 30-31, 33-44, 48-70, 72-78, 81-97, 99-114, 117-120	16' height
		Lot 124	24' height
		Lot 125	tree site, 24' height
		Lot 126	topo site
		Lots 128-130, 132, 135, 136, 138	tree site, 24' height
		Lots 139, 140	frontage site, 16' height, Category 2
		Lots 141-147	frontage site, 16' height, Category 1
		Lots 148-150	frontage site, 16' height

Sonoma County Local Coastal Plan

APPENDIX B: PUBLIC ACCESS PLAN



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX B: PUBLIC ACCESS PLAN

TABLE OF CONTENTS

THE SEA RANCH NORTH SUBAREA 1 (FIGURE C-PA-1A)	1
(A-1) California Coastal Trail: The Sea Ranch North SubArea	1
(A-2) Gualala Point Regional Park	2
(A-3) Gualala Point Regional Park Expansion	3
(A-4) Gualala River Water Trail	4
(A-5) Sea Ranch Bikeway	4
(A-6) Coastal Ridge Trail	5
(A-7) Blufftop Sea Ranch Access Trail	6
(A-8) The Sea Ranch Recreation Facilities	6
(A-9) Salal Sea Ranch Access Trail	7
(A-10) Del Mar Landing Ecological Reserve	7
(A-11) Walk-On Beach Sea Ranch Access Trail	8
THE SEA RANCH SOUTH SUBAREA 2 (FIGURE C-PA-1B)	10
(B-1) California Coastal Trail: The Sea Ranch South SubArea	10
(B-2) Sea Ranch Bikeway	10
(B-3) Coastal Ridge Trail	11
(B-4) Shell Beach Sea Ranch Access Trail	11
(B-5) Stengel Beach Sea Ranch Access Trail	12
(B-6) The Sea Ranch Recreation Facilities	12
(B-7) Pebble Beach Sea Ranch Access Trail	13
(B-8) Black Point Beach Sea Ranch Access Trail	13
(B-9) Black Point Loop Trail	14
(B-10) Black Point Connector Trail	15
STEWARTS POINT/HORSESHOE COVE SUBAREA 3 (FIGURE C-PA-1C)	16
(C-1) California Coastal Trail: Sea Ranch to Salt Point State Park	16
(C-2) Coastal Ridge Trail	17
(C-3) Stewarts Point Ranch & Cove	17
(C-4) Northern Red Box Coastal Access Trail 1: Fisherman Bay	18
(C-5) Northern Red Box Vertical Coastal Access Trail 2 & 3: Sandy Point	19
(C-6) Northern Red Box Coastal Access Trail 4: Unnamed Access Trail	20
(C-7) Northern Red Box Coastal Access Trail 5: Unnamed Gulch	20
(C-8) Southern Red Box Coastal Access Trail 1: Mac's Cove	21
(C-9) Southern Red Box Coastal Access Trail 2: Rocky Point	22
(C-10) Southern Red Box Coastal Access Trail 3: Small Cove	22

SALT POINT SUBAREA 4 (FIGURE C-PA-1D)	24
(D-1) California Coastal Trail: Kashia Coastal Reserve to Ocean Cove	24
(D-2) Kashia Coastal Reserve Coastal Trail	24
(D-3) Salt Point State Park Unit	25
(D-4) Salt Point State Park – Horseshoe Cove and Horseshoe Point	26
(D-5) Salt Point State Park – Deadman Gulch	26
(D-6) Salt Point State Park – Kruse Ranch Buildings	27
(D-7) Salt Point State Park – Fisk Mill Cove	27
(D-8) Kruse Rhododendron State Natural Reserve	28
(D-9) Salt Point State Park – Stump Beach	28
(D-10) Salt Point State Park – Gerstle Cove	29
TIMBER COVE/ FORT ROSS SUBAREA 5 (FIGURE C-PA-1E)	30
(E-1) California Coastal Trail: Ocean Cove to Fort Ross State Historic Park	30
(E-2) Ocean Cove Coastal Access & Boat Launch	30
(E-3) Bluff Trail: Ocean Cove to Stillwater Cove	31
(E-4) Stillwater Cove Regional Park	32
(E-5) Stillwater Cove Regional Park – North Terrace & Coastal Access Trails	33
(E-6) Stillwater Cove Regional Park – Stillwater Cove Coastal Access and Boat Launch	33
(E-7) Stillwater Cove Regional Park Expansion – Pocket Cove	34
(E-8) Timber Cove Access Easements	35
(E-9) Timber Cove Connection Trail	35
(E-10) Timber Cove Inn Coastal Access	36
(E-11) Timber Cove Inn – Bufano Statue	36
(E-12) Timber Cove Boat Landing & Campground	37
(E-13) Fort Ross Area – Offers to Dedicate	37
(E-14) Fort Ross State Historic Park Unit	38
(E-15) Fort Ross State Historic Park Unit – Windermere Point	39
(E-16) Fort Ross State Historic Park Unit – Kolmer Gulch	39
(E-17) Fort Ross State Historic Park Unit – Call Ranch	40
(E-18) Fort Ross State Historic Park Unit – Reef Campground	40
(E-19) Fort Ross State Historic Park Unit – South Reef	41
(E-20) Fort Ross State Historic Park Unit – Cardiacs Trail	41
THE HIGH CLIFFS/MUNIZ/JENNER SUBAREA 6 (FIGURE C-PA-1F)	42
(F-1) California Coastal Trail: Fort Ross State Historic Park to Bridgehaven	42
(F-2) Sonoma Coast State Park Unit	43
(F-3) Sonoma Coast State Park – Vista Trail	43
(F-4) Russian Gulch – Northern Access Trail	44
(F-5) Sonoma Coast State Park – Russian Gulch	44
(F-6) Sonoma Coast State Park – North Jenner Beach	45
(F-7) Jenner Headlands Preserve	45
(F-8) River's End	47
(F-9) Russian River Water Trail I	47

Appendix B: Public Access Plan

(F-10)	Jenner River Access	48
(F-11)	South Jenner Vista Points	48
(F-12)	Russian River Access from Highway 1 Bridge to Sawmill Gulch	49
(G-1)	Russian River Water Trail II	50
(G-2)	Riccioli Ranch	50
(G-3)	Duncans Mills Campground	51
(G-4)	Casini Family Ranch Campground	51
(G-5)	Steelhead Boulevard River Access	52
(G-6)	Rancho del Paradiso Subdivision/Freezeout Road River Access	52
(G-7)	Sonoma Coast State Park – Willow Creek – Freezeout Access	53
(G-8)	Duncans Mills River Access	54
(G-9)	Monte Rio – Willow Creek Trail	54

PACIFIC VIEW/WILLOW CREEK SUBAREA 8 (FIGURE C-PA-1H) 55

(H-1)	Russian River Water Trail III	55
(H-2)	Sonoma Coast State Park Unit	55
(H-3)	Sonoma Coast State Park – Penny Island	56
(H-4)	Sonoma Coast State Park – Russian River Access	56
(H-5)	Sonoma Coast State Park – Goat Rock Ocean Access	57
(H-6)	Sonoma Coast State Park – Blind Beach	57
(H-7)	California Coastal Trail: Bridgehaven to Carmet	57
(H-8)	Bridgehaven Trailer Park – Boat Launch	58
(H-9)	Sonoma Coast State Park – Willow Creek Area	59
(H-10)	Willow Creek Road Russian River Access	60
(H-11)	Willow Creek Environmental Campground - Russian River Access	60
(H-12)	Monte Rio – Willow Creek Trail	61
(H-13)	Sonoma Coast State Park – Dr. Joseph Memorial Trail	61
(H-14)	Wright Hill Ranch Preserve	62
(H-15)	Sonoma Coast State Park – Shell Beach	62
(H-16)	Sonoma Coast State Park – Furlong Gulch	63
(H-17)	Sonoma Coast State Park – Carlevaro Way	63
(H-18)	Sonoma Coast State Park – Wright's Beach	64
(H-19)	Sonoma Coast State Park – Duncan's Landing	64
(H-20)	Sonoma Coast State Park – Duncan's Cove	64
(H-21)	Sonoma Coast State Park – Rock Point	65
(H-22)	Sonoma Coast State Park – Gleason Beach Vista	65
(H-23)	Sonoma Coast State Park – Scotty's Creek – Gleason Beach Access	66
(H-24)	Sonoma Coast State Park – Scotty's Creek Vista Point	66
(H-25)	Sonoma Coast State Park – North Portuguese Beach	67
(H-26)	Sonoma Coast State Park – Portuguese Beach	67

BODEGA BAY SUBAREA 9 (FIGURE C-PA-1I) 68

(I-1)	Sonoma Coast State Park Unit	68
(I-2)	California Coastal Trail – Carmet to Salmon Creek	68
(I-3)	Sonoma Coast State Park – Schoolhouse Beach	69
(I-4)	Sonoma Coast State Park – North and South Carmet Beach	69

(I-5)	Sonoma Coast State Park – Marshall Gulch	70
(I-6)	Carrington Ranch	70
(I-7)	Sonoma Coast State Park – Arched Rock Vista	71
(I-8)	Sonoma Coast State Park – Coleman Beach	71
(I-9)	Sonoma Coast State Park – Miwok Beach	72
(I-10)	Sonoma Coast State Park – No-Name Beach	72
(I-11)	Sonoma Coast State Park – Rabbit Ears Beach	72
(I-12)	Sonoma Coast State Park – North Salmon Creek Beach	73
(I-13)	Sonoma Coast State Park – Bodega Bay to Sebastopol Trail	73
(I-14)	Salmon Creek Trail	73
(I-15)	California Coastal Trail: Salmon Creek to Bodega Harbor Subdivision	74
(I-16)	Sonoma Coast State Park – South Salmon Creek Beach	76
(I-17)	Sonoma Coast State Park – Bodega Dunes Campground	76
(I-18)	Bodega Coastal Prairie Trail Property	77
(I-19)	Bodega Marine Reserve and Laboratory	78
(I-20)	Sonoma Coast State Park – Bodega Head	78
(I-21)	Sonoma Coast State Park – Campbell Cove	79
(I-22)	Westside Regional Park	79
(I-23)	Spud Point Marina	80
(I-24)	Mason's Marina	80
(I-25)	Bodega Bay Sport Fishing Center	81
(I-26)	Taylor Tract Trail	82
(I-27)	Central Bodega Bay Commercial Access	82
(I-28)	Bodega Harbor Yacht Club	83
(I-29)	Birdwalk Coastal Access Trail	83
(I-30)	Doran Beach Regional Park	84
(I-31)	Links at Bodega Harbour Golf Course	85
(I-32)	California Coastal Trail: Bodega Harbor Subdivision to Marin County	86
(I-33)	Pinnacle Gulch Trail	87
(I-34)	Short-Tail Gulch Trail	87
(I-34)	Estero Ranch	88
VALLEY FORD SUBAREA 10 (FIGURE C-PA-1J)		89
(J-1)	California Coastal Trail: Bodega Harbor Subdivision to Marin County	89
(J-2)	Estero Americano Preserve	90
(J-3)	Estero Americano Water Trail	90
(J-4)	Estero Trail	91

LIST OF TABLES

Table C-PA-1:	Segments of the Bodega Bay Bicycle & Pedestrian Trail Plan Which Are Part of the California Coastal Trail	75

APPENDIX B: PUBLIC ACCESS PLAN

Note on “Status”: A status of “Existing” includes both fully developed access points as well as access points that are in development but provide some level of public access or use while in development. “Proposed” access points are not available for public use until developed. Proposed access points on privately owned land may not be used for access without permission of the landowner. “Existing” public access points may be privately controlled or have additional public use restrictions and may not be open to the general public.

THE SEA RANCH NORTH SUBAREA 1 (FIGURE C-PA-1A)

(A-1) California Coastal Trail: The Sea Ranch North SubArea

(2001 County LCP reference: pages 100 & 163; SB 908; AB 1396)

This section of the California Coastal Trail is a braided trail, including a north-south multiple use bikeway with a pedestrian-only trail closer to the ocean where feasible. There are several sections: the proposed Sea Ranch Bikeway, Gualala Point Regional

Park, two public Sea Ranch Coastal Access Trails, and potentially additional routes unidentified at this time.

Owner / Manager:	Public/Private
Status:	Existing and Proposed
Acquisition Priority:	II
Development Priority:	II
Existing Improvements:	Blufftop Trail, Walk-On Beach Trail, select trails in Gualala Point Regional Park

Proposed Improvements and Programs:

1. Designate the proposed Class I Sea Ranch Bikeway, providing safe pedestrian and bicycle facilities across the Gualala River Bridge to the southerly boundary of The Sea Ranch, as the California Coastal Trail through this subarea. See A-5 for specific proposed improvements.
2. Identify the best route from State Highway 1 through the park, to the Blufftop Trail at the southwestern boundary of Gualala Point Regional Park. The trail should be separate from the park driveway. Designate this route as California Coastal Trail. See proposed improvements for Gualala Point Regional Park (A-2).
3. Designate the existing Blufftop, and Walk-On Beach Coastal Access Trails as the California Coastal Trail.
4. Work within the provisions of the California State Resources Code (Bane Bill), and with The Sea Ranch community and other stakeholders to identify a continuous California Coastal Trail between Walk-On Beach Access Trail and the southerly boundary of the subarea.

(A-2) Gualala Point Regional Park

(2001 County LCP reference: #1, page 70; #4 page 71; and page 95)

Gualala Point Regional Park is located adjacent to the Gualala River on the northern edge of Sonoma County and The Sea Ranch. The park provides access to the coast, coastal terrace, Gualala River and estuary. Steelhead and rock-fishing, boating, picnicking, nature study, and whale watching are popular activities.

Owner / Manager:	Sonoma County Regional Parks
Status:	Existing and Proposed
Acquisition Priority:	See A-3
Development Priority:	III

Existing Improvements: 3.1-mile trail system, 21 vehicle and 8 walk-in campsites, informal picnic facilities, visitor center, restrooms, dump station, 104 day use parking stalls

Proposed Improvements and Programs:

1. Replace the Beach Restroom. The design should be consistent with the Visitor Center restroom.
2. Connect the park office and park residences to the existing park sewer system per existing Gualala Community Service District agreement when funding is available.
3. Upgrade the park office for accessibility per adopted Countywide ADA Transition Plan.
4. Study the feasibility of providing a paddle craft launch site to the Gualala River.
5. Identify the California Coastal Trail from State Highway 1 through the park to the Blufftop Trail. Develop new trail if needed to provide off-road connectivity and designate as California Coastal Trail once continuous. Install California Coastal Trail signage.

(A-3) Gualala Point Regional Park Expansion

(2001 County LCP reference: #4, page 71 & page 95; 2020 County General Plan)

Scenic redwood groves border the Gualala River from Gualala Point Regional Park and continuing upstream. Fishermen, boaters, and other day use visitors regularly use the existing informal trails on private property adjacent to the Gualala River. The Gualala River is one of the County's three largest watersheds and supports critical fisheries and other critical natural resources. The proposed park expansion includes the "Forest Trail" and "Fishing Trail" as proposed in previous County and coastal plans and provides the launch and landing sites to support the water trail. Between 1990 and 2016 there have been four unsuccessful negotiations by public and private conservation groups with two different owners of the subject lands to in part support the proposed Gualala Point Regional Park Expansion and Gualala River Water Trail (A-4).

Owner / Manager: Private
Status: Proposed
Acquisition Priority: I
Development Priority: II
Existing Improvements: Unknown

(A-4) Gualala River Water Trail

(2001 County LCP reference: #4, page 71 & page 95; 2020 County General Plan)

The Gualala River Water Trail is a water-based route for non-motorized recreational boating that is anchored by land based launch sites, camping, and picnicking facilities. Water trails provide educational and scenic experiences and are designed to accommodate boaters of all ages and abilities. With an integrated system of facilities and informational signs, good water trail programs encourage minimum-impact use and emphasize stewardship of the aquatic ecosystem and historic features.

Public and private conservation organizations have collaborated on acquisition attempts of lands to in part support the Gualala River Water Trail.

Owner / Manager:	Public/Private
Status:	Existing and Proposed
Acquisition Priority:	I
Development Priority:	II
Existing Improvements:	Unknown

Proposed Improvements and Programs:

1. Study the Gualala River Water Trail to identify an integrated system of facilities and programs to promote increased safe and responsible maximum public access to the Gualala River. Acquire easements or fee title from willing sellers along the main stem and South Fork of the Gualala River.
2. Amend the park master plan to address the water trail and expansion and support facilities. Depending upon the size and characteristics of the available land, camping opportunities should be evaluated.

(A-5) Sea Ranch Bikeway

(2001 County LCP reference: pages 163 & 166; 2010 Bikeways Plan Project 204)

The proposed Class I Bikeway connects the Sea Ranch Coastal Access Trails, Gualala Point Regional Park, The Sea Ranch community, and the community of Gualala. The Class I Bikeway will improve circulation, recreational opportunities, and safety. The Sonoma County Bicycle & Pedestrian Advisory Committee voted on October 20, 2010 to include the project in this Local Coastal Plan.

The approximately 600-foot long Gualala River Highway 1 Bridge has a narrow walkway on the side and has no shoulder or striped bike lanes. The bridge is a necessary link in the California Coastal Trail and is Project 204 in the County Bikeways Plan.

Owner / Manager: Caltrans/Private

Status: Proposed

Acquisition Priority: II

Development Priority: II

Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Require Caltrans to provide safe and accessible pedestrian and bicycle facilities by retrofit or during bridge replacement. The pedestrian and bicycle facilities should extend south to the intersection at Highway 1 at Gualala Point Regional Park and The Sea Ranch golf course.
2. Locate the Class I Bikeway within Caltrans right-of-way as much as feasible. Pursuant to the Bane Bill section of the Public Resources Code, acquire easements parallel to Highway 1 for the bikeway if needed and when funding is available.
3. Construct the bikeway. Consider designating it as the California Coastal Trail to provide an alternative route to the other public pedestrian-only trails closer to the ocean.

(A-6) Coastal Ridge Trail

(2003 Draft County ORP: Trail AB)

This multiple use trail begins at the Gualala Point Regional Park and the Gualala River and connects to the trail system at Salt Point State Park. The proposed trail would generally follow the ridge between the ocean and the South Fork of the Gualala River.

Owner / Manager: Private

Status: Proposed

Acquisition Priority: III

Development Priority: III

Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Study the feasibility of the trail to determine if the project is viable. Work with willing sellers to acquire easement access rights where required. If necessary,

manage public access within timber production zones to ensure compatibility within the land use type.

(A-7) Blufftop Sea Ranch Access Trail

(2001 County LCP reference: #5, page 71)

Access to Blufftop Trail and Walk-On Beach includes a 30-foot wide vehicular accessway to a parking area in Unit 34-A of The Sea Ranch for 10 cars; a 15-foot wide pedestrian accessway from the parking area west to the Blufftop Trail; and a 15-foot wide pedestrian easement beginning at the southern boundary of Gualala Point Regional Park and continuing for approximately three miles in a southern direction to the sandy beach at the northern end of Unit 28 just north of Walk-On Beach, together with a 15-foot wide pedestrian easement to provide a connection to Walk-On Beach to the south.

Erosion closed the trail in 2003 just south of the intersection of Walk-On Beach and in 2004 a study was initiated to evaluate options to reopen the public access route. The County obtained a license agreement from The Sea Ranch that uses private property to bypass the eroded areas in two locations. The license agreements are revocable, the bluff will continue to erode, and long-term options to protect public access should continue to be studied and pursued if feasible.

Owner / Manager:	Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	I
Existing Improvements:	3-mile trail, restroom, 10 day use parking spaces

Proposed Improvements and Programs:

1. Select alternatives for implementation in the Blufftop Coastal Access Trail Study.
2. Acquire easements or license agreements from willing sellers if needed.
3. Construct improvements to reopen trail.

(A-8) The Sea Ranch Recreation Facilities

(The Sea Ranch Comprehensive Environmental Plan 2013)

The Sea Ranch North includes four undeveloped community recreation areas and the following developed community recreation areas: 1) Del Mar Center, which consists of a community hall, meeting rooms, kitchen, pool, tennis courts, sauna, community flower garden, and picnic area; 2) One-Eyed Jack's, which consists of a playground, picnic

tables, barbeque area, and volleyball and petanque courts; 3) Dog Park; and 4) Children's Play Park. These facilities are only available for use by The Sea Ranch Association residents and their guests and are not publicly accessible.

Owner / Manager: Private
Status: Existing
Acquisition Priority: None
Development Priority: III
Existing Improvements: see description above

Proposed Improvements and Programs:

1. Support development of a publicly accessible commercial area in the vicinity of the golf course clubhouse, as shown on the 1982 Amended Precise Development Plan.

(A-9) Salal Sea Ranch Access Trail

(2001 County LCP reference: #2, page 70)

The trailhead is one-quarter mile from Gualala Point Regional Park, south on State Highway 1. The trail connects to the Blufftop Trail and to a limited pocket cove at the beach. The accessible beach area ranges from nearly non-existent to up to 500 feet in length at the lowest tide. Parking is available at The Sea Ranch Golf Course, which is publicly accessible. Erosion from surface drainage routinely damages the trail and increases the need for maintenance.

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 0.75-mile trail, bridges

Proposed Improvements and Programs:

1. Investigate options of continuing to provide a safe, low-maintenance trail to access the Bluff Top Trail.

(A-10) Del Mar Landing Ecological Reserve

(2001 County LCP reference: #3, page 70)

An access easement has been dedicated to the State Department of Fish and Wildlife to provide access to the Del Mar Ecological Reserve. The Reserve protects endangered

species and includes the tidelands and submerged lands near Del Mar Point. No formal trail has been developed, and access should remain limited due to the fragile nature of the Reserve. Due to low intensity use, the restroom and parking facilities for the Gualala Point Regional Park are sufficient to serve this informal trail.

Owner / Manager: California Department of Fish and Wildlife

Status: Existing

Acquisition Priority: None

Development Priority: II

Existing Improvements: None

Proposed Improvements and Programs:

1. Develop a public trail from Highway 1 to the Reserve. Due to low intensity use, restroom and parking facilities for the Salal Trail should be sufficient to serve this trail.
2. Develop a procedure for obtaining access permits.

(A-11) Walk-On Beach Sea Ranch Access Trail

(2001 County LCP reference: #5, page 71)

This coastal access trail includes a parking area in Unit 34-A of The Sea Ranch west of State Highway 1, north of Leeward Way; and a 15-foot wide pedestrian trail over the common areas, crossing Leeward Road and continuing west to the Blufftop Sea Ranch Access Trail. Walk-On Beach is accessed by traveling south for approximately 500 feet on Blufftop Trail.

Erosion closed the trail in 2003 just south of the intersection of Walk-On Beach and Blufftop Trail. In 2004 a study was initiated to evaluate options to reopen the public access route. The County obtained a license agreement from The Sea Ranch Association that uses existing private property to bypass the eroded areas. The license agreements are revocable, the bluff continues to erode, and long-term options to protect the public access should continue to be studied.

Owner / Manager: Sonoma County Regional Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: 0.4-mile trail, 10-day use parking spaces, restroom

Proposed Improvements and Programs:

1. See Blufftop Sea Ranch Access Trail Proposed Improvements and Programs to reestablish access to Walk-On Beach.

THE SEA RANCH SOUTH SUBAREA 2 (FIGURE C-PA-1B)

(B-1) California Coastal Trail: The Sea Ranch South SubArea

(SB 908; AB 1396)

The California Coastal Trail does not currently exist through this SubArea. The Bane Bill prohibits requiring the dedication of land in The Sea Ranch for additional public access not identified in that legislation. Senate Bill 908, Assembly Bill 1396, and other legislation direct the state to develop the California Coastal Trail as a continuous trail primarily for pedestrians as close to the ocean as feasible.

Owner / Manager:	Private
Status:	Proposed
Acquisition Priority:	III
Development Priority:	III
Existing Improvements:	None

Proposed Improvements and Programs:

1. Work within the provisions of the Bane Bill and with The Sea Ranch community and other stakeholders to identify a continuous California Coastal Trail through the entire The Sea Ranch South SubArea. Analyze the potential for designating The Sea Ranch Bikeway and offers to dedicate an easement at The Sea Ranch Lodge, as part of the California Coastal Trail.
2. If funding is available, acquire easements if needed and construct trail.

(B-2) Sea Ranch Bikeway

(2001 County LCP reference: pages 163 &166, Bane Bill)

The proposed Class I Bikeway connects the Sea Ranch Coastal Access Trails, Gualala Point Regional Park, The Sea Ranch community, and the community of Gualala. The Class I Bikeway will improve circulation, recreational opportunities, and safety.

Owner / Manager:	Public/Private
Status:	Proposed
Acquisition Priority:	II
Development Priority:	II
Existing Improvements:	Unknown

Proposed Improvements and Programs:

1. Identify the best alignment for The Sea Ranch Bikeway, using Caltrans right-of-way as much as possible. If needed, pursuant to the Bane Bill, acquire easements parallel to Highway 1 for a Class I Bikeway, separated from motorized traffic, when funding is available.
2. Construct the bikeway. Consider designating it a multiple use route of the California Coastal Trail.

(B-3) Coastal Ridge Trail

(2003 Draft County ORP: Trail AB)

This multiple use trail begins at the Gualala River main stem and connects to the trail system at Salt Point State Park. The proposed trail would generally follow the ridge between the ocean and the South Fork of the Gualala River.

Owner / Manager:	Private
Status:	Proposed
Acquisition Priority:	III
Development Priority:	III
Existing Improvements:	Unknown

Proposed Improvements and Programs:

1. Study the feasibility of the trail to determine if the project is viable. Work with willing sellers to acquire easement access rights where required. If necessary, manage public access within timber production zones to ensure compatibility within the land use type.

(B-4) Shell Beach Sea Ranch Access Trail

(2001 County LCP reference: #6, page 71)

The Shell Beach Sea Ranch Access Trail is a pedestrian trail that connects State Highway 1 to Shell Beach in Unit 24 of The Sea Ranch. A fifteen-foot wide trail easement connects to both the northern and southern portions of Shell Beach.

Owner / Manager:	Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	None
Existing Improvements:	0.5-mile trail, restroom, 6 day use parking spaces

Proposed Improvements and Programs: None

(B-5) Stengel Beach Sea Ranch Access Trail

(2001 County LCP reference: #7, page 72)

The Stengel Beach Sea Ranch Access Trail is a pedestrian trail on a 15-foot wide easement that connects Highway One with Stengel Beach at the intersection of Units 21 and 36A.

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: III
Existing Improvements: 0.2-mile trail, restroom, 10 day use parking spaces

Proposed Improvements and Programs:

1. Add accessible picnic tables at the top of the stairs.

(B-6) The Sea Ranch Recreation Facilities

(The Sea Ranch Comprehensive Environmental Plan 2013)

The Sea Ranch South includes ten undeveloped community recreation areas and the following developed community recreation areas: 1) Moonraker Recreation Center, which consists of a pool, tennis court, and sauna; 2) Ohlson Ranch Center, which consists of meetings room, library, kitchen, pool, tennis courts, basketball and volleyball courts, sauna, picnic tables, and native plant demonstration garden; 3) Knipp-Stengel Bar, which consists of a meeting hall and theatre; 4) Hot Spot, a river swimming area with picnic tables and a barbeque area; 5) Equestrian Center for horse boarding including a riding ring, tack room, and pasture; and 6) Airstrip including private hangars. These facilities are only available for use by The Sea Ranch Association residents and their guests and are not publicly accessible.

Owner / Manager: Private
Status: Existing
Acquisition Priority: None
Development Priority: III
Existing Improvements: see description above

Proposed Improvements and Programs:

1. Support development of a publicly accessible commercial area in the vicinity of the golf course clubhouse, as shown on the 1982 Amended Precise Development Plan.

(B-7) Pebble Beach Sea Ranch Access Trail

(2001 County LCP reference: #8, page 72)

The Pebble Beach Sea Ranch Access Trail is a pedestrian trail on a 15-foot wide easement that connects Highway 1 in Unit 17 with Pebble Beach.

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 0.3-mile trail, restroom, 4 day use parking spaces
Proposed Improvements and Programs: None

(B-8) Black Point Beach Sea Ranch Access Trail

(2001 County LCP reference: #9, page 73)

The Black Point Beach Sea Ranch Access Trail includes a parking area and a 15-foot wide pedestrian easement adjoining The Sea Ranch Lodge to Black Point Beach. A staircase to the beach provides access to the beach. The access trail and parking area will be relocated as part of an expansion of The Sea Ranch Lodge. As part of the Conditions of Approval, a connecting trail easement to Black Point was previously required. See B-9 for additional detail.

Owner / Manager: Sonoma County Regional Parks
Status: Existing/Proposed
Acquisition Priority: None
Development Priority: None
Existing Improvements: 0.2-mile trail, staircase, restroom, 10 day use parking spaces

Proposed Improvements and Programs:

1. Maintain scenic views from the existing or proposed relocated parking area and trail.
2. Require new leach fields to be set back from the relocated parking area and trail by a minimum of 50 feet.

3. Require adequate staff and visitor parking to avoid Sea Ranch Lodge guests from using the public access parking as overflow.
4. Create a new public parking area prior to closing the old parking area and trail.
5. Once the Black Point Loop Trail (B-9) is constructed, designate it and the Black Point Beach Sea Ranch Access Trail as the California Coastal Trail.

(B-9) Black Point Loop Trail

(2001 County LCP reference Figure V-1: None, GP2020 reference Policy OSRC-17d)

In 2009 Sonoma County approved a proposed expansion of The Sea Ranch Lodge. Article 73 of Conditions of Approval for PLP 08-0011 required The Sea Ranch Lodge to dedicate an easement for a loop trail that extends from the existing Black Point Beach Access Trail to Black Point.

Owner / Manager:	Public/Private
Status:	Proposed
Acquisition Priority:	I
Development Priority:	II
Existing Improvements:	Informal trails

Proposed Improvements and Programs:

1. Prior to the issuance of grading or building permits for the Meadow Cluster or North Cluster, the Applicant shall make an Offer of Dedication to the Sonoma County Regional Parks Department for a Black Point loop trail easement that is conceptually depicted in Attachment "K" of the Sea Ranch Lodge Expansion Initial Study. The Offer of Dedication shall be placed in escrow and released to Regional Parks simultaneously with the issuance of certificates of occupancy for the Meadow Cluster or North Cluster. Prior to occupancy of the North Cluster or Meadow Cluster, the Applicant shall cooperate with Regional Parks and the Kashia Pomo Tribe to make any needed field adjustments to the loop trail that provides safe access to the westernmost end of Black Point from the existing Black Point Trail Easement.
2. Construct the trail and provide signage.
3. Once complete, designate the Black Point Loop Trail and the Black Point Beach Sea Ranch Access Trail as the California Coastal Trail.

(B-10) Black Point Connector Trail

(2001 County LCP reference: None)

In 2009 the owner of Sea Ranch Lodge offered Coastwalk, a statewide nonprofit organization promoting the California Coastal Trail, an offer to dedicate a trail easement across The Sea Ranch Lodge property to a qualified government or nonprofit agency. The trail easement would connect the northern and southern boundary of the Sea Ranch Lodge property to provide a continuous California Coastal Trail. This offer is contingent on several conditions documented in an agreement before the trail easement can be recorded.

Owner / Manager:	Public\Private
Status:	Proposed
Acquisition Priority:	I
Development Priority:	II
Existing Improvements:	Informal trails

Proposed Improvements and Programs:

1. Once the conditions of the agreement between The Sea Ranch Lodge and Coastwalk have been met, encourage an appropriate recreation provider to work with Coastwalk and the Sea Ranch Lodge to record a trail easement including provisions for realignment for coastal bluff retreat and temporary alignments due to Lodge events.
2. Construct the trail and provide signage.
3. Designate the continuous trail through Sea Ranch Lodge property as the trail as the California Coastal Trail.

STEWARTS POINT / HORSESHOE COVE SUBAREA 3 (FIGURE C-PA-1C)

(C-1) California Coastal Trail: Sea Ranch to Salt Point State Park

(SB 908; AB 1396)

The approximate 6-mile distance through this SubArea between the southerly terminus of Sea Ranch and the northerly boundary of Salt Point State Park has been identified as an important and highly scenic connection for the California Coastal Trail by the State Coastal Conservancy and other park and conservation agencies. This area includes stunning coastal views, pristine coves, unique rock formations, and historic features. An approximately 1-mile long public trail easement was acquired in 2015 along the 6-mile long area.

Owner / Manager: Public/Private

Status: Proposed

Acquisition Priority: I

Development Priority: I

Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Work with willing land owners to acquire easements or fee title to locate the California Coastal Trail as a continuous trail, separate from motorized traffic, from the southerly boundary of Sea Ranch to the northerly boundary of the public trail easement on Stewarts Point Ranch.
2. Develop the Coastal Trail on the Stewarts Point Ranch Trail Easement. Dedicate as the Coastal Trail. See Proposed Improvements for Stewarts Point Ranch and Cove (C-3).
3. Work with willing land owners to acquire easements or fee title to locate the California Coastal Trail as a continuous trail, separate from motorized traffic, from the southerly boundary of Stewarts Point Ranch to the northerly boundary of the public trail easement on the Kashia Coastal Reserve.
4. Assess the need for trailhead and interpretive facilities at the time of dedication. Develop the trail.

(C-2) Coastal Ridge Trail

(2001 County LCP reference: none; 2003 Draft County ORP: Trail AB)

This multiple use trail begins at the Gualala River main stem and connects to the trail system at Salt Point State Park. The proposed trail would generally follow the ridge between the ocean and the South Fork of the Gualala River.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: III
Development Priority: III
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Study the feasibility of the trail to determine if the project is viable. Work with willing sellers to acquire easement access rights where needed. If needed, mitigate public access within timber production zones including temporary trail reroutes to ensure compatibility within the land use type.

(C-3) Stewarts Point Ranch & Cove

(2001 County LCP reference: #10, page 73)

The historic Stewarts Point Ranch includes the land between Sea Ranch and Salt Point State Park, much of the Stewarts Creek watershed, a portion of the South Fork Gualala River, and a very significant old growth redwood stand outside of the Coastal Zone. Many recreation and conservation entities have long identified the property as a priority location for recreation and conservation. This area has been one of the longest stretches of coast without any public access and a highly desirable destination for nature lovers and divers. The historic ranch is now in several different ownerships.

The Save the Redwoods League purchased 871 acres of the historic Stewarts Point Ranch, and in 2017 sold a conservation easement and public trail easement. They resold the property to the previous owners for continued ranching while Sonoma County Regional Parks will develop the public access trail. The trail easement connects the north and south border of the property, and has a short connector trail to a small parking area.

Owner / Manager: Private/Public
Status: Proposed
Acquisition Priority: None

Development Priority: I

Existing Improvements: Ranch roads, barns, private boat launch

Proposed Improvements and Programs:

1. Plan and develop the California Coastal Trail and small staging area on the existing public trail easement from the northern edge of the historic Stewart's Point townsite to the property boundary, approximately 0.8 miles to the north. Develop the Coastal Trail from the southern property boundary to the planned staging area. Develop the Coastal Trail from planned staging area to the northern property boundary once additional property rights are acquired from willing sellers to the north.
2. Identify the California Coastal Trail alignment through the historic ranch as a continuous trail to connect to the existing public access easement, separate from the motorized traffic and consistent with Coastal Commission's Coastal Trail siting guidelines. Acquire easements from willing sellers and construct trail.
3. Encourage the retention of active timber management on the historic Stewart's Point Ranch while providing for resource protection and maximum public access.
4. Encourage the retention of grazing in a manner that maximizes ecological health, supports the local agricultural economy, and provides for compatible recreation opportunities. Provide public education about recreation within grazing areas.

(C-4) Northern Red Box Coastal Access Trail 1: Fisherman Bay

(2001 County LCP reference: #11, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between The Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes where day use visitors dropped 1-2 dollars into when they visited before crossing the fence and walking an informal trail to the coast. The northern group of these coastal access trails had five locations. Fisherman Bay is the most northern of the eight and contains a scenic double cove.

Owner / Manager: Private

Status: Proposed

Acquisition Priority: II

Development Priority: II

Existing Improvements: None

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to the coast at Fisherman Bay through purchase of fee title or easement from a willing property owner.
2. Assess the need for related facilities at the time of dedication. Provide maximum public access in a manner compatible with retaining grazing to maximize ecological health, supports the local agricultural economy, and provides for compatible recreation opportunities. Provide public education about recreation within grazing areas.

(C-5) Northern Red Box Vertical Coastal Access Trail 2 & 3: Sandy Point

(2001 County LCP reference: #11, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between The Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes that day use visitors dropped 1-2 dollars into when they visited before crossing the fence and walking an informal trail to the coast. The northern group of these coastal access trails had five locations. The second and third most northern red box access trail was located near Sandy Point.

Owner / Manager:	Private
Status:	Proposed
Acquisition Priority:	II
Development Priority:	II
Existing Improvements:	None

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to the coast at Sand Point through purchase of fee title or an easement from willing property owners.
2. Assess the need for related facilities at the time of dedication. Provide maximum public access in a manner compatible with retaining grazing to maximize ecological health, supports the local agricultural economy, and provides for compatible recreation opportunities. Provide public education about recreation within grazing areas.

(C-6) Northern Red Box Coastal Access Trail 4: Unnamed Access Trail

(2001 County LCP reference: #11, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between The Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes that day use visitors dropped one to two dollars into when they visited before crossing the fence and walking an informal trail to the coast. The northern group of these coastal access trails had five locations. The fourth most northern red box access trail was located approximately a quarter mile south of Sandy Point and a quarter mile north of an unnamed gulch.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: II
Development Priority: II
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to the coast at the coastline halfway between Sandy Point and an unnamed gulch to the south through purchase of fee title or easements from willing sellers.
2. Assess the need for related facilities at the time of dedication. Provide maximum public access in a manner compatible with grazing to maximize ecological health and to support the local agricultural economy. Provide public education about recreation in grazing areas.

(C-7) Northern Red Box Coastal Access Trail 5: Unnamed Gulch

(2001 County LCP reference: #11, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between The Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes that day use visitors dropped 1-2 dollars into when they visited before crossing the fence and walking an informal trail to the coast. The fifth most northern red box coastal access trail was located at an unnamed gulch at the south end of a broad sandy cove, approximately half of a mile south of Sandy Point.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: II
Development Priority: II
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to the unnamed gulch at the Sandy Cove coast at the coastline halfway between Sandy Point and an unnamed gulch to the south through purchase of fee title or easements from willing sellers.
2. Assess the need for related facilities at the time of dedication. Provide maximum public access in a manner compatible with grazing to maximize ecological health and support the local agricultural economy. Provide public education about recreation in grazing areas.

(C-8) Southern Red Box Coastal Access Trail 1: Mac's Cove

(2001 County LCP reference: #11, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes that day use visitors dropped 1-2 dollars into when they visited before crossing the fence and walking an informal trail to the coast. The southern group of these coastal access trails had three locations. The northerly red box coastal access trail in the southern group was located at Mac's Cove, a third of a mile long cove just north of Rocky Point.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: II
Development Priority: II
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to Rocky Point through purchase of fee title or easement from a willing seller.
2. Assess the need for related facilities at the time of dedication.

3. Provide maximum public access in a manner compatible with grazing to maximize ecological health and support the local agricultural economy. Provide public education about recreation in grazing areas.

(C-9) Southern Red Box Coastal Access Trail 2: Rocky Point

(2001 County LCP reference: #12, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes that day use visitors dropped 1-2 dollars into when they visited before crossing the fence and walking an informal trail to the coast. The southern group of these coastal access trails had three locations. The middle coastal access trail of this group was located at Rocky Point, a scenic promontory.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: II
Development Priority: II
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to Rocky Point through purchase of fee title or easement from willing sellers.
2. Assess the need for related facilities at the time of dedication. Provide maximum public access in a manner compatible with grazing to maximize ecological health and support the local agricultural economy. Provide public education about recreation in grazing areas.

(C-10) Southern Red Box Coastal Access Trail 3: Small Cove

(2001 County LCP reference: #12, page 74)

Located on very scenic private property on the historic Stewarts Point Ranch between Sea Ranch and Horseshoe Cove, eight informal coastal access trails were closed to the public years ago due to the landowner's concerns about insurance and liability. The "Red Boxes" were red boxes that day use visitors dropped one to two dollars into when they visited before crossing the fence and walking an informal trail to the coast. The southern group of these coastal access trails had three locations. The southerly-most

red box coastal access trail was located at a sheltered, unnamed small cove, on the south side of Rocky Point.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: II
Development Priority: II
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Investigate the possibility of reestablishing public access to the unnamed small cove through purchase of fee title or easement from willing sellers.
2. Assess the need for related facilities at the time of dedication. Provide maximum public access in a manner compatible with retaining grazing to maximize ecological health, supports the local agricultural economy, and provides for compatible recreation opportunities. Provide public education about recreation within grazing areas.

SALT POINT SUBAREA 4 (FIGURE C-PA-1D)

(D-1) California Coastal Trail: Kashia Coastal Reserve to Ocean Cove

(2001 County LCP reference: page 100 & #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

The Coastal Trail through the Salt Point SubArea consists of an approximately 1-mile trail easement held by Sonoma County Regional Parks on the Kashia Coastal Reserve. Salt Point State Park has over 9 miles coastline. The California Coastal Trail is partially identified and developed, although informal trails connect the majority of the length.

Owner / Manager: Sonoma County Regional Parks/California State Parks

Status: Proposed

Acquisition Priority: None

Development Priority: I

Existing Improvements: Several trails, restrooms, and parking areas

Proposed Improvements and Programs:

1. Complete plans to align the California Coastal Trail as a continuous trail through the entire length of Salt Point SubArea. Dedicate as the Coastal Trail. See Proposed Improvements for Kashia Coastal Reserve Coastal Trail (D-2) and Salt Point State Park Unit (D-3). Develop the trail.

(D-2) Kashia Coastal Reserve Coastal Trail

(2001 County LCP reference: #13, page 74)

In 2016, the Trust for Public Lands acquired a 688-acre ranch adjacent to Salt Point State Park which includes Northern Horseshoe Cove. The land is the ancestral home of the Kashia Band of Pomo Indians of the Stewarts Point Rancheria. The purchase restores ownership of coastal lands to the Kashia which will manage the property. Public access to a future section of the California Coastal Trail was a part of the acquisition. Sonoma County Regional Parks holds a trail easement along the western side of Highway 1 from Salt Point State Park to the northern ranch boundary, approximately 1 mile in length. The trail easement includes a small parking area. The property contains vital coastal habitat, including forest and riparian woodlands, coastal meadows, and tide pools.

Owner / Manager: Kashia Band of Pomos / Sonoma County Regional Parks
Status: Proposed
Acquisition Priority: None
Development Priority: I
Existing Improvements: None

Proposed Improvements and Programs:

1. Work with the Kashia Band of Pomos and other stakeholders to plan, develop, and open the Kashia Coastal Reserve section of California Coastal Trail. Work with Caltrans to secure an encroachment permit to locate the Coastal Trail within the Highway 1 right of way only where bluff erosion and a deep ravine provides no other option.
2. Work with the Kashia Band of Pomos and other stakeholders to create interpretive signage and programs.
3. Work with California State Parks and Caltrans to connect the Kashia Coastal Reserve Coastal Trail to the planned State Park staging area approximately a quarter mile south of the Salt Point State Park boundary.

(D-3) Salt Point State Park Unit

(2001 County LCP reference: #7, page 72)

The 5,684-acre Salt Point State Park has over six miles of coastline, rocky promontories, panoramic views, kelp-dotted coves, unique geologic formations, broad coastal prairies terraces, forested hills, and pygmy forests. Popular activities include picnicking, hiking, horseback riding, mountain biking, fishing, skin and scuba diving, and camping.

The General Plan for Salt Point State Park was adopted in 1976.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: III
Existing Improvements: 20 miles of trail, 109 vehicle campsites, 1 group campsite, 10 hiker-biker campsites, 20 walk-in campsites, restrooms, day use parking

Proposed Improvements and Programs:

1. Update the park's 1976 General Plan. Evaluate the need for additional camping facilities.

2. Implement the planned trail realignment and related improvements for the California Coastal Trail and trailhead support facilities through Salt Point State Park.
3. Consider restoration or relocation of the environmental campground that was destroyed by fire.
4. Encourage the expansion of Salt Point State Park to the northeast and east to expand recreational opportunities and support resource protection.
5. Consider designation of a portion of the area to the east of Highway 1 as a State wilderness.
6. See individual proposed improvements for specific improvements such as parking, restrooms, and trails.

(D-4) Salt Point State Park – Horseshoe Cove and Horseshoe Point

(2001 County LCP reference: #14, page 74)

Two steep trails lead to the southern half of Horseshoe Cove, and one trail leads to Horseshoe Point on the coastal terrace.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: Informal trails

Proposed Improvements and Programs:

1. Develop a day use parking area and a trailhead for the California Coastal Trail. Provide trail connections to the north and south.
2. Improve access to the cove if feasible.

(D-5) Salt Point State Park – Deadman Gulch

(2001 County LCP reference: #15, page 75)

Coastal access along Deadman Gulch is available, and a mid-terrace trail connects this coastal access trail to Highway 1 near Fisk Mill Cove.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: 2-mile trail

Proposed Improvements and Programs:

1. Develop other interconnecting trails and shoreline access between Horseshoe Cove and Fisk Mill Cove. Construct bridge crossing for the California Coastal Trail.

(D-6) Salt Point State Park – Kruse Ranch Buildings

(2001 County LCP reference: #19, page 104)

The historic Kruse Ranch buildings include the Kruse Barn, old Wells Fargo office, hotel and store and are adjacent to Highway 1. There is currently no public access.

Owner / Manager: California State Parks

Status: Proposed

Acquisition Priority: None

Development Priority: III

Existing Improvements: Historic structures

Proposed Improvements and Programs:

1. Reconstruct the historic Kruse Barn, Wells Fargo office, hotel, and store structures subject to research on authenticity. Pursue adaptive reuse of these structures for interpretive facility or as a youth hostel. Relocate the trailer out of sight at the proposed park support service area to the south; or relocate it out of view of Highway 1 and use it as a park residence.
2. Develop trail connections within State lands from the historic structures to existing trails to the north, south and east.

(D-7) Salt Point State Park – Fisk Mill Cove

(2001 County LCP reference: #16, page 75)

A vertical coastal access trail from Highway 1 through a forested area leads to the rocky Fisk Mill Cove. The trail also connects to a Salt Point State Park blufftop trail that is part of the California Coastal Trail, and leads to Stump Beach to the south.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: Barbeques, picnic tables, restrooms, potable water, vista overlook, 30+ day use parking spaces

Proposed Improvements and Programs:

1. Realign and reconstruct the vertical access trails to the beach, and develop a fully accessible trail that connects to the existing Salt Point State Park Blufftop Trail as part of the California Coastal Trail. Relocate and reconstruct bridge crossings for the Coastal Trail.

(D-8) Kruse Rhododendron State Natural Reserve

(2001 County LCP reference: page 96)

Established in 1933, the 317-acre Kruse Rhododendron State Natural Reserve contains second-growth redwood, Douglas fir, grand firs, tanoaks, and an abundance of rhododendrons. Over the last several decades, Salt Point State Park has expanded to the western and southern boundaries of Kruse Rhododendron State Natural Reserve.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: 5-mile pedestrian and equestrian trail, 10 day use parking spaces

Proposed Improvements and Programs:

1. Manage the vegetation succession to promote spring time Rhododendron displays.

(D-9) Salt Point State Park – Stump Beach

(2001 County LCP reference: page 96)

A coastal access trail from State Highway 1 through a forested area leads to Stump Beach, a popular sandy beach. The trail also connects to a Salt Point State Park Blufftop Trail that is part of the California Coastal Trail.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: 0.5-mile trail, picnic tables, restroom, day use parking

Proposed Improvements and Programs: None

(D-10) Salt Point State Park – Gerstle Cove

(2001 County LCP reference: page 96)

Gerstle Cove is the largest use area within the park. Gerstle Cove provides access to the Gerstle Cove Marine Reserve, the first underwater park established in California for the complete protection of marine resources.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: Visitor center, boat launch, day use parking

Proposed Improvements and Programs: None

TIMBER COVE/ FORT ROSS SUBAREA 5 (FIGURE C-PA-1E)

(E-1) California Coastal Trail: Ocean Cove to Fort Ross State Historic Park

(2001 County LCP reference: page 100, #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

The California Coastal Trail is undefined through the north portion of this SubArea. California State Parks is planning a realignment of the Coastal Trail through Fort Ross State Historic Park. The environmental document for the project has been adopted, and project permits will be applied for when funding becomes available.

Owner / Manager: Public/Private
Status: Proposed
Acquisition Priority: I
Development Priority: II
Existing Improvements: Informal trails

Proposed Improvements and Programs:

1. Complete the realignment and improvements to the California Coastal Trail through Fort Ross State Historic Park including new trailheads, new trail, boardwalks, bridges, restoration, signage, and restrooms.
2. Complete the Timber Cove Coastal Trail Feasibility Study which seeks to identify the California Coastal Trail in the northern half of this SubArea. Acquire easements if needed and construct trail or braided trails.

(E-2) Ocean Cove Coastal Access & Boat Launch

(2001 County LCP reference: #18, pages 75-76)

Access to Ocean Cove for pedestrians and for launching small watercraft is available for a small fee. Vehicular access to the blufftop and parking near the bluff are provided. A road from the bluff to a beach on the cove provides access. Approvals associated with coastal development at this location required offers to dedicate access and trail easements and other improvements to parking.

Owner / Manager: Private
Status: Existing
Acquisition Priority: I
Development Priority: III

Existing Improvements: Private campground, boat launch, store

Proposed Improvements and Programs:

1. Support private commercial recreational activities that provide public access to the shoreline including the boat launch
2. Develop access to Stillwater Cove Regional Park, consistent with the "Offer of Dedication of an Easement" recorded October 16, 2009, Document #2009099641.
3. A Coastal Development Permit, appealable to the Coastal Commission, shall be required for permanent termination of private commercial recreational activities that provide public access, including but not limited to, the boat launch.

(E-3) Bluff Trail: Ocean Cove to Stillwater Cove

(2001 County LCP reference: #19, page 76)

An existing bluff trail extends from Highway 1 at the Ocean Cove Campground south to Stillwater Cove Regional Park and crosses the private campground and four parcels owned by California State Parks. Sonoma County Regional Parks manages the four parcels as part of Stillwater Cove Regional Park under a management agreement with the State. The trail provides spectacular views and connects to two vertical access trails to the shoreline.

Owner / Manager: Public/Private

Status: Proposed

Acquisition Priority: I

Development Priority: II

Existing Improvements: Informal trails

Proposed Improvements and Programs:

1. Record the Trail Easement Offer to Dedicate required by Coastal Permit CPH00-0009. Include provisions for signage, relocating the easement due to bluff erosion, and year round hours of operation.
2. Add signage identifying the public trail, improve disabled access, and consider realigning the trail on the State-owned parcels to reduce erosion. Connect trail to Stillwater Cove.
3. Consider designating part or the entire trail as the California Coastal Trail.
4. Use the existing restroom and parking facilities at Stillwater Cove Regional Park and Ocean Cove. Evaluate constructing additional restroom and parking facilities to increase accessibility.

(E-4) Stillwater Cove Regional Park

(2001 County LCP reference #21, page 76 & page 96)

Stillwater Cove Regional Park offers a beautiful rocky shore, coastal terrace, and a sheltered beach well used for ocean based activities. Trails connect the lush Stockoff Creek canyon, scenic redwood groves, and the campground. There is a life estate covering 221 acres.

Owner / Manager:	Sonoma County Regional Parks
Existing Status:	Existing
Acquisition Priority:	I
Development Priority:	III
Existing Improvements:	3-miles of trail, picnic tables, restrooms, day use parking, 23 campsites, 1 walk-in/hike/bike campsites, fish cleaning station, cove suitable for boat access, ranger residence, park office

Proposed Improvements and Programs:

1. Master Plan the life estate to the east of the existing park.
2. Expand Stillwater Cove County Park to include the additional undeveloped land in the Stockoff Creek canyon. Extend the Stockoff Creek Trail to connect with Salt Point State Park.
3. Evaluate options for a long-term potable water supply.
4. Restore historic Fort Ross School when funding becomes available. Provide additional interpretation.
5. Replace three trail bridges over Stockoff Creek on the Creek Trail.
6. Evaluate options to renovate and enhance the trail system, day use parking area, damaged timber stairs to Highway 1, and picnic area to improve the user experience, provide additional amenities, signage, and picnic facilities.
7. Evaluate visitor opportunities for low-cost coastal accommodations options in accordance with the Coastal Conservancy program.
8. Identify the best continuous route for the California Coastal Trail through the park. Construct improvements.

(E-5) Stillwater Cove Regional Park – North Terrace & Coastal Access Trails

(2001 County LCP reference: #20, page 76)

These 4 parcels are across Stillwater Ranch, between Stillwater Cove and the Ocean Cove campground. Several turnouts with informal connecting trails provide access from the Highway to the bluff and the shoreline.

Owner / Manager: California State Parks/Sonoma County Regional Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: Informal trails, 5-7 turnout parking spaces

Proposed Improvements and Programs:

1. Develop safe trails connecting the Bluff Trail at Ocean Cove to Stillwater Cove (E-4) and the shoreline.
2. Consider constructing additional trails, including the Coastal Trail, to vistas on interior meadows and rock outcrops, and parking improvements. Use existing restroom and parking facilities at Stillwater Cove Regional Park. Evaluate constructing additional parking and restroom facilities to increase accessibility.

(E-6) Stillwater Cove Regional Park – Stillwater Cove Coastal Access and Boat Launch

(2001 County LCP reference: #21, page 76 & page 97)

Stillwater Cove is a sheltered cove popular for diving, boating, fishing, tidepooling, and picnicking. The Stockoff Creek Trail on the east side of the Highway connects the cove with the campground and other trails.

Owner / Manager: Sonoma County Regional Parks

Status: Existing

Acquisition Priority: I

Development Priority: III

Existing Improvements: Paved vehicle loading area and trail, restrooms, rescue craft building, picnic tables, fish cleaning station.

Proposed Improvements and Programs:

1. Evaluate options for additional picnic facilities at the cove.
2. Develop a safe trail to connect the cove to the northern portions of the park.

(E-7) Stillwater Cove Regional Park Expansion – Pocket Cove

(2001 County LCP reference: #22, page 76)

A 10-acre parcel contains coastal terrace and rocky coastline adjacent to Stillwater Cove Regional Park. The Coastal Commission, County Regional Parks Department, and Sonoma Land Trust have identified this 10-acre parcel adjacent to the southern boundary of Stillwater Cove Regional Park known as “Pocket Cove” as a key potential addition to the park. In 1979 the Coastal Commission required the property developer to dedicate at least two acres adjacent to the existing park including Pocket Cove and provide Highway 1 frontage for a future trail connection to the south. The property was subsequently sold and has not been developed.

The Sonoma Land Trust identified the parcel as a “Tier One Opportunity” in its May 2002 *Russian River/North Coast Parcel Analysis*. As an expansion to Stillwater Cove Regional Park, it would provide access to the southern coastal terrace, spectacular views from the unnamed point, and shoreline access to Stillwater Cove. A recorded offer to dedicate is adjacent to the south side of the Pocket Cove parcel.

Owner / Manager:	Private
Status:	Proposed
Acquisition Priority:	I
Development Priority:	III
Existing Improvements:	Informal trails

Proposed Improvements and Programs:

1. Pursue one of the following: a) require dedication of a public access easement with any development approval, b) purchase an access easement, or c) acquire the property.
2. Provide connecting trails between the existing Stillwater Cove Regional Park, the blufftop and shoreline. Consider designating a part as a link of the California Coastal Trail.
3. Use the existing restroom and parking facilities in Stillwater Cove County Park until use necessitates examining facility development.

(E-8) Timber Cove Access Easements

(2001 County LCP reference: none; numerous Coastal Permits)

Eight Offers to Dedicate have been accepted at locations within the Timber Cove Subdivision by Sonoma County Regional Parks. Although they are not contiguous, they may support the eventual connection and development of the California Coastal Trail as well as a potential connection to the beach.

Owner / Manager: Sonoma County Regional Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: None

Proposed Improvements and Programs:

1. Complete the Timber Cove Coastal Trail Feasibility Study to identify the preferred alignment of the Coastal Trail through Timber Cove, using the Timber Cove access easements where feasible.

(E-9) Timber Cove Connection Trail

(2001 County LCP reference: #23, page 77)

This trail will connect an existing coastal access trail on the southern part of Ninive Drive to a coastal access trail at Timber Cove Inn. It will run from Cormorant Point along the southern end of Ninive Drive, to the west of Highway 1, to the blufftop adjacent to the Timber Cove Inn where it will connect with the Timber Cove Inn Coastal Access.

Owner / Manager: Private

Status: Proposed

Acquisition Priority: II

Development Priority: II

Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Acquire access as a condition of approval for new development or through purchase of easement or fee title.
2. Develop a trail from the southern end of Ninive Drive to the Timber Cove Inn to connect the coastal access trails and provide bluff access. Consider designating portions or all the California Coastal Trail.

(E-10) Timber Cove Inn Coastal Access

(2001 County LCP reference: #24, page 77)

Several private trails lead from the Timber Cove Inn property to the coastline. Local Coastal Plan policy limits expansion at the Timber Cove Inn to improved parking facilities and coastal access. Vertical and lateral access supporting a continuous California Coastal Trail shall be a condition of approval for renovating the Inn.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: II
Development Priority: II
Existing Improvements: Developed and informal trails

Proposed Improvements and Programs:

1. Acquire vertical access and link with Timber Cove Connection Trail (E-9).
2. Provide public parking and restrooms either combined with or separate from the Inn.

(E-11) Timber Cove Inn – Bufano Statue

(2001 County LCP reference: none)

The State Department of Parks and Recreation owns the parcel containing the Benny Bufano statue located in the surroundings of the Timber Cove Inn. The State also owns an undeveloped trail easement and a partially developed parking easement intended to access the statue. An informal trail for viewing the ocean and statue leads from the Timber Cove Inn parking lot across the bluff to the statue.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: II
Existing Improvements: Statue, informal trails and parking area

Proposed Improvements and Programs:

1. Develop a trail route from the parking area to the Bufano Statue that meets accessibility guidelines. If necessary, relocate the existing trail and parking easement to follow the existing or an improved trail alignment and parking area.

2. Connect the statue to the Timber Cove Bluff Connection Trail when the bluff trail is established.
3. Install signage on Highway 1 identifying “Coastal Access” to the Bufano Statue as a State Park facility.

(E-12) Timber Cove Boat Landing & Campground

(2001 County LCP reference: #20, page 76)

A private campground south of Timber Cove Inn provides boat launching, camping, and a road to the beach. Extensively used by divers, the boat launch is particularly important.

Owner / Manager:	Private
Status:	Existing
Acquisition Priority:	None
Development Priority:	None
Existing Improvements:	Access road to boat launch, campground office, campsites

Proposed Improvements and Programs:

1. Continue beach access and boat launching under private ownership. If the property owner closes the access, consider acquisition of the boat launch facility.

(E-13) Fort Ross Area – Offers to Dedicate

The State Coastal Conservancy accepted five Offers to Dedicate north of Fort Ross State Historical Park. Although they are not all contiguous, several are important as future links of the California Coastal Trail. The State Coastal Conservancy will eventually transfer the Offers to Dedicate to California State Parks or Sonoma County Regional Parks.

Owner / Manager:	Public/Private
Status:	Proposed
Acquisition Priority:	None
Development Priority:	III
Existing Improvements:	None

Proposed Improvements and Programs:

1. Complete the Timber Cove Coastal Trail Feasibility Study to identify which of the five Offers to Dedicate can be useful to provide coastal access or to support the California Coastal Trail.

(E-14) Fort Ross State Historic Park Unit

(2001 County LCP reference: #26-31, pages 77-79 & page 105)

Fort Ross State Historic Park has over 4 miles of shoreline, 3,300 acres, multiple access points and a trail network that provides access to the coastal terrace and shoreline. The historic structures from the Russian settlement, trails, campsites, and almost all amenities are located west of the highway. Most of the property is to the east of Highway 1 and is undeveloped.

The Sonoma Land Trust identifies an expansion of Fort Ross State Historic Park as a “Tier Two Opportunity” in its May 2002 *Russian River/North Coast Parcel Analysis*.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	III
Development Priority:	II
Existing Improvements:	Visitor center, historic buildings, interpretive exhibits, 21 campsites, restrooms, picnic facilities, day use parking

Proposed Improvements and Programs:

1. Encourage continued restoration of the historic structures.
2. Realign and improve the California Coastal Trail to provide improved access and protection of natural and cultural resources. Trail improvements include boardwalks to protect wetlands, and bridges for crossing drainages.
3. Develop cultural interpretive trail focusing on Kashia Pomo culture, and integrate cultural trail with the California Coastal Trail.
4. Update the park General Plan to include the parkland on the east side of Highway 1. Consider additional trails and camping opportunities on the east side of the State Highway. Evaluate the need for additional camping, including group camping facilities and environmental campsites.
5. Acquire additional acreage in the Fort Ross Creek watershed to expand recreational opportunities and support resource protection.
6. Construct restrooms and improve parking areas at Fort Ross Terrace, Windermere Point, and Kolmer Gulch.

(E-15) Fort Ross State Historic Park Unit – Windermere Point

(2001 County LCP reference: #26, page 78)

The site is a former lumber mill. It is used for vehicular access, parking, and trail access to the coastline. It is physically degraded and in need of restoration, but provides for a significant amount of recreational use.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: II
Existing Improvements: Informal day use parking

Proposed Improvements and Programs:

1. Develop parking and restroom facilities to serve both Windermere Point and Kolmer Gulch.
2. Develop the California Coastal Trail to connect Kolmer Gulch and Windermere Point

(E-16) Fort Ross State Historic Park Unit – Kolmer Gulch

(2001 County LCP reference: #27, page 78)

The beach at Kolmer Gulch is relatively large, sandy, attractive, and popular. Access to the beach is from informal trails leading from turnouts on State Highway 1.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: I
Existing Improvements: None

Proposed Improvements and Programs:

1. Develop parking and restroom facilities to serve both Windermere Point and Kolmer Gulch.
2. Develop a trail connecting Kolmer Gulch with Windermere Point to the north and the bluff tops to the south.

(E-17) Fort Ross State Historic Park Unit – Call Ranch

(2001 County LCP reference: #28, page 78)

The Call Ranch stretches from Fort Ross north almost to Kolmer Gulch and was acquired as an expansion of Fort Ross State Historic Park. The coastline is rocky and has a small beach area at low tide; and there is vertical access down a steep path at Sandy Cove.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	III
Existing Improvements:	Historical structures, interpretive exhibits, trails
Proposed Improvements and Programs:	
1.	Develop an accessible trail from the Call House to the Fort Ross Visitor Center
2.	Improve existing trail access to North Cove and extend trail east to the Call House

(E-18) Fort Ross State Historic Park Unit – Reef Campground

(2001 County LCP reference: #29, page 79)

A road to the northern boundary and a parking area provide access to the cove to the south, the cove to the north, and a bluff trail to the beach at Fort Ross State Historic Park. The middle bluff road and parking area lead to two steep shoreline trails.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	None
Existing Improvements:	21 campsites, restrooms, day use parking
Proposed Improvements and Programs:	
1.	Extend the California Coastal Trail to the south to connect with the Fort Ross Terrace parking area.

(E-19) Fort Ross State Historic Park Unit – South Reef

(2001 County LCP reference: #30, page 79)

This coastal access trail provides access to the Fort Ross Reef area and is popular with abalone divers and fishermen.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: II
Existing Improvements: Informal access trails, day use parking

Proposed Improvements and Programs:

1. Improve and expand existing parking area.
2. Develop Coastal Trail Trailhead signing at the parking area.
3. Develop bridge crossing to extend Coastal Trail to the south. Improve existing beach access trail to the south of unnamed drainage.

(E-20) Fort Ross State Historic Park Unit – Cardiacs Trail

(2001 County LCP reference: #31, page 79)

This access point is the most southerly access point at Fort Ross State Historic Park. A steep trail leads to a long narrow beach at the mouth of Timber Gulch.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: III
Existing Improvements: 0.3-mile trail, day use parking

Proposed Improvements and Programs:

1. Improve vehicular access to the trailhead.
2. Provide trail connections to the north.

THE HIGH CLIFFS/MUNIZ/JENNER SUBAREA 6 (FIGURE C-PA-1F)

(F-1) California Coastal Trail: Fort Ross State Historic Park to Bridgehaven

(2001 County LCP reference: page 100 & #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

This section of the Sonoma County coastline is extremely rugged and steep, making it a challenge for locating a trail. The California Coastal Trail is unidentified and undeveloped in this area, although informal trails connect short sections north and south of Russian Gulch. Long sandy and rocky beaches become exposed at low tides, but these areas can be dangerous.

The Coastal Trail route through the High Cliffs/Muniz/Jenner SubArea connects Fort Ross State Historic Park, Vista Trail, Russian Gulch, Jenner Headlands Preserve, Russian River Bridge, and Bridgehaven. The route should either directly connect with Jenner or have a connector trail.

Owner / Manager:	Public/Private
Status:	Proposed
Acquisition Priority:	I
Development Priority:	I
Existing Improvements:	Existing trails and parking areas may be incorporated into alignment

Proposed Improvements and Programs:

1. Study off-road trail alignments between Fort Ross State Historic Park and Bridgehaven and select the most appropriate route or routes for the California Coastal Trail. The study will be based on the Coastal Commission's Guidelines for Siting the California Coastal Trail. The feasibility study should include a water taxi between Jenner River Access and Goat Rock River Access.
2. Modify the Russian River Bridge south of Jenner to provide safe pedestrian access for the Coastal Trail including a barrier or other separation between trail users and motorized vehicle traffic.
3. If needed, work with Caltrans and willing land owners to acquire land or easements for a safe off-road trail alignment. The California Coastal Trail should be separate from roads with motorized traffic.
4. Construct the trail in phases as funding becomes available.

(F-2) Sonoma Coast State Park Unit

(2001 County LCP reference: page 106)

The Sonoma Coast State Park spans almost the entire coastline through this subarea and contains numerous coastal access points, trails, and other facilities. Hiking, ocean and freshwater fishing, sea kayaking, seal and whale watching, tidepooling, surfing, and scuba diving are popular activities.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	See specific access points
Development Priority:	See specific access points
Existing Improvements:	Russian Gulch - day use beach access, restroom, and 30 parking spaces; Goat Rock - day use beach and river access, 2 restrooms, picnic sites, and 230 parking spaces (Blind Beach – 20, Arched View – 32; Goat Rock North – 68, Goat Rock South – 110); Campground – 12 campsites, river access, restroom, and 20 parking spaces; and State Highway 1 - numerous roadside turnouts

Proposed Improvements and Programs:

1. Continue deferred maintenance, rehabilitations, and upgrades as opportunities allow.
2. See recommendations for specific access points.

(F-3) Sonoma Coast State Park – Vista Trail

(2001 County LCP reference: #32, page 79)

The Vista Trail was acquired and developed by California State Parks as an accessible scenic interpretive facility. It is the northernmost developed part of the Sonoma Coast State Park. The view extends from Jenner to Point Reyes and captures most of the southern Sonoma Coast.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	None

Existing Improvements: 1-mile paved loop accessible trail, picnic tables, restroom, and 15 day use parking spaces

Proposed Improvements and Programs:

1. Include the Vista Trail in the alignment of the California Coastal Trail if determined feasible.

(F-4) Russian Gulch – Northern Access Trail

(2001 County LCP reference: #33, page 80)

An informal trail leads from Russian Gulch over the hill to the cove to the north. At low tides it is possible to connect with Fort Ross State Historical Park, but the beach route can be dangerous. A gap in State ownership on the western side of State Highway 1 remains between the southern edge of Fort Ross State Historical Park and the northern edge of Sonoma Coast State Park.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: I

Development Priority: I

Existing Improvements: Informal trails

Proposed Improvements and Programs:

1. Acquire remainder of the trail corridor to connect Russian Gulch and Vista Trail with Fort Ross State Historic Park. Study trail alignment alternatives for a safe, continuous trail as the California Coastal Trail. Evaluate both west and east sides of Highway 1.
2. Realign the existing informal trails to reduce erosion, protect resources, and provide safer and increased public access.

(F-5) Sonoma Coast State Park – Russian Gulch

(2001 County LCP reference: #34, page 80)

Russian Gulch has a large, accessible, attractive, and heavily used beach.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: Picnic tables, restrooms, 60 day use parking spaces

Proposed Improvements and Programs:

1. Include Russian Gulch in the alignment of the California Coastal Trail if determined feasible.
2. Improve the parking area and restrooms.
3. Develop a trail connecting Russian Gulch with the Jenner Headlands Preserve.

(F-6) Sonoma Coast State Park – North Jenner Beach

(2001 County LCP reference: #35, page 80 and #35-36, page 105)

Several turn-outs along State Highway 1 provide access to an informal trail network. The trails lead to the top of the bluff and in some cases the shoreline. There are excellent vistas to the mouth of the Russian River and north.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: II

Development Priority: II

Existing Improvements: Informal trails and about 29 parking spaces in six turnouts on State Highway 1

Proposed Improvements and Programs:

1. Construct restrooms and one parking area between Jenner and Russian Gulch. Evaluate all locations, including east of State Highway 1 not on State property.
2. Prevent vehicle access to the bluffs while providing safe turnout parking to the north and south of Manni Gulch. Evaluate and implement appropriate trail connections between North Jenner Beach and the parking lot on Jenner Headlands Preserve (see F-7 below).
3. Construct a trail that includes safe shoreline access to the double cove from the parking area to No Dog Beach.

(F-7) Jenner Headlands Preserve

(2001 County LCP reference: parking lot only: #36, page 80)

The headlands above the town of Jenner include coastal bluffs and Jenner Gulch, a stream with steelhead trout that is the sole domestic water source for the town. The Sonoma Land Trust acquired 5,630 acres of the Jenner Headlands in 2009 using funding from both private and public sources and has since transferred the property to

The Wildlands Conservancy, a non-profit organization that acquires and operates a network of preserves that provide public education and public access. The acquisition grants require that public access be provided on some portions of the property.

The Wildlands Conservancy and their partners developed an Integrated Resource Management Plan that includes public access with short and long-term public access improvements and programs for facilities. Approximately 12 miles of former ranch roads have been converted to public access trails. Two parking lots include public restrooms and provide parking for 30 vehicles, 2 ADA parking spaces, and 2 spaces for buses.

Owner / Manager:	The Wildlands Conservancy (Private)
Status:	Existing
Acquisition Priority:	I
Development Priority:	I
Existing Improvements:	34 parking spaces, restroom, 12 miles of trails

Proposed Improvements and Programs:

1. Provide maximum public access that is compatible with the preserve's conservation goals. Study public access and recreation facilities including multiple use trails, overnight facilities including camping and backpacking, and environmental education facilities.
2. Locate the California Coastal Trail on the western portion of the property with coastal views to connect Russian Gulch with the Jenner area.
3. Provide maximum public access to the Preserve at a variety of access points in order to maximize connections and to disperse use. Study trail connections between Sonoma Coast State Park, State Highway 1, Jenner, and areas to the east. Pursue if compatible with conservation goals.
4. Encourage expansion of the Preserve to the north, east, and south to provide greater resource protection and recreation opportunities.
5. Encourage the retention of agriculture for ecological health and reducing fire danger. Manage the forest to promote maximum ecological, old growth forest characteristics, and reduce fire danger. A Non-Industrial Timber Harvest Plan may be required.

(F-8) River's End

(2001 County LCP reference: page 101)

River's End is a small private restaurant and resort facility located on the north side of the mouth of the Russian River in Jenner. Day use of the beach is possible. Cabins, a restaurant, and bar are also located on the property.

Owner / Manager: Private
Status: Existing
Acquisition Priority: III
Development Priority: III
Existing Improvements: Trail to beach

Proposed Improvements and Programs:

1. Continue day use access to the beach.

(F-9) Russian River Water Trail I

(2001 County LCP reference page 100)

The Russian River Water Trail is a water-based route for non-motorized recreational boating that are anchored by land based launch sites, camping, and picnicking facilities. Water trails provide educational and scenic experiences and are designed to accommodate boaters of all ages and abilities. With an integrated system of facilities, 'trail' guides and access site informational signage, good water trail programs encourage minimum-impact use and emphasize stewardship of the aquatic ecosystems, and historical features.

Owner / Manager: Public/Private
Status: Existing
Acquisition Priority: I
Development Priority: I
Existing Improvements: Various

Proposed Improvements and Programs:

1. Study the Russian River Water Trail to identify an integrated system of facilities and programs to promote increased safe and responsible public access to the Russian River.
2. See specific river access facility proposed improvements in this plan.

(F-10) Jenner River Access

(2001 County LCP reference: #36, pages 80 & 105)

Located at the mouth of the Russian River, this facility includes a popular small boat launch ramp and a small visitor center.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	III
Existing Improvements:	Visitor center building, restroom, boat ramp, and 8 day use parking spaces

Proposed Improvements and Programs:

1. Provide structural improvements to the visitor center, including raising the building above flood levels.
2. Continue to partner with the Sonoma County Water Agency in management of the Russian River estuary.
3. Continue to operate the boat ramp, restroom, and visitor center as a coastal public information center.
4. Provide deferred maintenance to ensure viability of the visitor center.
5. Study the feasibility of acquiring adjacent properties to provide additional parking spaces for the visitor center and river access.

(F-11) South Jenner Vista Points

(2001 County LCP reference: #37, page 80)

Several turnouts are located within the right-of-way along State Highway 1 between Jenner and the Russian River Highway 1 Bridge that provide visual access to the Russian River, Penny Island, and Jenner Pond. Jenner Pond is a freshwater wetland located near the intersection of State Highway 116 and State Highway 1. The Sonoma Land Trust identified the pond as a “Tier Two Opportunity” in its May 2002 *Russian River/North Coast Parcel Analysis*.

Owner / Manager:	Public/Private
Status:	Proposed

Acquisition Priority: III
Development Priority: III
Existing Improvements: Informal turnouts

Proposed Improvements and Programs:

1. Designate a minimum of two turnouts as highway vista points, one for northbound traffic and one for southbound traffic. Provide directional road signs to notify the public about the vista points. Develop interpretive signs. Expand existing turnouts as necessary to provide safe access.
2. Encourage conservation agencies to acquire fee title or a conservation easement protecting Jenner Pond.

(F-12) Russian River Access from Highway 1 Bridge to Sawmill Gulch

(2001 County LCP reference: #38, page 80)

Several turnouts along State Highway 116 provide parking for informal trails across public and private property to the Russian River. The most desirable destination is the cove at the mouth of Sawmill Gulch, but no developed parking is available. California State Parks owns an undeveloped ten-acre riverside parcel provides access to the River. Additional access points would offer canoers and kayakers access to the lower five miles of the river. The Sonoma Land Trust identifies this area as a “Tier Two Opportunity” in its May 2002 *Russian River/North Coast Parcel Analysis*.

Owner / Manager: Public/Private
Status: Proposed
Acquisition Priority: III
Development Priority: III
Existing Improvements: Informal trails

Proposed Improvements and Programs:

1. Work with property owners to allow public use of existing informal access.
2. Pursue acquisition of easements or fee title for river access between Jenner and Duncans Mills. Assess the need for related facilities at the time of dedication.
3. Develop a trail and parking area for the property owned by California State Parks.

(G-1) Russian River Water Trail II

(2001 County LCP reference: page 100)

The Russian River Water Trail is a water-based route for non-motorized recreational boating that is anchored by land based launch sites, camping, and picnicking facilities. Water trails provide educational and scenic experiences and are designed to accommodate boaters of all ages and abilities. With an integrated system of facilities, access site informational signage, good water trail programs encourage minimum-impact use and emphasize stewardship of the aquatic ecosystems, and historical features.

Owner / Manager:	Public/Private (onshore only)
Existing Status:	Existing
Acquisition Priority:	II
Development Priority:	II
Existing Improvements:	See individual proposed improvements

Proposed Improvements and Programs:

1. Study the Russian River Water Trail to identify an integrated system of facilities and programs to promote increased safe and responsible public access to the Russian River.
2. See specific river access facility proposed improvements in this plan.

(G-2) Lower Russian River Beach Access

(2001 County LCP reference: #39, page 81)

Long, wide beaches are located between Duncans Mills and Highway 1 on the Russian River but there is currently no overland public access.

Owner / Manager:	Private
Status:	Proposed
Acquisition Priority:	II
Development Priority:	II
Existing Improvements:	Unknown

Proposed Improvements and Programs:

1. Work with willing sellers to establish day use public access to the Russian River beach area. Manage agriculture and public access to ensure mutual compatibility. Assess the need for related facilities at the time of dedication.

(G-3) Duncans Mills Campground

(2001 County LCP reference: #40, page 81; page 102; #62-63, page 107)

Duncans Mills Campground is a resort on the north bank of the Russian River, with a sandy beach and dense riparian vegetation open to camp club members and the public on occasion. Fishing, boating, hiking, picnicking, and horseback riding (including rentals), are common activities. Access to the Russian River was allowed for a small day use fee, but is now available only for private use by camp club members.

Owner / Manager:	Private
Status:	Existing
Acquisition Priority:	III
Development Priority:	III
Existing Improvements:	125 campsites, restrooms with showers, recreational vehicle sanitation facilities, boat launch, playground, basketball, volleyball, recreation center

Proposed Improvements and Programs:

1. Work with the property owner to re-establish day use public access to the Russian River.
2. Require dedication of a public access easement as a condition of approval for expanding the campground.

(G-4) Casini Family Ranch Campground

(2001 County LCP reference: #41, page 107)

Access to the Russian River is allowed for a small day use fee when the campground is not full.

Owner / Manager:	Private
Status:	Existing
Acquisition Priority:	III
Development Priority:	III
Existing Improvements:	225 campsites, restrooms, cabins, recreational vehicle waste disposal facilities, boat launch, playground, recreation center, sports fields

Proposed Improvements and Programs:

1. Continue public day use, including day use parking.

2. Require a Coastal Development Permit for discontinuance of existing fee-based day use public access.
3. Require day use public access as a condition of approval for expansion of the existing campground.
4. Encourage development of additional campsites and camper services. Any development plans should include prohibiting camping between the river and the riparian vegetation on the beach.

(G-5) Steelhead Boulevard River Access

(2001 County LCP reference: None)

Steelhead Boulevard right-of-way extends to the Russian River's mean high water in at least one location.

Owner / Manager: Sonoma Public Infrastructure

Status: Proposed

Acquisition Priority: III

Development Priority: III

Existing Improvements: Informal trail

Proposed Improvements and Programs:

1. Determine extent of public lands. Develop access on public right-of-way. Pursue acquisition of additional property from willing sellers if needed to support access.

(G-6) Rancho del Paradiso Subdivision / Freezeout Road River Access

(2001 County LCP reference: #42, page 82)

A beach is located adjacent to the Rancho del Paradiso Subdivision along the Russian River and connects to Freezeout Road via several roads, trails, and rights of way. Some of these routes have never been cleared, and others have been closed by physical barriers and overgrown vegetation. The Sonoma Land Trust and the County own several parcels and rights-of-way in the subdivision that may be able to provide public access from Freezeout Road.

Owner / Manager: Public/Private

Status: Proposed

Acquisition Priority: III

Development Priority: III

Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Evaluate easements and rights of way recorded on the Rancho del Paradiso Subdivision to determine if the map or subsequent dedications provides public access to the Russian River.
2. Study the feasibility of providing maximum public access to the river using the existing County rights of way and Sonoma Land Trust parcels. Assess the need for support facilities, including parking management.
3. Clear Beach Drive and open it for pedestrian access. Consider constructing a parking area if adequate public right of way exists.

(G-7) Sonoma Coast State Park – Willow Creek – Freezeout Access

Located to the southwest of Duncans Mills, the Freezeout Access trailhead provides access to the eastern area of the Willow Creek Area of Sonoma Coast State Park.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: I

Existing Improvements: Freezeout Creek watershed - about 8.8 miles of multi-use trails; Freezeout Access trailhead – 20 undeveloped day use parking spaces and equestrian trailer access.

Proposed Improvements and Programs:

1. Improve the trailhead facility and access road to reduce erosion and provide parking definition.
2. Include the Freezeout Creek watershed in the Willow Creek roads and trails plan as recommended under (H-9) Sonoma Coast State Park - Willow Creek Area.
3. Include Freezeout Creek area in the watershed and stream restoration projects as recommended under (H-9) Sonoma Coast State Park - Willow Creek Area.

(G-8) Duncans Mills River Access

(2001 County LCP reference: None)

Moscow Road crosses the Russian River adjacent to Duncans Mills, but no public access is currently available at this crossing. Extent of public right of way has not been determined.

Owner / Manager: Public
Status: Proposed
Acquisition Priority: III
Development Priority: III
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Study the feasibility of providing maximum public access at or near the Moscow Road Bridge at Duncans Mills within the existing public right-of-way. Acquire additional right of way if needed from adjoining property owners.

(G-9) Monte Rio – Willow Creek Trail

(2001 County LCP reference: page 99; 2010 Bikeways Plan Project #209)

The Monte Rio - Willow Creek Trail is a section of the Lower Russian River Trail, a proposed Class I Bikeway to provide access between Monte Rio, the Russian River, and the Coast. Sonoma County Regional Parks and partners completed a feasibility study of a Class 1 Bikeway from Forestville to Highway 1 which includes this section in the Coastal Zone.

Owner / Manager: Public/Private
Status: Proposed
Acquisition Priority: I
Development Priority: I
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Implement the trail improvements identified in the Lower Russian River Trail Feasibility Study.
2. Acquire property for the trail from willing sellers if needed.
3. Construct the trail.

PACIFIC VIEW/WILLOW CREEK SUBAREA 8 (FIGURE C-PA-1H)

(H-1) Russian River Water Trail III

(2001 County LCP reference: page 100)

The Russian River Water Trail is a water-based route for non-motorized recreational boating that are anchored by land based launch sites, camping, and picnicking facilities. Water trails provide educational and scenic experiences and are designed to accommodate boaters of all ages and abilities. With an integrated system of facilities, 'trail' guides and access site informational signage, good water trail programs encourage minimum-impact use and emphasize stewardship of the aquatic ecosystems, and historical features.

Owner / Manager: Public/Private

Status: Existing

Acquisition Priority: III

Development Priority: III

Existing Improvements: Various

Proposed Improvements and Programs:

1. Study the Russian River Water Trail to identify an integrated system of facilities and programs to promote increased safe and responsible public access to the Russian River.
2. See specific river access facility proposed improvements in this plan until a Russian River Water Trail Plan has been completed.

(H-2) Sonoma Coast State Park Unit

(2001 County LCP reference: page 106)

The Pacific View Area consists primarily of coastal terrace lands west of State Highway 1. There are 10 day use access points providing trail access to the beach. The Kortum Trail provides lateral trail access along the coastal terrace.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: II

Existing Improvements: Day use parking lots, roadside turnouts, restrooms, and beach access trails; Wrights Beach Campground – 23 campsites, restroom, and day use beach access

Proposed Improvements and Programs:

1. Implement projects identified in the Sonoma Coast State Park General Plan, including development of a reliable water source for public facilities at Wrights Beach.

(H-3) Sonoma Coast State Park – Penny Island

(2001 County LCP reference: page 105)

Penny Island is accessible only by water craft. The island contains remnants of dairy ranch buildings and is popular with day use explorers.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: I

Existing Improvements: Historic structures

Proposed Improvements and Programs:

1. Designate Penny Island and the marsh at Goat Rock as a State Reserve or State Natural Reserve.
2. Stabilize and preserve the existing milking barn and install interpretive signing.

(H-4) Sonoma Coast State Park – Russian River Access

(2001 County LCP reference: #43, page 82)

The beach at the mouth of the Russian River is accessible from the Goat Rock parking area at Sonoma Coast State Park.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: 68 day use parking spaces

Proposed Improvements and Programs: None

(H-5) Sonoma Coast State Park – Goat Rock Ocean Access

(2001 County LCP reference: #46, page 82)

Four coastal access trails are available from Goat Rock Road within the Goat Rock Beach Unit.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 4 trails, restrooms, 110 parking spaces
Proposed Improvements and Programs: None

(H-6) Sonoma Coast State Park – Blind Beach

(2001 County LCP reference: #46, page 82)

A steep trail provides access to the ocean within the Goat Rock Beach Unit. The parking area is also the northern trailhead for the Kortum Trail.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 0.25-mile trail, restrooms, 20 day use parking spaces
Proposed Improvements and Programs: None

(H-7) California Coastal Trail: Bridgehaven to Carmet

(2001 County LCP reference: #47, page 83; page 100; #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

The California Coastal Trail is partially developed through this subarea and includes the spectacular Kortum Trail from Blind Beach parking area to Wright's Beach. Recent upgrades to the Kortum Trail include boardwalks, bridges, gravel and asphalt surfacing to provide an accessible trail and to avoid damage to wetlands and coastal prairie. A new trailhead for the Kortum Trail was constructed at Wright's Beach.

Owner / Manager: Public
Status: Existing

Acquisition Priority: I

Development Priority: I

Existing Improvements: Kortum Trail, 3.8-mile trail, including 0.5 mile paved accessible trail, parking areas

Proposed Improvements and Programs:

1. Modify the Russian River Bridge south of Jenner to provide safe pedestrian access for the Coastal Trail including a barrier or other separation between trail users and motorized vehicle traffic.
2. Study potential safe, off-road alignments for the Coastal Trail between Bridgehaven and the Kortum Trail including routes to the east and west of State Highway 1. If needed, acquire easements from willing sellers. Construct the trail.
3. Designate a portion of the Kortum Trail as the California Coastal Trail. Designate a route through the campground, across Wright's Beach, and up the Duncan's Landing Access Trail as the California Coastal Trail.
4. Study potential safe, off-road alignments for the Coastal Trail between Duncan's Landing and Carmet including routes to the east and west of State Highway 1. If needed, acquire easements or fee title from willing sellers and collaborate with Caltrans Highway 1 Gleason Beach realignment project to develop the trail.

(H-8) Bridgehaven Trailer Park – Boat Launch

(2001 County LCP reference: #44, page 82)

Fee-based boat launching was available at the trailer park but is now available only to occupants of the trailer park.

Owner / Manager: Private

Status: Existing

Acquisition Priority: III

Development Priority: III

Existing Improvements: Boat launch

Proposed Improvements and Programs:

1. Construct a new public access to the river beneath the bridge on Caltrans right-of-way if feasible.
2. Work with property owner to reestablish fee-based public use of the boat launch.
3. Pursue acquisition of an access easement to the river. Assess the need for related facilities at the time of dedication.

(H-9) Sonoma Coast State Park – Willow Creek Area

(2001 County LCP reference: page 106)

The inland Willow Creek Area consists of the lower and a majority of the upper watershed of Willow Creek and portions of the watershed of Freezeout Creek. The total area is about 4800 acres. Only the lower area of these watersheds support developed facilities. Access to the area is provided in four locations - upper and lower Willow Creek Road, Freezeout Creek Access, and Coleman Valley Road Access.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	I
Existing Improvements:	Pomo Campground - 22 walk-in campsites; Willow Creek Environmental Campground – 12 campsites with river access; trailhead – 30 parking spaces and pit toilets; primitive roads serving as trail access; Willow Creek watershed – about 14 miles of trail; and administrative facility for maintenance

Proposed Improvements and Programs:

1. Restore and expand the Willow Creek ranch buildings as a hostel, administrative facility, and/or environmental education facility. Development should reflect the historic character of the existing structures.
2. Continue negotiations with the owner of the property in the eastern portion of the Willow Creek watershed to acquire fee title and/or access easements for improved access and recreation opportunities.
3. Develop a roads and trail plan for Willow Creek to identify trailhead access points, and provide a recreational trails network linking Willow Creek to lands east, west, and south. Based on an approved roads and trails plan, identify and construct trail improvement projects.
4. Conduct watershed and stream restoration projects that include realigning, renovating, or removing problematic roads or other facilities identified as a significant source of sediment.

(H-10) Willow Creek Road Russian River Access

(2001 County LCP reference: none)

Access to the Russian River is available from an informal launch site on the side of Willow Creek Road, near the borrow pit, approximately ¼ mile before the Willow Creek Environmental Campground access trail.

Owner / Manager: Sonoma Public Infrastructure/California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: I

Existing Improvements: Informal boat launch, roadside parking

Proposed Improvements and Programs:

1. Provide improved parking, signage, and boat launching at this location.

(H-11) Willow Creek Environmental Campground - Russian River Access

(2001 County LCP reference: #45, page 82)

Access to the Russian River is available from an access road that leads from Willow Creek Road to the walkway in the Willow Creek Environmental Campground.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: II

Existing Improvements: Hike or paddle-in environmental campground – 20 campsites with river access, 20 day use and overnight parking spaces

Proposed Improvements and Programs:

1. Explore the feasibility of additional environmental campsites in the meadow.

(H-12) Monte Rio – Willow Creek Trail

(2010 Bikeways Plan Project #209)

The Monte Rio - Willow Creek Trail is a proposed Class I Bikeway to provide access between Monte Rio, the Russian River, and the Coast. Sonoma County Regional Parks and partners have received state funding and local funding to complete a feasibility study of a Class 1 Bikeway from Forestville to Highway 1 which includes this section in the Coastal Zone. Feasibility studies conducted since the 2010 Bikeways Plan identify the trail alignment for the Lower Russian River Trail through sub areas 6 and 7.

Owner / Manager: Public/Private

Existing Status: Proposed

Acquisition Priority: III

Development Priority: III

Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Study the trail to identify the best alignment and update Public Access Maps as needed to reflect future Bikeways Plan updates. Address flooding issues through trail alignment, design, and management.
2. Acquire property for the trail from willing sellers if needed.
3. Construct the trail.

(H-13) Sonoma Coast State Park – Dr. Joseph Memorial Trail

(2001 County LCP reference: none)

The Dr. Joseph Memorial Trail, also known as the Pomo Canyon Trail, connects the Pomo Campground to the Shell Beach parking area on State Highway 1. An additional 1.25-mile loop trail has been developed on the Red Hill property to the south.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: I

Existing Improvements: 3.5-mile trail

Proposed Improvements and Programs:

1. Provide trail connections between the Dr. Joseph Memorial Trail and Red Hill Trail to Wright Hill Regional Park & Open Space Preserve.

(H-14) Wright Hill Regional Park & Open Space Preserve

This 1,235-acre property was acquired from the Poff Family by the Sonoma County Agricultural Preservation & Open Space District in 2005 to provide resource protection and compatible recreation. It is bordered by Sonoma Coast State Park to the north and west. In 2017 the District adopted the Wright Hill Ranch Preserve Management Plan – Natural and Cultural Resources, which guides management decisions. The Management Plan does not include public access use or development. In 2021 the property was transferred to Sonoma County Regional Parks for ongoing management and providing public access.

Owner / Manager: Sonoma County Regional Parks

Status: Existing

Acquisition Priority: None

Development Priority: I

Existing Improvements: Ranch roads, historic structures

Proposed Improvements and Programs:

1. Complete a park master plan inclusive of public access in order to expand recreational opportunities, integrate public access with natural resource management goals, and provide for natural and historic interpretation.
2. Consider retaining agriculture for grassland management objectives.
3. Evaluate preservation and public access options for the historic cabin complex.
4. Reuse existing roads and/or construct trails within the property and to connect the property with Red Hill, Wrights Beach area, and other areas if feasible.

(H-15) Sonoma Coast State Park – Shell Beach

(2001 County LCP reference: #48, page 83)

Shell Beach provides safe access to the shore. The Kortum Trail connects Shell Beach to the Blind Beach trailhead on the north and to the Wright's Beach area on the south. The parking area also serves as the trailhead for the Dr. Joseph Memorial Trail that connects to the Pomo Campground in Willow Creek.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: 7 miles of trail, restrooms, 40 vehicle parking spaces

Proposed Improvements and Programs:

1. Continue improvements on the connecting trails to protect wetlands, reduce erosion, and protect other sensitive areas.

(H-16) Sonoma Coast State Park – Furlong Gulch

(2001 County LCP reference: #49, page 83)

This property was proposed for subdivision in the late 1970s, but was acquired by California State Parks and added to the State Park. A paved road, Grille Way, was developed prior to the acquisition and now provides access to the Kortum Trail at the northern and southern ends of the site.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: Day use parking

Proposed Improvements and Programs:

1. Construct restrooms.

(H-17) Sonoma Coast State Park – Carlevaro Way

(2001 County LCP reference: None)

This property was proposed for subdivision in the late 1970s, but was acquired by the State Department of Parks and Recreation and added to the State Park. A paved road, Carlevaro Way, was developed prior to the acquisition and now provides access to the Kortum Trail at the northern and southern ends of the site.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: Day use parking

Proposed Improvements and Programs: None

(H-18) Sonoma Coast State Park – Wright’s Beach

(2001 County LCP reference: #50, pages 83-84)

Wright’s Beach contains the only public campground on the coast between the Russian River and the Bodega Dunes and as such is a major use area. An accessible trail with parking has been developed adjacent to Wright’s Beach on the southern end of the Kortum Trail.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: I
Existing Improvements: Trail, restroom, day use parking

Proposed Improvements and Programs:

1. Designate a route for the California Coastal Trail through Wright’s Beach Campground to connect the Kortum Trail with the beach. Separate pedestrians from motorized vehicles to the extent feasible. Provide signage.

(H-19) Sonoma Coast State Park – Duncan’s Landing

(2001 County LCP reference: #51, page 84)

Duncan’s Landing is a peninsula with a loop road that provides views to Death Rock, and to the north and south. A trail provides access to Wright’s Beach to the north.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Trail, restroom, 45 day use parking spaces

Proposed Improvements and Programs: None

(H-20) Sonoma Coast State Park – Duncan’s Cove

(2001 County LCP reference: #52, page 84)

Duncan’s Cove is on the south side of Duncan’s Landing. There are two trails to the cove, the primary trail begins at the Duncan’s Cove parking lot and the secondary trail begins at the Duncan’s Landing parking lot.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 2 trails, 25 day use parking spaces
Proposed Improvements and Programs: None

(H-21) Sonoma Coast State Park – Rock Point

(2001 County LCP reference: page 161)

This blufftop parking area adjacent to State Highway 1 has two turnouts that provide visual access to the shoreline.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Picnic table, 15 day use parking spaces
Proposed Improvements and Programs: None

(H-22) Sonoma Coast State Park – Gleason Beach Vista

(2001 County LCP reference: #53, page 84)

This bluff top vista provides visual access to the shoreline and parking.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 10 day use parking spaces
Proposed Improvements and Programs:

1. Maintain access and parking at the Gleason Beach vista point. Provide for no net loss of existing facilities during the realignment of State Highway 1 through this area.

(H-23) Sonoma Coast State Park – Scotty’s Creek Beach Access

(2001 County LCP reference: #54, page 84)

This access point is where the sandy beach reaches State Highway 1 at Scotty’s Creek. Caltrans has relocated Highway 1 due to bluff failure. An agreement between Caltrans, Coastal Commission, and the County is guiding public access development in the highway relocation area.

Owner / Manager:	Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	I
Development Priority:	I
Existing Improvements:	Informal roadside parking for 20 vehicles. Caltrans constructing permanent parking improvements and California Coastal Trail segment.

Proposed Improvements and Programs:

1. Require Caltrans to provide off-road continuous Coastal Trail access to the north and south of the project limits, parking, and sufficient provisions for future modifications that may be needed due to sea level rise and additional bluff retreat.
2. Provide universal access to the beach to the degree feasible.
3. Evaluate additional potential adjacent acquisitions to either mitigate the impacts of the highway relocation or to enhance the public access at Scotty Creek Beach Access. Acquisitions could support additional parking, a restroom, vistas, removal of debris and other benefits.

(H-24) Sonoma Coast State Park – Scotty’s Creek Vista Point

This is an existing bluff-top turnout between Scotty’s Creek and Calle de Sol subdivision that provides visual access north to Scotty’s Creek and Gleason Beach and south towards North Portuguese Beach.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	I
Development Priority:	I
Existing Improvements:	8 day use parking spaces

Proposed Improvements and Programs:

1. Install signage identifying the boundary between the existing State Park lands and the adjacent residence.
2. Evaluate acquisition opportunities to expand or enhance public access at the Gleason Beach area and to restore the bluff to its natural condition.

(H-25) Sonoma Coast State Park – North Portuguese Beach

(2001 County LCP reference: #55, page 85)

This access point consists of two coastal access trails and parking areas.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Two trails, 12 day use parking spaces in two areas
Proposed Improvements and Programs: None

(H-26) Sonoma Coast State Park – Portuguese Beach

(2001 County LCP reference: #55, page 85)

This is a major access point to a large sandy beach.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Trail, 68 day use parking spaces
Proposed Improvements and Programs: None

BODEGA BAY SUBAREA 9 (FIGURE C-PA-11)

(I-1) Sonoma Coast State Park Unit

(2001 County LCP reference: page 106)

The Sonoma Coast State Park spans most of the coastline of this SubArea, including Bodega Dunes Campground and day use areas and Bodega Head. Additional recreation facilities provided by the County include Doran Park and Spud Point Marina.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	II
Development Priority:	I
Existing Improvements:	98 campsites; about 9 miles of trail, including an all access loop trail around Bodega Head; coastal access; 40 day use parking spaces; restrooms

Proposed Improvements and Programs:

1. Encourage development of a multi-agency visitor center in the vicinity of Salmon Creek, Bodega Bay, or the Bodega Dunes Campground.
2. Encourage development of a nature trail west of State Highway 1 at the Salmon Creek Marsh.
3. Develop the California Coastal Trail from Keefe Avenue to Bay Flat Road.
4. Encourage partnerships with the U.C. Davis Bodega Bay Marine Lab and local conservation organizations in the restoration and management of natural dunes systems.
5. Develop concession agreements for the operation of equestrian trail rides.
6. Develop a planning and feasibility analysis for acquisition needs and route planning for completion of missing segments of the California Coastal Trail.

(I-2) California Coastal Trail – Carmet to Salmon Creek

(2001 County LCP reference: page 100 & #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

The California Coastal Trail is unidentified from Carmet to Marshall Gulch, with steep cliffs preventing continuous access, and residential development complicating bluff access. From Marshall Gulch, the Coastal Trail route heads east of State Highway 1 onto the Carrington Ranch Regional Park and Open Space Preserve, owned by Sonoma County Regional Parks. The proposed Coastal Trail crosses Salmon Creek at the highway bridge.

Owner / Manager: State, To Be Determined
Status: Proposed
Acquisition Priority: I
Development Priority: I
Existing Improvements: None

Proposed Improvements and Programs:

1. Study the feasibility of connecting Carmet with Marshall Gulch. Routes west and east of Highway 1 should be evaluated. Acquire property from willing sellers if needed.
2. Develop the Coastal Trail from Marshall Gulch to the Salmon Creek State Highway 1 bridge as illustrated in the Carrington Ranch Immediate Public Use Facilities Plan completed by California State Parks or successor plan.
3. Develop a trail separated from motorized vehicles across the Salmon Creek State Highway 1 Bridge.

(I-3) Sonoma Coast State Park – Schoolhouse Beach

(2001 County LCP reference: # 56, page 85 and #11, page 161)

This is a major access point to a large sandy beach towards the north end of Carmet.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Trail, 79 day use parking spaces
Proposed Improvements and Programs: None

(I-4) Sonoma Coast State Park – North and South Carmet Beach

(2001 County LCP reference: #10, page 160)

This access point consists of one large parking turnout that serves two trails to two sandy beaches at the south end of Carmet.

Owner / Manager: California State Parks

Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 2 trails, 57 day use parking spaces
Proposed Improvements and Programs: None

(I-5) Sonoma Coast State Park – Marshall Gulch

(2001 County LCP reference: #9, page 160)

This access point consists of a short trail to a beach.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Trail, 8 day use parking spaces
Proposed Improvements and Programs: None

(I-6) Carrington Ranch Regional Park & Open Space Preserve

(2001 County LCP reference: None)

The Carrington Ranch was acquired by the Sonoma County Agricultural Preservation and Open Space District for transfer to California State Parks as an addition to Sonoma Coast State Park in 2003. The 330-acre property contains a historic ranch house and out buildings and is located entirely east of Highway 1. Coleman Valley Road bisects the property and provides access to the north and south. California State Parks incorporated the Carrington Ranch into the Sonoma Coast State Park General Plan and subsequently prepared a focused plan to provide public use and guidance for stabilization of historic structures. However, California State Parks was unable to accept the property, and Sonoma County Regional Parks accepted the property in 2020 and is completing a master plan.

Owner / Manager: Sonoma County Regional Parks
Status: Proposed
Acquisition Priority: None
Development Priority: I

Existing Improvements: Historic Building, informal parking areas

Proposed Improvements and Programs:

1. Complete a master plan the Carrington Property, including addressing historic structures, parking, access improvements, restrooms, trails, picnic sites, and caretaker residence improvements. Evaluate visitor opportunities for low-cost coastal accommodations options in accordance with the Coastal Conservancy program.
2. Develop the California Coastal Trail from Marshall Gulch to Salmon Creek Bridge.
3. Develop trail connections to properties to the east via trail easements and as conservation easements permit.
4. Implement a Master Plan in phases when resources allow.

(I-7) Sonoma Coast State Park – Arched Rock Vista

(2001 County LCP reference: #56, page 85)

This turnout on State Highway 1 immediately to the north of Coleman Valley Road provides spectacular views of Arched Rock and other sea stacks. There is currently no access to Arched Rock Beach from the Arched Rock Vista parking area.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: Trail, 34 day use parking spaces

Proposed Improvements and Programs: None

(I-8) Sonoma Coast State Park – Coleman Beach

(2001 County LCP reference: #56, page 85)

This turnout on Highway 1 immediately south of Coleman Valley Road provides spectacular views of Arched Rock and other sea stacks. Repair storm damage to Coleman Beach access as feasible.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: I

Existing Improvements: Trail, 26 day use parking spaces

Proposed Improvements and Programs:

1. Restore access to Coleman Beach if determined to be feasible.

(I-9) Sonoma Coast State Park – Miwok Beach

(2001 County LCP reference: #56, page 85)

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: Trail, 5 day use parking spaces

Proposed Improvements and Programs: None

(I-10) Sonoma Coast State Park – No-Name Beach

(2001 County LCP reference: #56, page 85)

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: Trail, day use parking

Proposed Improvements and Programs: None

(I-11) Sonoma Coast State Park – Rabbit Ears Beach

(2001 County LCP reference: #56, page 85)

Two sea stacks appear as rabbit ears when viewed from this parking area.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: Trail, 5 day use parking spaces

Proposed Improvements and Programs: None

(I-12) Sonoma Coast State Park – North Salmon Creek Beach

(2001 County LCP reference: #56, page 85)

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: Trail, 40 day use parking spaces
Proposed Improvements and Programs: None

(I-13) Sonoma Coast State Park – Bodega Bay to Sebastopol Trail

(2003 Draft County ORP: Trail AA)

This proposed trail begins at Bodega Bay by Salmon Creek and ends at the West County Trail, north of Sebastopol. The trail connects Bodega Bay, Salmon Creek Beach, Carrington Ranch and other trail easements and the West County Trail north of Sebastopol. The existing West County Trail continues south into Sebastopol. The western portion of this proposed trail is in the Coastal Zone.

Owner / Manager: Public / Private
Status: Proposed
Acquisition Priority: II
Development Priority: III
Existing Improvements: None

Proposed Improvements and Programs:

1. Study the feasibility of trail alignments between existing trail easements, and public road right of way, and Sebastopol.
2. If feasible, develop offer-to-dedicate trail easements after public parking at Carrington Ranch has been established.

(I-14) Salmon Creek Trail

(2003 Draft County ORP: Trail BG)

This proposed trail begins at the Pacific Ocean and ends at Occidental. The portion of the alignment in the Coastal Zone is unidentified. The portion of the Salmon Creek Trail from Bodega to Occidental is proposed as a Class I Bikeway, Project 207 in the Sonoma County Bikeways Plan.

Owner / Manager: Private
Status: Proposed
Acquisition Priority: III
Development Priority: III
Existing Improvements: Unknown

Proposed Improvements and Programs:

1. Study the feasibility to identify the most appropriate alignment. If needed, acquire easements or fee title from willing sellers. Develop trail.

(I-15) California Coastal Trail: Salmon Creek to Bodega Harbour Subdivision

(2001 County LCP reference: page 100 & #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

The California Coastal Trail is a braided trail through this area and consists of two routes serving two purposes. The coastal route follows the western side of the Bodega peninsula and along Doran Beach. This route provides a coastal experience through State and County parkland to pedestrians, equestrians, and partially to bicyclists. The inland route generally parallels State Highway 1 along boardwalks, Class I Bikeways, and multiple use trails. This route connects the community and provides an important transportation corridor. The inland route the Class I segments of the Bodega Bay Pedestrian & Bicycle Trail. From Salmon Creek, the western route includes South Salmon Creek Beach, Bodega Dunes Trail, Bodega Marine Life Refuge, Bodega Head Loop Trail and Doran Beach.

Owner / Manager: Public/Private
Status: Proposed
Acquisition Priority: See Table C-PA-1 below
Development Priority: See Table C-PA-1 below
Existing Improvements: None

Proposed Improvements and Programs:

1. Modify the Salmon Creek Bridge to provide safe pedestrian access including a barrier or other separation between trail users and motorized vehicle traffic on the eastern side to connect with the Coastal Trail on the Carrington Ranch addition to the State Park. Cross Highway 1 to the south of Salmon Creek and connect with the Bodega Bay Pedestrian & Bicycle Trail.

2. The following Class I Bikeway segments in the Bodega Bay Pedestrian & Bicycle Trail Study are designated as the California Coastal Trail: 1B, 1C, 2B, 3A, 3B-2, 3D-1, 3D-2, 5B, 6B, 6C, I, and J. Acquire and develop the designated California Coastal Trail segments of the Bodega Bay Pedestrian & Bicycle Trail Plan according to the priorities identified in the Bikeways Plan.
3. Designate the existing Lower Dunes Trail, the Overlook Trail, and the Bodega Head Trail as the California Coastal Trail.
4. Develop a trail from the Bodega Head Loop Trail to Campbell Cove to separate hikers from motorized traffic.
5. Study the feasibility of providing a water taxi from Campbell Cove to Doran Regional Park and pursue if feasible to connect the Class I Bikeway on Doran (section I and J).
6. Install the California Coastal Trail signage along all designated sections.

Table C-PA-1: Segments of the Bodega Bay Bicycle & Pedestrian Trail Plan Which Are Part of the California Coastal Trail

North to South	Sonoma Co. Bikeways Plan Project #	Bodega Bay Pedestrian & Bicycle Trail Plan Segment	Acquisition Priority	Development Priority	Notes
1	None	None	I	I	Salmon Creek Bridge Pedestrian Upgrade
2	None	None	I	I	Inland Route East of Highway 1, crosses Highway to join 1B
3	197f	1B, 1C, 2B	I	I	Inland Route. 1B and 1C are Existing.
4	197e	3A, 3B-2	I	I	Inland Route. Only the portion north of Porto Bodega SFC of 3A is designated California Coastal Trail
5	197g	3D-1, 3D-2	I	I	Inland Route
6	197c	5B, 6B	I	I	Inland Route
7	197c	6C	Existing	Existing	Inland Route
8	197a	I, J	None	II	Coastal Route

(I-16) Sonoma Coast State Park – South Salmon Creek Beach

(2001 County LCP reference: #57, page 85)

South Salmon Creek is one of the most important and heavily used beach access points on the Sonoma County Coast. Existing parking for 20 cars is inadequate, and roadside parking is incompatible with residential uses. Heavy use of the area has damaged and destabilized the dunes such that the parking area has periodically been covered by drifting sand. California State Parks has undertaken a dune stabilization and revegetation project in selected areas, for which temporary closure of the parking area was necessary. Closure of the parking area may be necessary in the future for revegetation and dune stabilization.

The South Salmon Creek parking lot is usually inadequate on weekends, and overflow parking ends up on Bean Avenue, the road that provides access to the parking lot; and on private roads in the Salmon Creek Subdivision. Access along these narrow roads is very constrained.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	II
Existing Improvements:	40 day use parking spaces

Proposed Improvements and Programs:

1. Continue revegetation and dune stabilization.
2. Parking improvements for South Salmon Creek Beach identified by California State Parks include: 1) expanding the South Salmon Creek parking lot; 2) constructing new parking lots further south along State Highway 1 and developing an alternative access to those lots; 3) moving the California State Parks headquarters and using that area for parking and beach access; and 4) providing signs at both the Bean Avenue entrance to the South Salmon Creek parking lot and at the entrance to the Dunes Campground directing vehicles to an existing parking lot at the Dunes kiosk for overflow parking.

(I-17) Sonoma Coast State Park – Bodega Dunes Campground

(2001 County LCP reference: #58, page 85)

Direct access to the beach is available from several areas of the Bodega Dunes Campground.

Owner / Manager: California State Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 98 campsites, restrooms, showers, RV dump station

Proposed Improvements and Programs:

1. Acquire the five parcels near the Roppolo Well to protect the dunes from development.
2. Consider providing a hostel or other alternative overnight facilities to serve the South Coast.
3. Evaluate trail connections to Chanslor Ranch and implement if feasible.

(I-18) Bodega Coastal Prairie Trail Property

(2001 County LCP reference: None)

This 34-acre property hosts the multi-purpose community center building, the Nicholas Green Bell Tower, and trails. Community groups lease the community center building for various activities, and the parking area is used for a farmer's market. The first of several phases of the Community Center has been developed.

Owner / Manager: County
Status: Existing
Acquisition Priority: None
Development Priority: II
Existing Improvements: Community center, memorial sculpture, 0.5-mile trail, day use parking

Proposed Improvements and Programs:

1. Extend the Coastal Prairie Trail, a segment of the Bodega Bay Pedestrian & Bike Trail and the California Coastal Trail, to Bay Flat Road.
2. Study the feasibility of using the area with the building and access road for expanded recreational and/or educational purposes.
3. Consider additional trail connections across the property and interpretive features.

(I-19) Bodega Marine Reserve and Laboratory

(2001 County LCP reference: #59, page 85)

The 362-acre Bodega Marine Reserve and Laboratory are owned by the University of California Davis and has limited public access. The Overlook Trail is a public pedestrian trail that traverses the Reserve and provides views of Horseshoe Cove. The trail connects with the Osprey Trail in the southern portion of the South Salmon Creek Beach and Bodega Dunes area. Although the remainder of the Reserve is closed to the public due to ongoing research, the University provides facility tours on a weekly basis and for special events.

Owner / Manager: University of California at Davis

Status: Existing

Acquisition Priority: None

Development Priority: None

Existing Improvements: 0.8-mile trail

Proposed Improvements and Programs: None

(I-20) Sonoma Coast State Park – Bodega Head

(2001 County LCP reference: #60, page 86)

Bodega Head is a heavily used area for hiking, sunset viewing, photography, fishing, and other ocean-based activities. The Overlook Trail extends from this site across the dunes to the Bodega Dunes Campground.

Owner / Manager: California State Parks

Status: Existing

Acquisition Priority: None

Development Priority: III

Existing Improvements: 2.1 miles of trail, restrooms, day use parking areas

Proposed Improvements and Programs:

1. Limit recreational development to passive day use activities to minimize conflicts with the Bodega Marine Reserve. Limit development to improving existing parking areas, restrooms, trails, and picnic facilities.
2. Develop an off-road trail from the existing Overlook Trail to Campbell Cove to provide a safe connection for the California Coastal Trail.

(I-21) Sonoma Coast State Park – Campbell Cove

(2001 County LCP reference: None)

Campbell Cove is on the north side of Bodega Head at the entrance to Bodega Harbor and is popular with fishermen, sightseers, bird watchers, and other visitors. Campbell Cove was the site of “The Hole in the Head” where Pacific Gas and Electric Company started to excavate for a nuclear power plant in the 1950s.

Owner / Manager:	California State Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	III
Existing Improvements:	Interpretive signage, trail/boardwalk, picnic tables, day use parking

Proposed Improvements and Programs:

1. Connect Campbell Cove and Bodega Head by an off-road trail.
2. Enhance the site’s accessibility, visitor amenities, interpretative signage, and resource protection.

(I-22) Westside Regional Park

(2001 County LCP reference: #61, page 86)

Located on the west side of Bodega Harbor, Westside Regional Park provides camping and harbor access. In 2006 Regional Parks completed the connection of the restrooms to public sewer. In 2016 Regional Parks completed the renovation and expansion of the boat launching facilities, including 3 lane launch, docks, ADA kayak launch, fish cleaning station, and accessibility upgrades.

Owner / Manager:	Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	II
Existing Improvements:	47 campsites, day use picnic area, fish cleaning station, boat rinsing station, RV dump station, 76 boat trailer spaces, and 31 day use parking spaces

Proposed Improvements and Programs:

1. Renovate the campground to improved experience, functionality, sustainability, and aesthetics.
2. Connect the park's boat washing facility and fish cleaning station to either a holding tank or public sewer.
3. Construct a trail separated from the road from Westside Regional Park south to West Side Trail at Sonoma Coast State Park to connect the campground to the greater trail system.
4. Evaluate potential impacts of sea level rise and plan and mitigate accordingly.

(I-23) Spud Point Marina

(2001 County LCP reference: pages 117-123 and #5 & #7, page 123)

Spud Point Marina was developed by the County in 1986 to accommodate commercial and recreational fishermen. A pier allows public access to view the bay as well as access to the harbor. Slips can accommodate boats up to 148 feet in length. The decline of the fishing industry and other factors has impacted the financial stability of the facility.

Owner / Manager:	Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	I
Existing Improvements:	Marina, 244 slips with electrical service, fuel dock, laundry facilities, waste pump-out station, restrooms, showers, fishing pier, parking area

Proposed Improvements and Programs:

1. Complete disabled access improvements to the berths and gangways.
2. Develop a master plan for the Marina and immediate environment to maximize public use for commercial and recreational fishing, boating, and coastal access related activities and provides for stable finances.

(I-24) Mason's Marina

(2001 County LCP reference: None)

Mason's Marina is owned by the County and was leased to a private marina operator since the 1960s. The lease expired in 2012, and the County resumed management. The marina needs extensive repairs to the docks, buildings, restrooms, wharfs/ piers and other facilities. Recently completed reports inventory the necessary repairs and the shift

from a commercial focus to a mixed use focus of commercial, recreational, and educational uses.

Owner / Manager:	Sonoma Public Infrastructure / Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	I
Existing Improvements:	Marina, 120 slips, electrical service, fuel dock, restrooms, showers, dry storage, parking area

Proposed Improvements and Programs:

1. Complete disabled access improvements to the berths and gangways.
2. Complete a feasibility study for the Marina and immediate environment to study the potential to support appropriate commercial, educational, and recreational fishing and boating related activities. If feasible, obtain funding and implement the plan.

(I-25) Bodega Bay Sport Fishing Center

(2001 County LCP reference: none)

The County enters into a license agreement with sport fishing boat operators to allow them use the Bodega Bay Sport Fishing Center for party boats for fishing, whale watching, pelagic bird watching, and sightseeing.

Owner / Manager:	Sonoma Public Infrastructure / Sonoma County Regional Parks
Status:	Existing
Acquisition Priority:	None
Development Priority:	I
Existing Improvements:	Dock, berths, parking area

Proposed Improvements and Programs:

1. Complete disabled access renovations of the Parking, gangway consistent with the County wide ADA Transition plan.
2. Maintain the breakwater, pontoons, and gangways.
3. Consider paving parking lot to delineate spaces for safety and to accommodate use levels.
4. Consider moving the Sport Fishing Center activities to Mason's Marina to improve the amenities, accessibility, and consolidate the management of the County's

marinas. Evaluate coastal dependent reuse options for the tidelands lease area now occupied by the Sport Fishing Center.

(I-26) Taylor Tract Trail

(2010 Bikeways Plan & Bodega Bay Pedestrian & Bicycle Trail: south portion of Trail 3A & 3B-1)

This Class I Bikeway follows the one-way portion of Bay Flat Road and provides an important connection between the businesses on State Highway 1 with the residences, businesses, Porto Bodega Sport Fishing Center, and the California Coastal Trail. This route begins at the intersection of Bay Flat Road and Eastshore Road and continues to Taylor Street. This is the southern half of segment 3A and all of 3B-1 in the Bodega Bay Pedestrian & Bicycle Trail Plan or Projects 197E in the Bikeways Plan.

In 1984 a landslide removed Bay Flat Road's western travel lane and the remaining lane was designated as a one-way road. This proposed Class I Bikeway is contingent upon repairing and stabilizing the slope and may require retaining walls and other measures.

Owner / Manager: Public

Status: Proposed

Acquisition Priority: I

Development Priority: I

Existing Improvements: None

Proposed Improvements and Programs:

1. Acquire easements if needed.
2. Construct Class I trail including retaining walls, safety barriers, switchbacks, and other measures necessary to provide safe access.

(I-27) Central Bodega Bay Commercial Access

(2001 County LCP reference: #62, page 86)

Existing commercial uses such as The Tides, Lucas Wharf, and Diekmann's Store provide physical and visual access to the harbor. The Coastal Conservancy purchased other parcels in the town to prohibit development, and these parcels also provide visual access. The proposed Bodega Bay Pedestrian & Bicycle Trail alignment is proposed through along the Central Bodega Bay Commercial area. Additional access opportunities may be possible.

Owner / Manager: Public / Private

Status: Existing
Acquisition Priority: None
Development Priority: III
Existing Improvements: Boardwalks, parking areas

Proposed Improvements and Programs:

1. Require that permits for expansion of existing uses, changing existing uses, establishment of new uses, and renewal of tideland leases with the County include a condition of approval for providing public access to Bodega Harbor, including the Proposed Improvements and Programs of the Bodega Bay Pedestrian & Bicycle Trails Plan.

(I-28) Bodega Harbor Yacht Club

(2001 County LCP reference: #63, page 86 and #9, page 123)

The Bodega Harbour Homeowners' Association did not renew its lease for the Yacht Club property from the County. The Yacht Club is considered one of the best wind-sailing launch sites for Bodega Harbour, however deferred maintenance, closed gates, and private signage prevented public access to Bodega Harbor until recently.

Owner / Manager: Public
Status: Existing
Acquisition Priority: None
Development Priority: I
Existing Improvements: Boat launch, day use parking area

Proposed Improvements and Programs:

1. Address deferred maintenance and upgrade the accessibility to the parking area and pier to support public access. Install signage notifying the public of access to Bodega Harbor.
2. Evaluate building reuse options.

(I-29) Birdwalk Coastal Access Trail

(2001 County LCP reference: #64, page 86)

The property previously known as the Old Airport Site has been used as a disposal site for dredge spoils. The Birdwalk Coastal Access Trail was constructed on the reclaimed perimeter berm of the disposal site, on the eastern side of Bodega Harbor. The site is still available for dredge spoil disposal and a 2003 Army Corps of Engineer Study identified the capacity of approximately 100,000 cubic yards. However, species and other environmental issues reduce the feasibility of the site for dredge disposal.

In 2008 Regional Parks constructed a section of the California Coastal Trail from Birdwalk Coastal Access to Doran Regional Park over Cheney Gulch. The Bodega Bay Bicycle & Pedestrian Plan identified continuing the Coastal Trail from the levee to Smith Brothers Road and beyond (Project #197c, 6B).

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: I
Existing Improvements: 1.2-mile trail, picnic tables, restroom, 10 day use parking spaces

Proposed Improvements and Programs:

1. Reclaim and revegetate the site when the disposal of dredge spoils is complete.
2. Construct a Class I Bikeway from the north property boundary of the Birdwalk Coastal Access property to the existing levee trail on the levee, approximately 0.3 miles.

(I-30) Doran Beach Regional Park

(2001 County LCP reference: #66, page 69; #65, page 86; page 93; page 100; page 103; #54-55, page 107)

Doran County Park provides public access to Doran Beach, Doran Pond, Bodega Harbor, and Bodega Bay. Boat launching, clamming, crabbing, fishing, diving, picnicking, nature observation, bird watching, and surfing are all popular activities at this heavily used park. The Bodega Bay Bicycle & Pedestrian Plan identified a Class I Bikeway along the length of the park (Project #197a, Sections I, J).

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: II
Existing Improvements: 323 day use parking spaces, 138 camp sites, 1 group camp sites, 3 restrooms with showers, 4 restrooms without showers, boat launch with dock, fish cleaning station, RV dump station, boardwalk, monuments, other amenities.

Proposed Improvements and Programs:

1. Develop a restroom by the Gull and Shell Camp areas.
2. Develop an accessible ramp to the beach at the Jetty Day Use Area.
3. Study replacing pit toilets with new restrooms to improve water quality and accessibility.
4. Expand boardwalk, interpretive displays, and native dune grass restoration.
5. Study expanded day use parking.
6. Construct a Class I Bikeway along the length of the park.
7. Complete accessibility upgrades consistent with the County Transition Plan.
8. Evaluate ecological and infrastructure resiliency strategies for adapting to sea level rise and increased king tides and groundwater. Implement mitigations and transition plans. Consider importance of Doran Beach in protecting Bodega Harbor from climate changes.

(I-31) Links at Bodega Harbour Golf Course

(2001 County LCP reference: page 108)

Designed by Robert Trent Jones Jr., the Links at Bodega Harbour Golf Course is an 18-hole golf course with clubhouse and other facilities available to owners of property in the Bodega Harbour Subdivision. The back nine greens were opened in 1978, and the front nine greens were added in 1987. Renovations to the golf course were completed in 2008, in which over 96 bunkers were re-constructed and bentgrass was installed on all 18 greens. In 2012 the pro shop was moved outside the clubhouse to the opposite end of the parking lot.

Owner / Manager:	Private
Status:	Existing
Acquisition Priority:	None
Development Priority:	III
Existing Improvements:	18-hole golf course, clubhouse, pro shop, golf warm-up facility, swimming pool, tennis courts, 89 parking spaces

Proposed Improvements and Programs:

1. Expand and upgrade the clubhouse and parking.
2. Construct a building for parking golf carts.

(I-32) California Coastal Trail: Bodega Harbor Subdivision to Marin County

(2001 County LCP reference: page 100 and #56-58, page 107; 2020 County General Plan; SB 908; AB 1396)

The California Coastal Trail is a braided trail through this area and consists of two primary routes. The coastal and inland routes of the California Coastal Trail from Bodega Harbor to Marin County are intertwined with both the Bodega Bay and Valley Ford SubAreas.

The coastal route follows the shoreline of the Bodega Harbour subdivision from Doran Regional Park to the Marin County line at the Estero Americano. This pedestrian only route is limited to use during low tides, although portions can be accessed anytime from Doran Beach, Pinnacle Gulch Trail, and Short Tail Gulch Trail.

The inland route generally follows Highway 1 and Valley Ford Estero Road from the entrance of the Bodega Harbour subdivision to the Marin County line. Highway 1 is very steep through this area.

Owner / Manager:	Public/Private
Status:	Proposed
Acquisition Priority:	I
Development Priority:	I
Existing Improvements:	See individual access points

Proposed Improvements and Programs:

1. Study the long-term inland route alignment to provide a multi-use trail connecting Bodega Harbor with Marin County.
2. Designate the Highway 1 right-of-way as an alternative trail route until a continuous alignment consistent with Coastal Commission siting goals can be identified. Work with Caltrans to improve pedestrian and bicycle access.
3. Work with Marin County and other partners to connect the coastal route in Marin County.
4. Provide improved signage to existing Pinnacle Gulch and Short Trail Gulch Trails.

(I-33) Pinnacle Gulch Trail

(2001 County LCP reference: #66, page 86)

Dedicating and developing a coastal access trail along Pinnacle Gulch was required as a condition of approval of the Bodega Harbour Subdivision. The narrow access easement has experienced numerous landslides.

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: None
Existing Improvements: 0.5-mile trail, restrooms, 18 day use parking spaces

Proposed Improvements and Programs:

1. Maintain the trail and improve eroded sections.
2. If erosion persists, study options of relocating easements to more stable land.

(I-34) Short-Tail Gulch Trail

(2001 County LCP reference: #67, page 87)

An Offer of Dedication of a coastal access trail at the southern end of Bodega Harbor along Short-Tail Gulch was required as a condition of approval for the Bodega Harbour Subdivision. The trail was developed from Osprey Drive to the beach, which is less than a mile north of the mouth of the Estero Americano. Parking is available approximately ½ mile away at Pinnacle Gulch as well as on the public streets near the Short-Tail Gulch trailhead located approximately 150 feet north of the intersection of Osprey Drive and Owl Court. It is possible to walk along the beach from the Estero Americano to Doran Beach at low tide.

Owner / Manager: Sonoma County Regional Parks
Status: Existing
Acquisition Priority: None
Development Priority: I
Existing Improvements: 0.5-mile trail

Proposed Improvements and Programs:

1. Provide improved directional signage indicating public access trail and public parking locations from Highway 1 to Short Tail Gulch trailhead.

(I-35) Estero Ranch Preserve

(2001 County LCP reference: none)

In 2015 The Wildlands Conservancy acquired a 547-acre preserve at the mouth of the Estero Americano and ocean. The acquisition secured a conservation easement that included public funding and the requirement for public access. Road access is limited by easement restrictions that prohibit public use of Estero Lane. Trail access is either via the California Coastal Trail segment between Bodega Harbour and the mouth of the Estero Americano running along the Pacific Ocean. Future trail access may connect Short-Tail Gulch Trail to Estero Ranch Preserve. A management plan under development will balance appropriate public access to the bluff, estuary, and coast with ecological protection.

Owner / Manager: Private

Status: Existing

Acquisition Priority: None

Development Priority: I

Proposed Improvements and Programs:

1. Plan and develop appropriate public access, education, and research compatible with the site's fragile ecosystem.
2. Maintain agriculture and related infrastructure on the preserve to support grassland health.

VALLEY FORD SUBAREA 10 (FIGURE C-PA-1J)

(J-1) California Coastal Trail: Bodega Harbor Subdivision to Marin County

(2001 County LCP reference: page 100 & #56-58, page 107; 2020 County General Plan; SB 908; AB 1396

The California Coastal Trail is a braided trail through this area and consists of two primary routes. The coastal and inland routes of the California Coastal Trail from Bodega Harbor to Marin County are intertwined with both the Bodega Bay and Valley Ford SubAreas.

The coastal route follows the shoreline of the Bodega Harbour subdivision from Doran Regional Park to the Marin County line at the Estero Americano. This pedestrian only route is limited to use during low tides, although portions can be accessed anytime from Doran Beach, Pinnacle Gulch Trail, and Short Tail Gulch Trail. The 2016 acquisition of the Estero Ranch by The Wildlands Conservancy may support additional Coastal Trail routes. The inland route generally follows Highway 1 and Valley Ford Estero Road from the entrance of the Bodega Harbour subdivision to the Marin County line. Highway 1 is very steep through this area and bicyclists have trouble negotiating the severe grades.

Owner / Manager:	Public
Status:	Proposed
Acquisition Priority:	I
Development Priority:	I
Existing Improvements:	See individual access points

Proposed Improvements and Programs:

1. Study the long-term inland route alignment to provide a multi-use trail connecting Bodega Harbor with Marin County.
2. Designate the Highway 1 right-of-way as an alternative trail route until a continuous alignment consistent with Coastal Commission siting goals can be identified. Work with Caltrans to improve pedestrian and bicycle access.
3. Work with Marin County and other partners to connect the Coastal Trail in Marin County.
4. Provide improved signage to Pinnacle Gulch and Short Trail Gulch Trails.

(J-2) Estero Americano Preserve

(2001 County LCP reference: #68, page 88)

The Sonoma Land Trust owns a 127 acre preserve off Estero Lane that provides limited guided hikes and limited guided canoe/kayak access to the Estero Americano. Access is only through infrequent scheduled guided outings available to the public. Road access is limited by easement restrictions that prohibit public use of Estero Lane, which is the only road connecting Estero Americano Preserve to the public road network. The preserve hosts a variety of research projects on water, wildlife, and coastal grassland management. School groups occasionally visit the Preserve to learn about the unique and fragile ecosystem of the Estero Americano.

The Sonoma Land Trust identified additional property in the lower half of the Estero as a “Secondary Conservation Target” for protecting the watershed, biotic resources, and visual access to the ocean in its November 1999 *Sonoma County Coastal Parcel Study*.

Owner / Manager:	Private
Status:	Proposed
Acquisition Priority:	III
Development Priority:	III
Existing Improvements:	20 informal parking spaces

Proposed Improvements and Programs:

1. Encourage additional low-impact support facilities to enhance nature education and interpretation.
2. Work with adjacent landowners to allow public to access the Estero American Preserve using Estero Lane.
3. Pursue acquisition of additional conservation and/or access easements to the Estero Americano from willing sellers.
4. Maintain agriculture and related infrastructure on the preserve to maximize grassland health and address fuel load management.

(J-3) Estero Americano Water Trail

(2001 County LCP reference: page 119)

The Estero Americano is a navigable waterway for at least six miles and as such, the areas below mean high tide are legally available to the public. From Valley Ford Estero Road to the Pacific Ocean, the Estero Americano is part of the Greater Farallones National Marine Sanctuary. The waterway has become popular with paddlers, including

bird watchers and hunters because of the exceptional scenic and wildlife attributes. There is no developed access facility, and currently there is no identified agency that manages public access at the Estero Americano. As recreational use levels have risen, conflicts between adjacent property owners and people paddling on the Estero Americano have increased, demonstrating a need for public agency management of access and use of the Estero Americano. Public access is currently restricted to the mouth of the Estero via public trust lands at the Pacific Ocean outfall.

Owner / Manager: Public / Private

Status: Existing

Acquisition Priority: Existing

Development Priority: III

Existing Improvements: None

Proposed Improvements and Programs:

1. Create a maximum public access plan that manages the existing right to access the navigable waterway and protects the Estero and private property. The plan should protect the sensitive natural resources from overuse and prevent visitor impacts to private property and agricultural operations.

(J-4) Estero Trail

(2001 County LCP reference: none)

The Sonoma County Agricultural Preservation & Open Space District acquired a conservation easement and trail easement over the Bordessa Ranch, which remains in private ownership. The State Coastal Conservancy required a trail access plan be developed as part of the easement acquisition.

Owner / Manager: Public / Private

Status: Proposed

Acquisition Priority: Easement Acquired

Development Priority: II

Proposed Improvements and Programs:

1. Complete the trail plan, including locating trails and parking areas consistent with the recorded easements.
2. Implement the plan in phases to allow adaptive management techniques to be fine-tuned to prevent impacts to grazing and natural resources.

Sonoma County Local Coastal Plan

APPENDIX C: RIGHT TO FARM ORDINANCE



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX C: RIGHT TO FARM ORDINANCE

(ORDINANCE NO. 5203)

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SONOMA, STATE OF CALIFORNIA, ADDING SECTIONS 7-11.75, 25-12.75, 26-88-170, AND 26C-451.5 TO THE SONOMA COUNTY CODE, AND REPEALING AND RE-ENACTING ARTICLE II OF CHAPTER 30 OF THE SONOMA COUNTY CODE, THE SONOMA COUNTY RIGHT TO FARM ORDINANCE

The Board of Supervisors of the County of Sonoma, State of California, ordains as follows:

SECTION I. Section 7-11.75 of the Sonoma County Code is added to read:

Sec. 7-11.75. Compliance with right to farm ordinance.

Any building or structure subject to the provisions of this chapter shall comply with the right to farm ordinance set forth in Chapter 30 of this code.

SECTION II. Section 25-12.75 is added to the Sonoma County Code to read:

Sec. 25-12.75. Compliance with right to farm ordinance.

Any subdivision subject to the provisions of this chapter shall comply with the right to farm ordinance set forth in Chapter 30 of this code.

SECTION III. Section 26-88-170 is added to the Sonoma County Code to read:

Sec. 26-88-170. Compliance with right to farm ordinance.

Any use subject to the provisions of this chapter shall comply with the right to farm ordinance set forth in Chapter 30 of this code.

SECTION IV. Section 26C-451.5 is added to the Sonoma County Code to read:

Sec. 26C-451.5. Compliance with right to farm ordinance.

Any use subject to the provisions of this chapter shall comply with the right to farm ordinance set forth in Chapter 30 of this code.

SECTION V. Article II of Chapter 30 of the Sonoma County Code is repealed and re-enacted to read:

Article II. Right to Farm.

Sec. 30-20. Short Title.

This article shall be known and may be cited as the Sonoma County Right to Farm Ordinance or the Right to Farm Ordinance.

Sec. 30-21. Findings.

(a) It is the declared policy of this county to conserve, protect, enhance, and encourage agricultural operations on agricultural land within the unincorporated area of the county. Further, it is the intent of this county to provide its residents proper notification of the county's recognition and support, through this article, of the right to farm.

(b) Where non-agricultural land uses, particularly residential and commercial development, extend onto agricultural land or exist side by side, agricultural operations are frequently the subject of nuisance complaints. As a result, some agricultural operations are forced to cease or curtail their operations and many others are discouraged from making investments in improvements to their operations, all to the detriment of adjacent agricultural uses and the economic viability of the county's agricultural industry as a whole. It is the purpose and intent of this article to reduce the loss to the county of its agricultural resources by limiting the circumstances under which properly conducted agricultural operations on agricultural land may be considered a nuisance.

(c) It is the further purpose and intent of this article to promote a good-neighbor policy by requiring notification of owners, purchasers, residents, and users of property adjacent to or near agricultural operations on agricultural land of the inherent potential problems associated with being located near such operations, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds, and pesticides. It is intended that, through mandatory disclosures, owners, purchasers, residents, and users will better understand the impact of living or working near agricultural operations and be prepared to accept attendant conditions from properly conducted agricultural operations as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.

(d) It is the further purpose and intent of this article to carry out and advance the goals, objectives, policies, and implementation programs of the agricultural resources element of the general plan.

Sec. 30-22. Relationship to other laws.

This article is not intended to, and shall not be construed or given effect in a manner that modifies or abridges federal law or regulation, or state law as set out in the Civil Code, Health and Safety Code, Fish and Game Code, Food and Agricultural Code, Division 7 of the Water Code, or any other applicable provision of state law relative to nuisances; instead, this article is only to be utilized in the interpretation and enforcement of provisions of this code and county regulations. Further, this article is not intended to, and shall not be construed or given effect in a manner that limits or restricts the county's authority to review and approve or disapprove proposals for agricultural operations on agricultural land in accordance with other provisions of this code or other laws.

Sec. 30-23. Schedule of fees and charges.

The board of supervisors may from time to time establish a schedule of fees and charges following the procedures required by law to recover the reasonable cost of providing services, issuing permits, recording documents, and enforcing regulations pursuant to this article.

Sec. 30-24. Definitions.

Unless the provision or context otherwise requires, the definitions contained in this section shall govern the construction of this article. The definition of a word or phrase applies to any of that word's or phrase's variants.

"Adjacent to agricultural land" means within 300 feet of agricultural land.

"Agricultural land" means all that real property within the unincorporated area of the county designated as land intensive agriculture, land extensive agriculture, or diverse agriculture by the general plan and zoning ordinance.

"Agricultural operation" means and includes, but shall not be limited to, the cultivation and tillage of the soil, dairying, the production, irrigation, frost protection, cultivation, growing, harvesting, processing, and storing of any agricultural commodity, including viticulture, horticulture, timber, or apiculture, the raising of livestock, fur bearing animals, fish, or poultry, and any commercial agricultural practices performed incident to or in conjunction with such operations, including preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market.

"Development approval" means all of the following:

(a) Any discretionary approval granted pursuant to Chapter 25, 26, or 26C of this code to allow residential or commercial development of land, including, without limitation, any approval of a zone change, tentative map, lot line adjustment, use permit, or design review.

(b) Any building permit issued pursuant to Chapter 7 of this code to allow construction of a new single-family dwelling, enlargement of an existing single-family dwelling by six hundred forty (640) square feet or more of floor area, or installation of a manufactured home.

"Director of permit and resource management" means the director of permit and resource management of the county or his or her authorized representative.

"General plan" means the Sonoma County General Plan.

"Properly conducted agricultural operation" means an agricultural operation that is in conformance with existing laws and regulations and proper and accepted customs and standards.

"Treasurer/tax collector" means the treasurer/tax collector of the county or his or her authorized representative.

"Zoning ordinance" means the Sonoma County Zoning Ordinance set forth in Chapter 26 of this code or the Sonoma County Coastal Zoning Ordinance set forth in Chapter 26C of this code, as appropriate.

Sec. 30-25. Nuisance - agricultural operation.

No agricultural operation conducted or maintained on agricultural land in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the county, shall be or become a nuisance for purposes of this code or county regulations if it was not a nuisance when it began, provided that such operation complies with the requirements of all applicable federal, state, and county statutes, ordinances, rules, regulations, approvals, and permits. The provisions of this section shall not apply where a nuisance results from the negligent or improper management or operation of an agricultural operation.

Sec. 30-26. Disclosure of article to current owners.

The treasurer/tax collector shall cause the following notice to be mailed to all owners of real property within the county with the annual tax bill:

The County of Sonoma permits the operation of properly conducted agricultural operations on agricultural land within the unincorporated area of Sonoma County, and has declared it County policy in the Sonoma County Right to Farm Ordinance (Sonoma County Code, Chapter 30, Article II) to conserve, protect, enhance, and encourage such operations. Residents or users of property located near an agricultural operation on agricultural land may at times be subject to inconvenience or discomfort arising from that operation, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds, and

pesticides. One or more of these inconveniences or discomforts may occur as result of any properly conducted agricultural operation on agricultural land. The County of Sonoma has determined in the Sonoma County Right to Farm Ordinance that inconvenience or discomfort arising from a properly conducted agricultural operation on agricultural land will not be considered a nuisance for purposes of the Sonoma County Code or County regulations, and that residents or users of nearby property should be prepared to accept such inconvenience or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector. For more information about the Sonoma County Right to Farm Ordinance, please contact the Sonoma County Agricultural Commissioner's office at 2604 Ventura Avenue, Santa Rosa, CA 95403.

Sec. 30-27. Disclosure of article in development approvals.

Where a development approval is sought on or adjacent to agricultural land, the property owner, as part of the application for the development approval, shall execute a declaration acknowledging the right to farm. The director of permit and resource management shall cause the declaration to be recorded in the office of the county recorder upon granting of the development approval, unless a declaration acknowledging the right to farm has already been recorded for the property pursuant to this section, in which case the declaration need not be recorded. The declaration shall be in substantially the following form:

DECLARATION ACKNOWLEDGING RIGHT TO FARM

The undersigned do hereby certify to be the owner(s) of certain real property located in Sonoma County, California, and more particularly described in Exhibit "A," attached hereto and incorporated herein by this reference ("the subject property").

The undersigned do hereby acknowledge that the subject property is located on or adjacent to agricultural land, as defined in the Sonoma County Right to Farm Ordinance (Sonoma County Code, Chapter 30, Article II). The undersigned do hereby further acknowledge that the County of Sonoma permits the operation of properly conducted agricultural operations on agricultural land within the unincorporated area of Sonoma County, and has declared it County policy in the Sonoma County Right to Farm Ordinance to conserve, protect, enhance, and encourage such operations. The undersigned do hereby further acknowledge that if the subject property is located near an agricultural operation on agricultural land, residents or users of the subject property may at times be subject to inconvenience or discomfort arising from that operation, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil

amendments, seeds, and pesticides. The undersigned do hereby further acknowledge that one or more of these inconveniences or discomforts may occur as a result of any properly conducted agricultural operation on agricultural land. The undersigned do hereby further acknowledge that the County of Sonoma has determined in the Sonoma County Right to Farm Ordinance that inconvenience or discomfort arising from a properly conducted agricultural operation on agricultural land will not be considered a nuisance for purposes of the Sonoma County Code or County regulations, and that residents or users of nearby property should be prepared to accept such inconvenience or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.

This Declaration shall run with the subject property in perpetuity and shall be binding upon the undersigned and the undersigned's heirs, personal representatives, lessees, executors, successors, and assigns. This Declaration and the acknowledgments contained herein shall be disclosed to prospective transferees of any interest in the subject property, including, without limitation, a leasehold interest, prior to any such transfer.

IN WITNESS WHEREOF, the undersigned has/have executed this Declaration this _____ day of _____, 19__.

DECLARANT(S)

Dated: _____

Dated: _____

NOTE: ACKNOWLEDGMENTS MUST BE ATTACHED FOR ALL SIGNATORIES.

Sec. 30-28. Disclosure of article to buyers of real property.

(a) Where a transfer of real property by sale, exchange, installment land sale contract, lease with an option to purchase, any other option to purchase, ground lease coupled with improvements, or residential stock cooperative improved with one to four dwelling units is proposed for any real property within the unincorporated area of the county, the transferor shall disclose this article and the nature of its provisions to the prospective transferee in one of the following ways:

(1) Deliver a general disclosures and disclaimers advisory to the prospective transferee pursuant to local real estate practice that includes a statement disclosing this article and the nature of its provisions. The statement shall be in substantially the following form:

The County of Sonoma permits the operation of properly conducted agricultural operations on agricultural land within the unincorporated area of Sonoma County, and has declared it County policy in the Sonoma County Right to Farm Ordinance (Sonoma County Code, Chapter 30, Article II) to conserve, protect, enhance, and encourage such operations. If the property you are purchasing is located near an agricultural operation on agricultural land, residents or users of the property may at times be subject to inconvenience or discomfort arising from that operation, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds, and pesticides. One or more of these inconveniences or discomforts may occur as a result of any properly conducted agricultural operation on agricultural land. The County of Sonoma has determined in the Sonoma County Right to Farm Ordinance that inconvenience or discomfort arising from a properly conducted agricultural operation on agricultural land will not be considered a nuisance for purposes of the Sonoma County Code or County regulations, and that residents or users of nearby property should be prepared to accept such inconvenience or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector. For more information about the Sonoma County Right to Farm Ordinance, please contact the Sonoma County Agricultural Commissioner's office at 2604 Ventura Avenue, Santa Rosa, CA 95403.

(2) Deliver a disclosure statement to the prospective transferee pursuant to Article 1.5 (commencing with Section 1102) of Chapter 2 of Title 4 of Part 4 of Division 2 of the Civil Code disclosing this article and the nature of its provisions. The disclosure statement shall be in substantially the following form:

LOCAL OPTION

REAL ESTATE TRANSFER DISCLOSURE STATEMENT

THIS DISCLOSURE STATEMENT CONCERNS THE REAL PROPERTY SITUATED IN THE UNINCORPORATED AREA OF THE COUNTY OF SONOMA, STATE OF CALIFORNIA, DESCRIBED AS (Address and Assessor's Parcel Number(s)). THIS STATEMENT IS A DISCLOSURE OF THE CONDITION OF THE ABOVE DESCRIBED PROPERTY IN COMPLIANCE WITH SECTION 30-28 OF THE SONOMA COUNTY CODE AS OF (date). IT IS NOT A WARRANTY OF ANY KIND BY THE SELLER(S) OR ANY AGENT(S) REPRESENTING ANY PRINCIPAL(S) IN THIS TRANSACTION, AND IS NOT A SUBSTITUTE FOR ANY INSPECTIONS OR WARRANTIES THE PRINCIPAL(S) MAY WISH TO OBTAIN.

SELLERS INFORMATION

The Seller discloses the following information with the knowledge that even though this is not a warranty, prospective Buyers may rely on this information in deciding whether and on what terms to purchase the subject property. Seller hereby authorizes any agent(s) representing any principal(s) in this transaction to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the property.

THE FOLLOWING ARE REPRESENTATIONS MADE BY THE SELLER(S) AS REQUIRED BY THE COUNTY OF SONOMA, AND ARE NOT THE REPRESENTATIONS OF THE AGENT(S), IF ANY. THIS INFORMATION IS A DISCLOSURE AND IS NOT INTENDED TO BE PART OF ANY CONTRACT BETWEEN THE BUYER AND SELLER.

The County of Sonoma permits the operation of properly conducted agricultural operations on agricultural land within the unincorporated area of Sonoma County, and has declared it County policy in the Sonoma County Right to Farm Ordinance (Sonoma County Code, Chapter 30, Article II) to conserve, protect, enhance, and encourage such operations. If the property you are purchasing is located near an agricultural operation on agricultural land, residents or users of the property may at times be subject to inconvenience or discomfort arising from that operation, including, without limitation, noise, odors, fumes, dust, smoke, insects, operation of machinery during any time of day or night, storage and disposal of manure, and ground or aerial application of fertilizers, soil amendments, seeds, and pesticides. One or more of these inconveniences or discomforts may occur as a result of any properly conducted agricultural operation on agricultural land. The County of Sonoma has determined in the Sonoma County Right to Farm Ordinance that inconvenience or discomfort arising from a properly conducted agricultural operation on agricultural land will not be considered a nuisance for purposes of the Sonoma County Code or County regulations, and that residents or users of nearby property should be prepared to accept such inconvenience or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector. For more information about the Sonoma County Right to Farm Ordinance, please contact the Sonoma County Agricultural Commissioner's office at 2604 Ventura Avenue, Santa Rosa, CA 95403.

Seller certifies that the information herein is true and correct to the best of the Seller's knowledge as of the date signed by the Seller.

Seller _____ Date _____

Seller _____ Date _____

BUYER(S) AND SELLER(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE AND/OR INSPECTIONS OF THE PROPERTY AND TO PROVIDE FOR APPROPRIATE PROVISIONS IN A CONTRACT BETWEEN BUYER(S) AND SELLER(S) WITH RESPECT TO ANY ADVICE/INSPECTIONS/DEFECTS.

I/WE ACKNOWLEDGE RECEIPT OF A COPY OF THIS STATEMENT.

Seller _____ Date _____

Seller _____ Date _____

Buyer _____ Date _____

Buyer _____ Date _____

Agent (Broker
Representing Seller) _____ By _____ Date _____
(Associate Licensee
or Broker-Signature)

Agent (Broker
Obtaining the Offer) _____ By _____ Date _____
(Associate Licensee
or Broker-Signature)

A REAL ESTATE BROKER IS QUALIFIED TO ADVISE ON REAL ESTATE. IF YOU DESIRE LEGAL ADVICE, CONSULT YOUR ATTORNEY.

(b) If a prospective transferee refuses to sign the general disclosures and disclaimers advisory or disclosure statement required by subsection (a), the transferor may comply with the requirements of this section by delivering the advisory or statement to the prospective transferee as provided in subsection (a) and affixing and signing the following declaration to the advisory or statement:

"I, (name), have delivered a copy of the foregoing (general disclosures and disclaimers advisory/disclosure statement) as required by Section 30-28 of the Sonoma County Code to (transferee's name), who has refused to sign.

I declare the foregoing to be true.

Date: _____ Signature: _____ Print Name: _____

Sec. 30-29. Noncompliance with article.

Noncompliance with any provision of this article shall not affect title to real property, nor prevent the recording of any document.

SECTION VI. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be unconstitutional and invalid, such decision shall not affect the validity of the remaining portion of this ordinance. The Board of Supervisors hereby declares that it would have passed this ordinance and every section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared unconstitutional or invalid.

SECTION VII. This ordinance shall be and the same is hereby declared to be in full force and effect from and after thirty (30) days after the date of its passage and shall be published once before the expiration of fifteen (15) days after said passage, with the names of the Supervisors voting for or against the same, in *The Press Democrat*, a newspaper of general circulation published in the County of Sonoma, State of California.

In regular session of the Board of Supervisors of the County of Sonoma, passed and adopted this day of , 2012, on regular roll call of the members of said Board by the following vote:

SUPERVISORS:

Brown	Rabbitt	Carrillo	McGuire	Zane
AYES	NOES	ABSENT	ABSTAIN	

WHEREUPON, the Chair declared the above and foregoing ordinance duly adopted and

SO ORDERED.

Chair, Board of Supervisors
County of Sonoma

ATTEST:

Veronica A, Ferguson, Clerk of the Board of Supervisors

Sonoma County Local Coastal Plan

APPENDIX D: SCENIC RESOURCES



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX D: SCENIC RESOURCES

TABLE OF CONTENTS

1.	SCENIC VIEW EASEMENTS	1
2.	SCENIC VIEW GUIDELINES	5
3.	VIEW PROTECTION GUIDELINES	7

This page intentionally left blank

APPENDIX D: SCENIC RESOURCES

1. SCENIC VIEW EASEMENTS

(Adopted by Board of Supervisors' Resolution #71611, April 20, 1982)

As a part of the legislative solution to the question of development of The Sea Ranch, the Coastal Act has been amended by the addition of Subsection 30610.6 (d) which instructs the executive director to "specifically identify the areas along State Highway One for which scenic view easements...will be required." Subsection 30610.6 (c) states that these easements are to be established for the purpose of allowing for the removal of trees in order to restore and preserve scenic views from the highway.

Using the Commission's current Overall Conditions and Findings for The Sea Ranch, plus the Sonoma County LCP, as starting points, the staff has identified those areas for which easements will be required. Below is a list of such areas as well as a recommendation for tree removal at each site. These recommendations are designed to be both an aid in directing the eventual removal of the trees as well as a means of ensuring that drainage areas within each easement will not be subject to increased erosion due to tree removal.

Easements and Tree Removal Guidelines

Unit 15

Easement – All the common area in this unit shall be subject to a scenic view easement.

Tree Removal Guideline – South of the Yardarm Drive entrance all trees within 50 feet of the entrance shall be removed, as shall all trees along the southernmost 200 feet of Yardarm Drive. Trees should be removed to open coastal views throughout the easement north of the entrance. (See Map A)

Unit 11

Easement – The easement shall be a 20-foot wide strip running the length of the area tentatively identified as Unit 11, adjacent to Highway One frontage. (See Map B)

Tree Removal Guideline – Trees should be thinned and removed where necessary to open coastal view.

Unit 1

Easement – The easement shall encompass all of the common area behind the Moonraker Recreation Area and Block 5. (See Map C)

Tree Removal Guideline – To open a downcoast view to Black Point trees behind the Moonraker Recreation Center shall be trimmed and thinned, gradually giving way to the creation of a clearing behind Captain's Close.

Moonraker Road

Easement – An easement shall extend 200' seaward along the first 400' of Highway One frontage, south of Moonraker Road. (See Map C)

Tree Removal Guideline – Trees in this area shall be removed.

Unit 7

Easement – Starting at the northern hedgerow, the easement extends across the common area between Highway One and the rear of Block 2 and the lot reserved for a recreation area. (See Map D)

Tree Removal Guideline – Remove only those Bishop Pines in the area behind Lots 4-9. Leave all the trees in the vicinity of Annapolis Road.

Unit 18

Easement 1 – The easement begins at the southernmost hedgerow and proceeds southward across the common area between Highway One, Mariners Drive and Lot 102. It then continues along the highway frontage, maintaining the width established between the southeastern corner of Lot 102 and the highway until it terminates at the boundary of this unit and Unit 17. (See Map E)

Tree Removal Guideline – All the young Bishop Pines along the fence shall be removed.

Easement 2 – The easement includes all the common area south of Whitesurf Road, between Lots 38-42 and Highway One. (See Map E)

Tree Removal Guideline – Remove most of the trees in this area.

Sea Ranch Stables

Easement – In the portion of the stables area north of the hedgerow (above Unit 21, Lots 130-140), an easement shall extend southward 200' from the northeast leg of the boundary with Unit 21. In addition, a 20' wide easement, adjacent to Highway One frontage, shall extend south to the hedgerow. (See Map F)

Tree Removal Guideline – Trees along the boundary with Unit 21 shall be topped and trimmed to maintain the northern view across the unit. Trees in the strip along the highway shall be removed where necessary to restore lateral coastal views.

Unit 21

Easement 1 – Includes all common land south of the northern hedgerow to Breaker Reach, bordered by Hedgegate Road on the west. (See Map F)

Tree removal Guideline – Remove all the trees in this area to restore the best downcoast view in The Sea Ranch.

Easement 2 – The easement extends from the Breaker Reach entrance to the Vantage Road entrance. This easement is bordered on the west by Greenvale Close and the lots fronting on that street, down to Lot 8. The easement ends at a straight line between the northwest corner of Lot 8 and the southwest corner of Lot 31. (See Map F)

Tree Removal Guideline – Widen the view down Breaker Reach by cutting the Bishop Pines just south of the entrance. Top and thin trees between Lots 31-34 and 7-8 to maintain a clear downcoast view over this area. It is noted, however, that extensive cutting in this area is not recommended because of the drainage course at this site. Trees behind Lots 4-6 should be thinned. The trees from behind Lot 3 to the Vantage Road entrance should be removed.

Easement 3 – This easement starts at the Vantage Road entrance and extends southward, between Sentinel Close and Highway One, to the boundary between this unit and The Sea Ranch Stables. (See Map f)

Tree Removal Guideline – The young pines in this area should be removed, but the wind stunted redwoods and brush in the southern drainage area should remain to prevent increased erosion.

Easement 4 – The easement begins at the northern hedgerow and extends northward behind Lots 42, 43, and 44, and terminates at the end of this unit. (See Map G)

Tree Removal Guideline – Removal all the young pines along the fence.

Unit 24

Easement – To widen the view down Whalebone Road an easement shall be established to include all the common area south of Whalebone, between Highway One and the rear of Lots 158 and 159. (Note: Pursuant to Coastal Act Subsection 30610.6 (c)(2) this area is also the site of a six vehicle parking area. This scenic easement is intended to cover that portion of the designated area that is not used for parking.) (See Map G)

Tree Removal Guideline – Removal all the trees in this area.

Unit 28

Easement 1 – An easement shall be established to include all common area south of the northern hedgerow to Leeward Spur, between Highway One and Leeward Road. (See Map H)

Tree Removal Guideline – Thin and remove trees in the easement area to restore a view across the entire unit. No trees should be removed between Lots 6 and 7 to avoid exacerbating erosion in the small drainage area.

Easement 2 – This easement extends across all the common area bordered by Leeward Spur, Leeward Road and the southern hedgerow. (See Map H)

Tree Removal Guideline – Thin trees to restore view of the coast.

2. SCENIC VIEW GUIDELINES

Development

Screening with Topography and Vegetation. New structures shall be sited and designed to take maximum advantage of existing topography and vegetation in order to substantially screen them from view from public roads and use areas.

Ocean and Coastline View Preservation. New structures shall be sited and designed to preserve existing views of the ocean and coastline from public roads and use areas.

Open Areas on Ridgeline and Hilltops. Development of highly visible open areas on ridgelines and hilltops shall be avoided.

Silhouette Projections. New structures shall not be located on ridgelines or hilltops or so that they project above the silhouette of the ridgeline or hilltop against the sky as viewed from public roads and use areas.

Cuts and Fills. Visible cuts and fills on ridgelines and hilltops shall be minimized.

Structure Cluster. To the extent feasible, structures shall be clustered on each parcel within existing built areas and near existing natural features such as tree groupings.

Driveways and Access Roads. Driveways and access roads shall be substantially screened from views from public roads and use areas where practical.

Tree and Vegetation Removal. Removal of trees and other mature vegetation shall be minimized. Removal of specimen trees, tree groupings, and tree Windbreaks shall be avoided. Where removal of trees is a necessary result of a proposed project, the trees shall be replaced at a greater than 1:1 ratio at another location on the site or at an off-site location approved by Permit Sonoma.

Existing Vegetation and Topography. After new structures have been constructed, existing vegetation or topography shall not be altered or removed if it would expose the new structures to view from public roads and use areas.

Landscaping. Where existing topography and vegetation would not screen structures from view from public roads and use areas, landscaping consisting of native vegetation in natural groupings that fit with the character of the area shall be installed in order to substantially screen structures from view. Screening with native, fire-retardant plants may be required.

Building Material. Structures shall be designed to use building materials and color schemes that blend with the natural landscape and vegetation.

Satellite Dishes. Satellite dishes requiring a building permit shall be sited such that they are not visible in views from public roads and use areas.

Minimize Visual Impacts. If compliance with these standards would make a parcel unbuildable, structures shall be sited and designed so that minimum visual impacts would result.

3. VIEW PROTECTION GUIDELINES

View Protection

Development within Scenic Landscape Units, Major Views, and views from Vista Points shall be required to meet the following criteria in addition to all other applicable design guidelines in order to be consistent with **Policy C-OSRC-1f**. In the case of conflict, the most restrictive design standards shall apply:

Structure Site. New structures shall be sited and designed to take maximum advantage of existing topography and vegetation in order to substantially screen them from view from public roads and use areas.

Ocean and Coastline Views. New structures shall be sited and designed to preserve existing views of the ocean and coastline from public roads and use areas.

Development in High Visible Areas. Development of highly visible open areas on ridgelines and hilltops shall be avoided.

Ridgelines and Hilltops. New structures shall not be located on ridgelines or hilltops or so that they project above the silhouette of the ridgeline or hilltop against the sky as viewed from public roads and use areas.

Cuts and Fills. Visible cuts and fills on ridgelines and hilltops shall be minimized.

Cluster Structures. To the extent feasible, structures shall be clustered on each parcel within existing built areas and near existing natural features such as tree groupings.

Driveways and Access Roads. Driveways and access roads shall be substantially screened from views from public roads and use areas where practical.

Tree and Vegetation Removal. Removal of trees and other mature vegetation shall be minimized. Removal of specimen trees, tree groupings, and tree Windbreaks shall be avoided. Where removal of trees is a necessary result of a proposed project, the trees shall be replaced at a greater than 1:1 ratio at another location on the site or at an off-site location approved by Permit Sonoma.

Existing Vegetation and Topography. After new structures have been constructed, existing vegetation or topography shall not be altered or removed if it would expose the new structures to view from public roads and use areas.

Structure Screening. Where existing topography and vegetation would not screen structures from view from public roads and use areas, landscaping consisting of native vegetation in natural groupings that fit with the character of the area shall be installed in order to substantially screen structures from view. Screening with native, fire-retardant plants may be required.

Building Materials and Colors. Structures shall be designed to use building materials and color schemes that blend with the natural landscape and vegetation.

Satellite Dishes. Satellite dishes requiring a building permit shall be sited such that they are not visible in views from public roads and use areas.

Minimize Visual Impacts. If compliance with these standards would make a parcel unbuildable, structures shall be sited where minimum visual impacts would result.

Sonoma County Local Coastal Plan

APPENDIX E: NATURAL RESOURCES



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX E: NATURAL RESOURCES

TABLE OF CONTENTS

1.	RESTORATION AND MONITORING REQUIREMENTS	1
2.	BIOLOGICAL RESOURCE ASSESSMENT REQUIREMENTS	4
3.	CRITERIA FOR ESTABLISHING BUFFER AREAS	6
4.	TECHNICAL CRITERIA FOR IDENTIFYING AND MAPPING WETLANDS AND OTHER WET ENVIRONMENTALLY SENSITIVE HABITAT AREAS	9
5.	HABITAT PROTECTION GUIDELINES	17
6.	ADMINISTRATIVE WAIVER OF WETLAND (100 FOOT SETBACKS) REQUIREMENTS IN THE LOCAL COASTAL PLAN IN "RURAL COMMUNITIES" AND "URBAN SERVICE AREAS" ONLY, WHERE ROADS, TOPOGRAPHY, OTHER DEVELOPMENT EXISTS BETWEEN PROPERTY DEVELOPMENT AREA AND WETLAND	21
7.	REVISION OF MAPPED ENVIRONMENTALLY SENSITIVE HABITAT AREAS	22

This page intentionally left blank

APPENDIX E: NATURAL RESOURCES

1. RESTORATION AND MONITORING REQUIREMENTS

Restoration and Monitoring

A Restoration and Monitoring Plan shall be required for any project involving habitat mitigation or restoration consistent with **Policy C-OSRC-7i**. The Restoration and Monitoring Plan shall consist of a stand-alone document that specifies performance standards, success criteria, adaptive management, and monitoring requirements as described below. Permit Sonoma County staff may request additional information to address site-specific conditions.

Restoration and Monitoring Plan. A Restoration and Monitoring Plan shall:

- (a) Be a stand-alone document that describes actual methods and practices to be employed, including performance/success criteria and adaptive management and monitoring requirements;
- (b) Provide complete information, avoiding generalizations and oversimplification of data and references;
- (c) Be able to be implemented by a technical specialist who has not been involved in the project;
- (d) Be written in such a way that an educated layman could understand and evaluate the plan;

Key Components. A Restoration and Monitoring Plan shall include, but not be limited to, the following key components:

- (a) A clear statement of the goals and objectives of the restoration for all habitat types;
- (b) Characterization of the desired habitat, including at least one actual sampled site, that can act as both a model (with clear rationale and criteria for comparison with the project site) for the restoration and as a reference site for developing success criteria;
- (c) Details about the sampling protocol used for characterizing the reference site and those methods that will be applied to the restoration site, along with a report and discussion of the data collected from the reference site;
- (d) A clear rationale for selecting the proposed restoration site, including specific characteristics that make it a strong candidate for a successful restoration project;

- (e) A detailed qualitative and quantitative description of the chosen restoration site prior to restoration, including existing biological resources and their conditions;
- (f) Specific performance criteria and the rationale for their selection, procedures for determining performance success including statistical tests, minimum effect sizes, and statistical power, a formal sampling design including analytical methods, and a reporting schedule (interim and final);
- (g) Requirements for designation of a qualified professional as the Restoration Manager who will be personally responsible for all phases of the restoration;
- (h) Prohibition on assignment of different phases of the restoration to different contractors without onsite supervision by the Restoration Manager;
- (i) A detailed Grading Plan if the topography must be altered, including fill amounts and locations, and the locations of fill removal and disposal;
- (j) A specific Erosion Control Plan if soil or other substrate will be significantly disturbed during the course of the restoration;
- (k) A Weed Eradication Plan. The Plan should be designed to eradicate existing weeds and to control future invasion by exotic species, to be approved by and carried out or supervised by a restoration biologist;
- (l) A Planting Plan that specifies a detailed plant palette based on the natural habitat type and reference site(s) that is the model for the restoration, using local native and non-invasive stock, and requiring that if plants, cuttings, or seed are obtained from a nursery, the nursery must certify that they are of local origin and are not cultivars. The Planting Plan shall provide specifications for preparation of nursery stock and include technical details of planting methods (e.g., spacing, mycorrhizal inoculation, etc.);
- (m) An Irrigation Plan that describes the method and timing of watering, conserves water, and ensures removal of watering infrastructure by the end of the monitoring plant establishment period. Where feasible, planting and seeding should be timed to take advantage of naturally-favorable conditions (e.g., prior to the onset of winter rains) to help reduce reliance on irrigation for establishment;
- (n) An Interim Monitoring Plan that includes maintenance and remediation activities, interim performance goals, assessment methods, and schedule. The Interim Monitoring Plan should serve as an adaptive management plan, guiding modifications to the restoration project based upon observed and measured performance, to maximize the success of the effort;
- (o) A Final Monitoring Plan to determine whether the restoration has been successful that specifies: the basis for selection of the performance criteria, types of performance criteria, procedure for judging success, formal sampling design, sample size, approval of a final report, and provision for possible further action.

2. BIOLOGICAL RESOURCE ASSESSMENT REQUIREMENTS

Biological Resources

A biological resource assessment shall be required for any project which could impact biological resources consistent with **Policy C-OSRC-8c**. The biological resource assessment shall be performed by a qualified professional and shall meet criteria described below. Permit Sonoma staff may require additional information to address site-specific conditions.

~~Permit Sonoma County staff may request additional information to address site specific conditions.~~

Site Description. A description of the regional setting and physical characteristics of the site, including, topography (e.g. slope orientation, etc.), soil types, habitat and/or wildlife migration corridors, and microclimate.

Photographic Documentation. Photographic documentation of the existing condition of the proposed development site.

Sensitive Habitats. A list of sensitive ~~habitats~~ natural communities, and species that could occur on the site, which can be generated from the California Natural Diversity Database, California Native Plant Society, and other reliable source(s).

Site Specific Assessment. A site-specific assessment, based upon the list of sensitive habitats and species with potential to occur on the site and at least one field visit for all parcels that are part of the proposed development. The assessment shall include a discussion of any species observations during the field visit, and whether other species are likely to be present during other times of the year, based upon habitat analysis and professional opinion. Constraints on the accuracy of the assessment (e.g., wrong season, time-of-day) should be explicitly discussed. Protocol-level surveys shall be included for sensitive species determined likely to occur on the proposed site.

Trees Supporting for Sensitive Species. Identification of trees suitable for nesting or roosting or significant foraging habitat, and any evidence of use by sensitive bird species raptors, bats, monarchs, dusky-footed woodrats, or other sensitive wildlife. ~~and raptor use.~~

Wetlands. Identification, ~~assessment, and mapping~~ and delineation of potential wetland areas in accordance with **Appendix E**, Section 4.

Field Visit. Details of the field visit, including date, time, weather, temperature, and methods employed. The context of the site within the broader landscape shall also be provided, including observations related to habitat use (e.g., corridors) and potential stressors. The field visit shall be completed in spring, unless a different and/or additional time of year is recommended by the Sonoma County staff biologist based on the likelihood of finding particular sensitive habitats or species.

~~Habitat and Plant Community Types~~ Vegetation Communities. Identification of and delineation within polygons all the ~~habitat/plant community types~~ vegetation communities (at the alliance level based on the classification methodology used in the *Manual of California Vegetation* (Sawyer et al. 2009 or subsequent editions) present on the property and generally indicate the locations of ~~the plant communities~~ these on adjacent properties. The location of observed sensitive plant or animal species should also be ~~shown~~ overlaid on the map.

ESHA. Identification and delineation of the limits of potential ESHA on and immediately adjacent to the project site, based upon **Policies C-OSRC-8a** through **C-OSRC-8e**.

Pre and Post Project Conditions. A comparison of pre-project and expected post-project conditions, including identification of potential project impacts on ESHA and other biotic resources both on and off the project site, and a discussion of the duration, extent, and severity of the project's effects on the condition of the resource within its natural range locally.

Methods Detail. The report shall include a clear description of all methods actually employed for both desktop and field analyses, including those used for formal protocol surveys. Visual and auditory survey methods shall be specified.

3. CRITERIA FOR ESTABLISHING BUFFER AREAS

A buffer area provides essential open space between the development and the environmentally sensitive habitat area. The existence of this open space ensures that the type and scale of development proposed will not significantly degrade the habitat area (as required by CA Coastal Act Section 30240). Therefore, development allowed in a buffer area is limited to access paths, fences necessary to protect the habitat area, and similar uses which have either beneficial effects or at least no significant adverse effects on the environmentally sensitive habitat area. A buffer area is not itself a part of the environmentally sensitive habitat area, but a "buffer" or "screen" that protects the habitat area from adverse environmental impacts caused by the development.

A buffer area should be established for each development adjacent to environmentally sensitive habitat areas based on the standards enumerated below. The width of a buffer area will vary depending upon the analysis. The buffer area should be a ~~minimum of no less than~~ 100 feet for small projects on existing lots (such as one single family home or one commercial office building) unless the applicant can demonstrate that 100 feet is ~~unnecessary to~~ not feasible, in which case, a limited reduction may be allowed provided that it will still protect the resources of the habitat area to the maximum extent feasible. Under no circumstances should an ESHA buffer be less than 50 feet. If the project involves a substantial increase in the intensity of use ~~substantial improvements or increased human impacts~~, such as a subdivision, a much wider buffer area should be required. For this reason, the guideline does not recommend a uniform width. The appropriate width will vary with the analysis based upon the standards. For a wetland, the buffer area should be measured from the landward edge of the wetland. For a stream or river, the buffer area should be measured landward from the landward edge of riparian vegetation or if no such vegetation is present, from the top edge of the bank (e.g., in channelized streams). Maps and supplemental information may be required to determine these boundaries. Standards for determining the appropriate width of the buffer area as follows:

1. Biological significance of adjacent lands. Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. That is, functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on adjacent lands. The degree of significance would depend upon the habitat requirements of the species in the habitat area (e.g., nesting, feeding, breeding or resting). This determination requires the expertise of an ecologist, wildlife biologist, ornithologist, or botanist who is familiar with the particular type of habitat involved. Where a significant functional relationship exists, the land supporting this relationship should also be considered to be part of the environmentally sensitive

habitat area, and the buffer area should be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no significant functional relationships exist, the buffer should be extended from the edge of the wetland, stream or riparian habitat (for example) which is adjacent to the proposed development (as opposed to the adjacent area which is significantly related ecologically).

2. Sensitivity of species resources to disturbance. The width of the buffer area should be based, in part, on the distance necessary to ensure that the most sensitive resources, including species of plants and animals as well as sensitive natural communities and especially valuable habitat, will not be disturbed significantly by the permitted development. Such a determination should be based on the following:
 - a. Nesting, feeding, breeding, resting or other habitat requirements of both resident and migratory fish and wildlife species.
 - b. An assessment of the short-term and long-term adaptability of various species resources to human disturbance.
3. Susceptibility of parcel to erosion. The width of the buffer area should be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetative cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.
4. Use of natural topographic features to located development. Hills and bluffs adjacent to environmentally sensitive habitat areas should be used, where feasible, to buffer habitat areas. Where otherwise permitted, development should be located on the sides of hills away from environmentally sensitive habitat areas. Similarly, bluff faces should not be developed, but should be included in the buffer area.
5. Use of existing cultural features to locate buffer zones. Cultural features, (e.g., roads and dikes) should be used, where feasible, to buffer habitat areas. Where feasible, development should be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the environmentally sensitive habitat area.
6. Lot configuration and location of existing development. Where an existing subdivision or other development is largely built out and the buildings are a uniform distance from a habitat area, at least that same distance will be required as a buffer area for any new development permitted. However, if that distance is less than 100 feet, additional mitigation measures (e.g., planting of native vegetation which grows locally) should be provided to ensure additional protection.

Where development is proposed in an area which is largely undeveloped, the widest and most protective buffer area feasible should be required.

7. Type and scale of development proposed. The type and scale of the proposed development will, ~~to a large degree,~~ inform determine the size of the buffer area necessary to protect the environmentally sensitive habitat area. For example, due to domestic pets, human use and vandalism, residential developments may not be as compatible as light industrial developments adjacent to wetlands, and may therefore require ~~wider~~ buffer areas exceeding the 100 ft minimum. However, such evaluations should be made on a case-by-case basis depending upon the resources involved, and the type and density of development on adjacent lands.

4. TECHNICAL CRITERIA FOR IDENTIFYING AND MAPPING WETLANDS AND OTHER WET ENVIRONMENTALLY SENSITIVE HABITAT AREAS

The purpose of this discussion is to provide guidance in the practical application of the definition of "wetland" contained in the California Coastal Act. The Coastal Act definition of "wetland" is set forth in Section 30121 of the Act which states:

Sec. 30121 "Wetland means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens."

This is the definition upon which the California Coastal Commission relies to identify "wetlands". The definition refers to lands "...which may be periodically or permanently covered with shallow water..." However, due to highly variable environmental conditions along the length of the California Coast, wetlands may include a variety of different types of habitat areas. For this reason, some wetlands may not be readily identifiable by simple means. In such cases, the Commission will also rely on the presence of hydrophytes and/or the presence of hydric soils. The rationale for this in general is that wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. For this reason, the single features that most wetlands share is soil or substrata that is at least periodically saturated with or covered by water, and this is the feature used to describe wetlands in the Coastal Act. The water creates severe physiological problems for all plants and animals except those that are adapted for life in water or in saturated soil, and therefore only plants adapted to these wet conditions (hydrophytes) could thrive in these wet (hydric) soils. Thus, the presence or absence of hydrophytes and hydric soils make excellent physical parameters upon which to judge the existence of wetland habitat areas for the purposes of the Coastal Act, but they are not the sole criteria. Proper identification of wetlands will require the skills of a qualified professional.

The United States Fish and Wildlife Service has officially adopted a wetland classification system¹ which defines and classifies wetland habitats in these terms. Contained in the classification system are specific biological criteria for identifying wetlands and establishing their upland limits. Since the wetland definition used in the classification

¹ "Classification of Wetlands and Deep-Water Habitats of the United States." By Lewis M. Cowardin, et al, United States Department of the interior, Fish and Wildlife Service, December 1979.

system is based upon a feature identical to that contained in the Coastal Act definitions, i.e., soil or substrata that is at least periodically saturated or covered by water, the Commission will use the classification system as a guide in wetland identification. Applying the same set of biological criteria consistently should help avoid confusion and assure certainty in the regulatory process. This appendix discusses the adaption of this classification system to the Coastal Act definition of "wetland" and other terms used in the Act, and will form the basis of the Commission's review of proposals to dike, fill or dredge wetlands, estuaries or other wet habitat areas.

4.1 U.S. Fish and Wildlife Classification System: Upland, Wetland/Deep-water Habitat Distinction

The United States Fish and Wildlife Service classification is hierarchical, progressing from systems and subsystems, at the most general levels, to classes, subclasses, and dominance types. The term "system" refers here to a complex of wetland and deep-water habitats that share the influence of one or more dominant hydrologic, geomorphic, chemical, or biological factors.

The Service provides general definitions of wetland and deep-water habitat and designates the boundary between wetland and deep-water habitat and the upland limit of a wetland. The following are the Services' definitions of wetland and deep-water habitats:

A. Wetlands

"Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrata is predominantly undrained hydric soil; and (3) the substrata is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Wetlands as defined here include lands that are identified under other categories in some land use classifications. For example, wetlands and farm lands are not necessarily exclusive. Many areas that we define as wetlands are farmed during dry periods, but if they are not tilled or planted to crops, a practice that destroys the natural vegetation, they will support hydrophytes.²

² For the purpose of identifying wetlands using the technical criteria contained in this guideline, one limited exception will be made. That is, drainage ditches as defined herein will not be considered wetlands under the Coastal Act. A drainage ditch shall be defined as a narrow (usually less than 5-feet wide), manmade, non-tidal ditch excavated from dry land.

Drained hydric soils that are now incapable of supporting hydrophytes because of a change in water regime are not considered wetlands by our definition. These drained hydric soils furnish a valuable record of historic wetlands, as well as an indication of areas that may be suitable for restoration.

The upland limit or wetland is designated as (1) the boundary between land with predominantly hydrophytic cover; (2) the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric; or (3) in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time each year and land that is not. Wetlands should be identified and mapped only after a site survey by a qualified professional.³

B. Deep water Habitats

"Deep water habitats are permanently flooded lands lying below the Deep water boundary of wetlands. Deep water habitats include environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live, whether or not they are attached to the substrata. As in wetlands, the dominant plants are hydrophytes; however, the substrata are considered non-soil because the water is too deep to support emergent vegetation (U.S. Conservation Service, Soil Survey Staff, 1975).

"The boundary between wetland and deep-water habitat in the Marine and Estuarine Systems (i.e., areas subject to tidal influence) coincides with the elevation of the extreme low-water of spring tide (ELIS); permanently flooded areas are considered deep-water habitats in these systems. The boundary between wetland and deep-water habitat in the Riverine, Lacustrine and Palustrine System lies at a depth of 2 meters (6.6 ft.) below low water; however, if emergents, shrubs or trees grow beyond this depth at any time, their deep-water edge is the boundary."

4.2 Wetland/Estuary/Open Coastal Water Distinction

For the purposes of mapping "wetlands" under the Coastal Act's definition of wetlands, and of mapping the other wet environmentally sensitive habitat areas referred to in the Act, including "estuaries", "streams", "riparian habitats", "lakes", and "open coastal water", certain adaptations of this classification system will be made. The following is a discussion of these adaptations.

"Wetland as defined in Section 30121 of the Coastal Act, refers to land covered by "shallow water", and the examples given in this section include fresh, salt and brackish

³ Further details regarding the standards and criteria for mapping wetlands using the Service's classification system may be found in the following, "Mapping Conventions of the National Wetland Inventory", (undated), published by the U.S.F.W.S. The document may be obtained from the U.S.F.W.S., Regional Coordinator, Region 1, Portland, Oregon.

water marshes, mudflats and fens. A distinction between "wetland" and the other habitat areas in the Act, for example, "estuary", must be made because the Coastal Act's policies apply differently to these areas, and because the Coastal Act does not define some of these terms (such as "estuary"). A reasonable distinction can be made between "wetland" and "estuary" on the basis of an interpretation of the phrase "shallow water". Using the Service's classification system, "shallow water" would be water that is above the boundary of deep-water habitat, which would be the line of extreme low-water of spring tide⁴ for areas subject to tidal influence and 2 meters for non-tidal areas. Therefore, wetland begins at extreme low-water of spring tide and "estuary" or "open coastal water" is anything deeper. The Coastal Act definition of "wetlands" would include the wetland areas of Estuaries, Palustrine, and Lacustrine ecological systems defined by the Fish and Wildlife classification system.

For the purposes of the Coastal Act, an "estuary" is a coastal water body usually semi-enclosed by land, but which has open, partially obstructed, or intermittent exchange with the open ocean and in which ocean water is at least occasionally diluted by fresh water runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation.

"Open coastal water" or "coastal water" as used in the Coastal Act refers to the open ocean overlying the continental shelf and its associated coastline with extensive wave action. Salinities exceed 30 parts per thousand with little or no dilution except opposite mouths of estuaries.

⁴ While the Service's classification system uses "extreme low-water of spring tide" as the datum to distinguish between "shallow-water" and "deep-water habitat", such datum is not readily available for the California coast. Therefore, the lowest historic tide recorded on the nearest available tidal bench mark established by the U.S. National Ocean Survey should be used as the datum.

Data for such bench marks are published separately for each station in loose-leaf form by the National Ocean Survey, Tideland Water Levels, Datum and Information Branch, (C23), Riverdale, MD 20840. These compilations include the description of all bench marks at each tide station (for ready identification on the ground), and their elevations above the basic hydrographic or chart datum for the area, which is mean lower low-water on the Pacific coast. The date and length of the tidal series on which the bench mark elevations are based are also given.

4.3 Wetland/Riparian Area Distinction

For the purpose of interpreting Coastal Act policies, another important distinction is between "wetland" and "riparian habitat". While the Service's classification system includes riparian areas as a kind of wetland, the intent of the Coastal Act was to distinguish these two areas. "Riparian habitat" in the Coastal Act refers to riparian vegetation and the animal species that require or utilize these plants. The geographic extent of a riparian habitat would be the extent of the riparian vegetation. As used in the Coastal Act, "riparian habitat" would include the "wetland" areas associated with Palustrine ecological systems as defined by the Fish and Wildlife Service classification system.

Unfortunately, a complete and universally acceptable definition of riparian vegetation has not yet been developed, so determining the geographic extent of such vegetation is rather difficult. The special case of determining consistent boundaries of riparian vegetation along watercourses throughout California is particularly difficult. In Southern California, these boundaries are usually obvious; the riparian vegetation grows immediately adjacent to watercourses and only extends a short distance away from the watercourse. In Northern California, however, the boundaries are much less distinct; vegetation that occurs alongside a stream may also be found on hillsides and far away from a watercourse.

For the purposes of this guideline, riparian vegetation is defined as that association of plant species which grows adjacent to freshwater watercourses, including perennial and intermittent streams, lakes, and other freshwater bodies. Riparian plant species and wetland plant species either require or tolerate a higher level of soil moisture than dryer upland vegetation, and are therefore considered hydrophytic. However, riparian vegetation may be distinguished from wetland vegetation by the different kinds of plant species. At the end of this appendix, lists are provided of some wetland hydrophytes and riparian hydrophytes. These lists are partial, but give a general indication of the representative plant species in these habitat areas and should be sufficient to generally distinguish between the two types of plant communities.

The upland limit of a riparian habitat, as with the upland limit of vegetated wetlands, is determined by the extent of vegetative cover. The upland limit of riparian habitat is where riparian hydrophytes are no longer predominant.

As with wetland, riparian habitats should be identified and mapped only after a site survey by a qualified professional.⁵ (See pp. 6-9 of the guideline for a list of information which may be required of the applicant.)

4.4 Vernal Pools

While "vernal pool" is a poorly defined term, all information available to the Commission suggests that all vernal pools are distinct from vernal ponds and vernal lakes, which exist in the coastal zone. The Commission generally considers these habitat areas to be wetlands for the purposes of the Coastal Act, and therefore all applicable sections of the Coastal Act will be applied to these areas.

4.5 Representative Plant Species in Wetlands and Riparian Habitat Areas

This is a list of "representative" species that can be expected to be found in the various habitat areas indicated. Not all of them will be found in all areas of the State, and there are numerous others that could be included. However, this test should suffice to generally distinguish between these types of plant communities.

A. Salt Marsh

Pickleweed (*Salicornia virginica*)
Glasswort (*S. subterminales*)
Saltgrass (*Distichlis spicata*)
Cordgrass (*Spartina foliosa*)
Jaumea (*Jaumea carnosa*)
Saltwort (*Batis maritima*)
Alkali heath (*Frankenia grandifolia*)
Salt cedar (*Monanthocalce littoralis*)
Arrow grass (*Trizicocnin maritimum*)
Sea-bliza (*Suaeda californica* var *pubescens*)
Marsh rosemary (*Limonium californicum* var *mexicanum*)
Gum plant (*Grindelia stricta*)
Salt Marsh fleabane (*Plucnea purpurescens*)

⁵ Identification of riparian habitat areas in Northern California presents peculiar difficulties. While Southern California riparian vegetation generally occurs in a narrow band along streams and rivers, along the major rivers in Northern California it may be found in broad floodplains, abandoned river channels and the bottoms adjacent to the channels. In forested areas, the overstory of riparian vegetation may remain similar to the adjacent forest but the understory may contain a variety of plant species adapted to moist or wet substrates. For example, a salmonberry, bayberry, willow, twinberry, and lady fern, may all be more common in the understory of riparian habitat areas than in other types of forest habitats.

B. Freshwater Marsh

Cattails (*Typha* spp.)
 Bulrushes (*Scirpus* spp.)
 Sedges (*Carex* spp.)
 Rushes (*Juncus* spp.)
 Spikerush (*Heleocharis palustris*)
 Pondweeds (*Potamogeton* spp.)
 Smartweeds (*Polygonum* spp.)
 Water Lilies (*Nuphar* spp.)
 Buttercup (*Ranunculus aquatilis*)
 Water-cress (*Nasturium officinale*)
 Bur-reed (*Sparganium eurycarpum*)
 Water parsley (*Vernanthe sarmentosa*)
 Naiads (Na)

C. Brackish Marsh

Alkali bulrush (*Scirpus robustus*)
 Rush (*Juncus balticus*)
 Brass buttons (*Cotula coronopifolia*)
 Fat-hen (*Atriplex patula* var *hastata*)
 Olney's bulrush (*Scirpus olneyi*)
 Common tula (*Scirpus acutus*)
 Common reed (*Phragmites communis*)

D. Riparian

Willows (*Salix* spp.)
 Cottonwoods (*Populus* spp.)
 Red alder (*Alnus rubra*)
 Box alder (*Acer negundo*)
 Sycamore (*Platanus racemosa*)
 Blackberry (*Rubus vitifolia*)
 So. Black W alnut (*Juglans californica*) (So. Calif.)
 California Bay (*Umbellularia californicum*) (So. Calif.)
 Bracken fern (*Pteris aquilinum*) (Cen. Calif.)
 Current (*Ribes* spp.)
 Twinberry (*Lonicera involucrata*) (No. Calif.)
 Lady fern (*Athyrium filix-femina*)
 Salmonberry (No. Calif.)
 Bayberry (No. Calif.)

E. Vernal Pools

Downingia (*Downingia* sp.)
 Meadow-foxtail (*Alopecurus howellii*)

Hair Grass (*Deschampsia danthonioides*)
Quilwort (*Isoetes* sp.)
Meadow-foam (*Limnanthus* sp.)
Pogogyne (*Pogogyne* sp.)
Flowering Quilwort (*Lilaea scilloides*)
Cryptantha (*Cryptantha* sp.)
Loosestrife (*Lythrum hyssopifolium*)
Skunkweed (*Navarretia* sp.)
Burton-celery (*Eryngium* sp.)
Crouse-grass (*Orcuttia* sp.)
Water-starwort (*Callitriche* sp.)
Waterwort (*Elatine* sp.)
Woolly-heads (*Psilocarpus* sp.)
Brodiaea (*Brodiaea* sp.)
Tilaea (*Crassula aquatica*)

5. HABITAT PROTECTION GUIDELINES

5.1 Streamside Conservation Area or Riparian Corridor

Allowable uses and development within any streamside conservation area or Riparian Corridor shall be limited to uses and methods described below consistent with **Policy C-OSRC-4c**.

Timber Harvest. Timber harvest operations conducted in accordance with an approved timber harvest plan.

Vegetation Removal. Vegetation removal, including as part of an integrated pest management program administered by the Sonoma County Agricultural Commissioner, necessary for continued viability of the riparian habitat.

Streamside Maintenance and Restoration. Streamside maintenance and restoration necessary for continued viability of the riparian habitat.

Fire Fuel Management. Fire fuel management where vegetation removal is limited to the minimum required for fire safety.

Habitat Alteration. Filling, grading, or dredging necessary for continued viability of the riparian habitat.

Public Recreation Facilities. Parks, public access, trails, bikeways, and other public recreational facilities dependent on the riparian resources where it can be shown there would be no long-term impacts on the viability of the riparian habitat from construction, maintenance, and public use of the facilities.

Stream and River Alteration. Limited alterations of rivers and streams, as provided in **Policy C-OSRC-4e**.

Agricultural Activities. The following agricultural activities, provided that they are conducted and maintained in compliance with agricultural best management practices developed or referenced by the Agricultural Commissioner, or defined in a farm or ranch water quality plan acceptable to the Agricultural Commissioner. The Agricultural Commissioner shall determine the applicable agricultural best management practices and shall enforce the provisions of this subsection.

- (a) Grazing and similar agricultural activities not involving structures or agricultural cultivation, except as defined by (b) below, and conducted in accordance with water quality protection guidelines of the Sonoma County Agricultural

Commissioner, Resource Conservation Districts, or Regional Water Quality Control Boards.

- (b) Agricultural cultivation and related planting, seeding, fertilizing, weeding, irrigation, and harvesting, not including application of pesticides and herbicides, located less than 100 feet from the edge of the riparian canopy.

Development. Grading, road crossings, and utility line crossings only under one or both of the following conditions:

- (a) It can be clearly demonstrated to Permit Sonoma Planning staff through having substantial functions or values as riparian habitat; and the proposed development would not have a significant, adverse impact on the functions and values of adjacent riparian habitat.
- (b) A conservation plan is approved by County Permit Sonoma Planning staff that provides for the appropriate protection of biotic resources, water quality, flood management, bank stability, groundwater recharge, and other functions of riparian habitat.

Until the County adopts mitigation standards and procedures for specific land uses and riparian functions, prior to approval of the conservation plan, the Permit Sonoma staff shall consult with the California Department of Fish and Wildlife, appropriate Resource Conservation District, Sonoma County Agricultural Commissioner, and other pertinent resource agencies regarding adequacy of the conservation plan.

5.2 Diking, Filling, Draining, and Dredging of Coastal Waters, Wetlands, and Estuaries

Diking, filling, draining, and dredging of coastal waters, wetlands, and estuaries shall be permitted only in accordance with other applicable provisions of this Local Coastal Program, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to uses and methods described below consistent with **Policies C-OSRC-5e and C-OSRC-9e**.

- (a) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
- (b) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
- (c) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings

for public recreational piers that provide public access and recreational opportunities.

- (d) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
- (e) Mineral extraction, including sand for restoring beaches, except in ESHA.
- (f) Maintenance, restoration, and enhancement of wetland function.
- (g) Nature study, aquaculture, or similar resource dependent activities.

Allowable diking, filling, draining, and dredging activities shall meet the following conditions:

- (a) Located outside of wildlife breeding habitat;
- (b) Limited to the smallest area feasible;
- (c) Utilize measures to protect water quality and remove them as soon as possible after they have served their purpose;
- (d) Result in no net loss in area and value of wetlands.

5.3 Mitigations Criteria

Where wetlands fill or development impacts are permitted in conformity with the Coastal Act and any applicable Local Coastal Plan policies, require mitigation measures to compensate for the temporal and functional loss of affected wetlands and associated habitat and ~~shall be limited to uses and~~ methods described below consistent with **Policy C-OSRC-5i**.

Net Loss in Wetlands. No net losses shall occur in wetland acreage, functions, or values. This includes both direct impacts on wetlands and ~~essential~~ their buffers, and consideration of potential indirect effects of development due to changes in available surface water and nonpoint source water quality degradation. Detailed review of the adequacy of a proposed mitigation plan shall be performed as part of any environmental and permit review of ~~the~~ a proposed development project to allow for a thorough evaluation of the anticipated loss, as well as the replacement acreage, functions, and values.

Restoration in Wetlands. Restoration of degraded wetlands is generally preferred to over creation of new replacement wetlands, due to the greater likelihood of success in terms of ecological function.

Mitigation Implementation. Mitigation shall be implemented prior to and/or concurrently with the project activity causing the potential adverse impact to minimize any short-term loss and modification to wetlands.

Wetland Buffer. An area of adjacent upland habitat shall be protected to provide an adequate buffer for wetland functions and values. Development shall be set back the minimum distance required under **Policy C-OSRC-5d** to create this buffer.

Mitigation Sites. Mitigation sites shall be permanently protected and managed for open space and wildlife habitat purposes.

Mitigation Projects. Mitigation projects must to the extent feasible minimize the need for ongoing maintenance and operational manipulation (e.g., dredging, artificial water-level controls, etc.) to ensure long-term success. Self-sustaining projects with minimal maintenance requirements constitute the primary objective and are encouraged.

Adverse Impacts on Wetlands. All plans to minimize or mitigate adverse impacts to wetland habitats shall include provisions to monitor the success of the restoration project for at least 5 years. The measures taken to avoid adverse impacts may be modified, but not weakened, if the original plans prove unsuccessful. Performance bonds or other evidence of financial responsibility shall be required for all mitigation plans involving habitat creation or enhancement, including the cost of monitoring for at least five years post-completion, or as long as necessary to ensure success criteria are achieved.

Restored Wetland Target. Mitigation shall be commensurate with adverse impacts of the wetland alteration and consist of providing similar functions and values and greater wetland acreage than those of the wetland area adversely affected. All restored or created wetlands shall have the same or increased habitat functions and values as the wetland proposed to be impacted.

~~Such~~ Compensatory mitigation ~~measures~~ may not be required for temporary or short-term fill or diking; provided that a bond or other evidence of financial responsibility is provided to assure that full restoration will be accomplished in the shortest period of time, not to exceed 12 months from the time of initial impact.

6. ADMINISTRATIVE WAIVER OF WETLAND REQUIREMENTS IN THE LOCAL COASTAL PLAN IN "RURAL COMMUNITIES" AND "URBAN SERVICE AREAS" ONLY, WHERE ROADS, TOPOGRAPHY, OTHER DEVELOPMENT EXISTS BETWEEN PROPERTY DEVELOPMENT AREA AND WETLAND

In enforcing setbacks from wetlands in areas designated "rural community" and "urban service areas" on the Coastal Plan Land Use Map the Director of the Permit and Resource Management Department may, through aerial photos, topographical maps, or other means make a determination, subject to review and approval by the Executive Director of the Coastal Commission, that development will not affect the riparian area or wetland because:

- a. Other developed lots or roads exist between the proposed development and the wetland. This standard shall be used cautiously - at the outer edge of the 300-foot limit. If there is any reasonable doubt the proposal would affect the wetlands or riparian area, an environmental assessment shall be undertaken and include appropriate mitigation measures.
- b. Topography is such that it is highly unlikely that development could affect the wetland.

7. REVISION OF MAPPED ENVIRONMENTALLY SENSITIVE HABITAT AREAS

If there is no obvious mapping error which can be determined from review of aerial photos, the burden of proof is on the applicant to redefine the boundaries of a mapped environmentally sensitive habitat area.

To define wetlands, the applicant shall use the California Coastal Commission Criteria for identifying and mapping wetlands and other wet environmentally sensitive habitat areas. (See Appendix E, Section 4) The California Coastal Act defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens."

Riparian areas refer only to riparian vegetation. The geographical extent of a riparian habitat would be where riparian vegetation comprises at least 50% of the ground (shade) cover. ~~Other habitats may be defined from Coastal Plan definitions.~~

~~Small drainage ways, usually less than five feet wide, with no evidence of riparian vegetation, are not to be considered riparian corridors. Unless there is a pooled or marshy area, they are probably also not wetlands as defined by the guidelines.~~

Where, during the course of review of a project, Coastal staff discovers an unmapped environmentally sensitive habitat area, staff shall utilize Coastal Plan habitat definitions and eCoastal Commission guidelines (for wet environmentally sensitive habitat areas), to define such area. Applicable Coastal Program restrictions would then apply.

Official changes in Open Space Maps may occur when Local Coastal Plan amendments are considered.

This page intentionally left blank

**Sonoma County
Local Coastal Plan**

**APPENDIX F: SHORELINE PROTECTION STRUCTURE GUIDELINES
STANDARDS**



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX F: SHORELINE PROTECTION STRUCTURE GUIDELINES STANDARDS

The construction, reconstruction, expansion, alteration, and/or replacement of a shoreline protective device, including seawalls, revetments, breakwaters, groins, bluff retention devices, deep piers/caissons and other shoreline protection structures for coastal erosion control and hazards protection shall be allowed only if all of the following criteria of the California Coastal Commission and County of Sonoma are met:

- (1) The structure ~~would~~ is required to serve coastal dependent uses or protect only an existing (i.e., in existence prior to the Coastal Act on January 1, 1977) principally ~~permitted use~~ structure, public road, or public beach in danger from erosion.
- (2) The siting and design of the proposed structure takes into account projected future changes in sea level based on the most up-to-date science and agency guidance.
- (3) To the maximum extent feasible, the design of the proposed structure would not significantly alter the natural landform on which it is placed; also, the structure and is designed to eliminate or mitigate adverse impacts on ~~would not impact~~ local sand supply.
- (4) The proposed structure would avoid, or if avoidance is infeasible, minimize and mitigate ~~not have any of~~ the following environmental effects:
 - a. Impede lateral beach access.
 - b. Reduce public access to the coastal environment.
 - c. Significant impacts on cultural and paleontological resources.
 - d. Significant impacts on wetlands, marine habitats and other significant resources or habitat areas.
 - e. Adversely affect adjacent or other sections of the shoreline.
 - f. Create a hazard in the area in which it is built.
- (5) A certified engineering geologist report is prepared which:
 - a. Demonstrates that the primary structure is in imminent risk from coastal erosion.
 - b. Contains at a minimum an alternatives analysis which includes the alternatives of: 1) no action; 2) relocating or demolishing the primary structure subject to the hazards; 3) removal of the portion of the development that is subject to the hazard; or 4) other non-structural alternatives such as sand replenishment, nature-based strategies, or

- managed retreat; and concludes that a non-structural alternative is not feasible and that the device is the least environmentally damaging feasible alternative.
- c. Provides evidence that the proposed protection structure is designed and can be constructed and maintained to withstand the specific range of coastal conditions which can be expected to occur, including sea level rise.
 - d. Includes measures which ensure that the protection structure can and will be maintained through its design life.
- (6) A deed restriction or other legally binding document is recorded on the property which requires the following:
- a. Owner is to be responsible, including financially, for monitoring and maintaining the shoreline protection structure.
 - b. Owner is to be responsible, including financially, for removing the shoreline protection structure if it fails or has an adverse effect on other properties which cannot be mitigated; the use it protects is abandoned; or the County, State Lands Commission, or Coastal Commission determines the structure should be removed.
- (7) The owner posts a cash bond with the County in an amount equal to the total cost plus inflation of removing the shoreline protection structure to guarantee that the money is available for that purpose.
- (8) The shoreline protective device shall be regularly monitored by an engineer or engineering geologist familiar and experienced with coastal structures and processes. Monitoring reports to the County and the Coastal Commission shall be required every five years from the date of coastal permit issuance until the coastal permit expiration, which shall evaluate whether or not the shoreline protective device is still required to protect the existing structure it was designed to protect.
- (9) Shoreline protective devices shall be required to mitigate impacts to shoreline sand supply, public access and recreation, and any other relevant coastal resource impacts in 20-year increments, starting with the building permit completion certification date. Permittees shall apply for a coastal permit amendment prior to expiration of each 20-year mitigation period, proposing mitigation for coastal resource impacts associated with retention of the shoreline protective device beyond the preceding 20-year mitigation period, and such application shall include consideration of alternative feasible mitigation measures in which the permittee can modify the shoreline protective device to lessen its impacts on coastal resources.

**Sonoma County
Local Coastal Plan**

**APPENDIX G:
BODEGA BAY FOCUSED VULNERABILITY ASSESSMENT AND
ADAPTATION STRATEGIES**



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

County of Sonoma

Bodega Bay Focused Sea Level Rise Vulnerability Assessment and Adaptation Strategies



April 30, 2017

Funded by:
California Ocean Protection Council

Prepared by:
Sonoma County Permit and Resource Management Department
Lisa Posternak, Planner III

Sea Level Rise Adaptation Planning Grant (CO300500)

1. Table of Contents

ACKNOWLEDGEMENTS.....	5
EXECUTIVE SUMMARY	7
1. INTRODUCTION	8
2. METHODS	10
Modeling	10
Assessment	12
3. BODEGA BAY COMMUNITY PROFILE	15
4. FLOODING AND SEA LEVEL RISE INUNDATION: IMPACTS AT BODEGA BAY	19
Bodega Harbor Area	19
Highway 1 Area	344
County Regional Parks Area	49
5. ADAPTATION STRATEGIES.....	64
6. BIBLIOGRAPHY AND REFERENCES.....	75
7. GLOSSARY	77
Figure 1	Bodega Bay Study Area
Figure 2	Bodega Bay Areas
Figure 3	Bodega Bay Study Area - Coastal Freshwater Marsh and Coastal Brackish Marsh
Figure 4	Bodega Bay Study Area - Bodega Harbor Tidal Mudflat & Eelgrass Bed
Figure 5	Bodega Bay Commercial Fisheries: Total Catch (Metric Tons) 1981 to 2017
Figure 6	Bodega Bay Study Area - California Coastal Trail
Figure 7	Bodega Bay Study Area - County Regional Parks Trails
Figure 8a	Bodega Harbor Area - Assets
Figure 8b	Bodega Harbor Area - Projected Inundation by 2100
Figure 8c	Bodega Harbor Area - Projected Flooding by 2100
Figure 9a	Highway 1 Area - Assets
Figure 9b	Highway 1 Area - Projected Inundation by 2100
Figure 9c	Highway 1 Area – Projected Flooding by 2100
Figure 10a	County Regional Parks Area - Assets
Figure 10b	County Regional Parks Area – Projected Inundation by 2100
Figure 10c	County Regional Parks Area - Projected Flooding by 2100

List of Tables

Table 1. Sea Level Rise Projections for San Francisco, CA Region	10
Table 2. Sea Level Rise and Storm Scenarios Used in Focused Vulnerability Assessment	12
Table 3. California Aquatic Resource Inventory Classifications Comprising Wetland Categories	14
Table 4. 2016 Total Catch (Metric Tons) and Revenue in Bodega Bay Commercial Fisheries.....	16
Table 5. Bodega Harbor Area: Coastal Freshwater Marsh – Inundation and Flood Projections (Percent Area)	21
Table 6. Bodega Harbor Area: Marine Industrial Assets – Inundation and Flood Projections (Percent Area)	25
Table 7. Bodega Harbor Area: County Roads – Inundation and Flood Projections (Percent Alignment)	27
Table 8. Bodega Harbor Area: Residential Assets – Lots and Dwelling Units.....	28
Table 9. Bodega Harbor Area: Residential Assets – Inundation and Flood Projections (Percent Area)	31
Table 10. Bodega Harbor Area: Summary of Projected Percent Area of Assets Permanently Inundated by Sea Level Rise by 2100	322
Table 11. Highway 1 Area: Dredge Spoil Disposal Ponds Site – Inundation and Flood Projections (Percent Area).....	377
Table 12. Highway 1 Area: Bodega Bay PUD Wastewater Treatment Plant – Inundation and Flood Projections (Percent Area)	388
Table 13. Highway 1 Area: Commercial Assets – Inundation and Flood Projections (Percent Area)	41

Table 14. Highway 1 Area: Bodega Harbour Yacht Club– Inundation and Flood Projections (Percent Area)	443
Table 15. Highway 1 Area: Residential Assets – Lots and Dwelling Units	443
Table 16. Highway 1 Area: Residential Assets – Inundation and Flood Projections (Percent Area)	46
Table 17. Highway 1 Area: Summary of Projected Percent Area of Assets Permanently Inundated by Sea Level Rise by 2100	47
Table 18. County Regional Parks Area: Coastal Freshwater Marsh – Inundation and Flood Projections (Percent Area)	51
Table 19. County Regional Parks Area: Coastal Brackish Marsh – Inundation and Flood Projections (Percent Area).....	52
Table 20. County Regional Parks Area: Regional Parks – Inundation and Flood Projections (Percent Area)	55
Table 21. County Regional Parks Area: County Roads – Inundation and Flood Projections (Percent of Alignment).....	57
Table 22. County Regional Parks Area: U.C. Davis Marine Laboratory Property – Inundation and Flood Projections (Percent Area)	59
Table 23. County Regional Parks Area: Links at Bodega Harbour Golf Course (affected grounds) – Inundation and Flood Projections (Percent Area)	60
Table 24. Highway 1 Area: Summary of Projected Percent Area of Assets Permanently Inundated by Sea Level Rise by 2100	62

2. **ACKNOWLEDGEMENTS**

In 2015 Sonoma County was awarded a Sea Level Rise Adaptation Planning Grant from the California Ocean Protection Council. The Sonoma County Permit & Resource Management Department (Permit Sonoma) Planning Division conducted this Focused Vulnerability Assessment with grant funding support.

We would like to thank all of our project partners:

Federal Government

National Oceanic and Atmospheric Administration

Lindy Betzhold – NOAA Affiliate

U.S. Geological Survey

Patrick Bernard – Research Geologist, Pacific Coastal and Marine Science Center

Amy Foxgrover – Geographer, Pacific Coastal and Marine Science Center

State Government

California Ocean Protection Council

Abe Doherty – Project Specialist

Paige Berube – Program Manager

Sara Briley – CA Sea Grant State Fellow

California Coastal Commission

Nancy Cave – Northern California Enforcement Program Supervisor

Stephanie Rexing – District Supervisor, North Central Coast District

County of Marin

Community Development Agency

Jack Liebster – Planning Manager

Alex Westhoff – Planner

County of Sonoma

Permit Sonoma

Jennifer Barrett – AICP, Deputy Director of Planning

Sandi Potter – Environmental Review Division Manager

Jane Riley – AICP, Supervising Planner

Lisa Posternak – Planner III

Mary Nicholl – Environmental Specialist II

Shelly Bianchi-Williamson – Senior Geographic Information Technician

Jann Samuels – Geographic Information Technician II

Noah Najarian – Geographic Information Technician II

County Counsel

Verne Ball – Deputy County Counsel

Regional Parks

Steve Ehret – Park Planning Manager

Melanie Parker – National Resource Manager

Transportation and Public Works

Susan Klassen – Director, Transportation & Operations

Olesya Tribukait – Engineering Division Manager

Janice Thompson – Senior Engineer

Fire and Emergency Services

Christopher Helgren – Emergency Manager

Kelsey Scanlon – Emergency Services Coordinator

Agricultural Preservation and Open Space District

Karen Gaffney – Manager

Tom Robinson – Conservation Planner

Institutional

Center for Ocean Solutions

Eric Hartge – Research Development Manager

Lisa Wedding – Research Associate in Spatial Ecology & Analysis

UCLA School of Law

Sean Hecht – Co-Executive Director, Emmett Institute on Climate Change and the Environment; Evan Frankel Professor of Policy and Practice; and Co-Director, UCLA Law Environmental Law Clinic

Megan Herzog – Emmett/Frankel Fellow in Environmental Law & Policy, Emmett Institute on Climate Change & the Environment

Private

Point Blue Conservation Science

Michael Fitzgibbon – Chief Technology Officer

Sam Veloz – Climate Adaptation Group Director

Maya Hayden – Coastal Adaptation Program Leader

3. EXECUTIVE SUMMARY

This Sonoma County Coast Focused Vulnerability Assessment has been prepared under the County's California Ocean Protection Council Sea Level Rise Adaptation Planning Grant. It focuses on Bodega Bay, the coastal community most at risk from the impacts of sea level rise based on the results of the Sonoma County Coast *General Vulnerability Assessment*.

This Vulnerability Assessment: (1) identifies the coastal areas and assets in Bodega Bay exposed to sea level rise and storm events; (2) analyzes the location and extent of assets projected to be inundated by sea level rise and flooded by storm events; (3) assesses the impacts of inundation and flooding; and (4) identifies potential adaptation measures to minimize the risks and impacts of inundation and flooding.

Sea levels are expected to rise over 6 feet by the end of this century. The sea level rise and storm scenarios used in the analysis are based on: (1) the range of sea level rise projections for California adopted by the National Research Council in 2012; and (2) the Our Coast Our Future website and tool that uses the U.S. Geological Survey's Digital Elevation Model and Coastal Storm Modeling System. The model incorporates several factors that can be analyzed individually and collectively under various scenarios, including: sea level rise, tides, storm surge, El Niño effects, wave set up, and wave run up. Sonoma County selected five sea level rise and storm scenarios that cover a full range of impact to affected coastal communities by the end of the century.

The northern section of Bodega Bay is referred to as the Bodega Harbor Area. It contains all of the marinas, the only rural residential development, and the largest area of urban residential development in the Bodega Bay study area. By 2100 under the worst case scenario, permanent inundation from sea level rise would affect 59% to 99% of marinas; 28% to 76% of County roads; 53% of a coastal wetland, and less than 1% to 14% of residential areas.

The eastern section of Bodega Bay is referred to as the Highway 1 Area. It contains all of the commercial development and the only public utility (Bodega Bay PUD Wastewater Treatment Plant) in the Bodega Bay study area. By 2100 under the worst case scenario, permanent inundation from sea level rise would affect 9% to 70% of commercial areas, 51% of the Bodega Harbour Yacht Club, 13% to 22% of residential areas, and 2% of a public access and recreation area (Dredge Spoil Disposal Ponds Site).

The southern section of Bodega Bay is referred to as the County Regional Parks Area. It contains the only County parks (Westside and Doran Beach Regional Parks) and institutional development (U.C. Davis Bodega Marine Laboratory) in the Bodega Bay study area. By 2100 under the worst case scenario, permanent inundation from sea level rise would affect 20% to 73% of coastal wetlands, almost 100% of Westside Regional Park and 36% of Doran Beach Regional Park, 26% to 39% of County roads, 23% of the Links at Bodega Harbor Golf Course, and less than 1% of the U.C. Davis Bodega Marine Laboratory.

4. 1. INTRODUCTION

Sea Level Rise Adaptation Planning Grant

The June 2016, *General Sea Level Rise Vulnerability Assessment for the Sonoma County Coast* prepared by staff evaluated coastal areas, communities, land uses, development, public infrastructure, and habitats most vulnerable to sea level rise impacts. This General Vulnerability Assessment also identified Bodega Bay and Jenner as the communities most at risk from the impacts of sea level rise. Permit Sonoma chose Bodega Bay as the first community for a Focused Vulnerability Assessment. This Focused Vulnerability Assessment for Bodega Bay is based on the process outlined in the California Coastal Commission's Sea Level Rise Policy Guidance, and incorporates the results of the *Focused Vulnerability Assessment: Sonoma County* (July 29, 2016) by the Center for Ocean Solutions (COS). **Figure 1** shows the Bodega Bay Study Area.

Local Coastal Plan Update

The California Coastal Commission recently adopted policy guidance on assessing and addressing sea level rise risks in local communities. While only advisory, the guidance includes steps for analyzing sea level rise in Local Coastal Plans, including choosing a range of sea level rise projections, identifying potential impacts, and assessing risks coastal habitats and development. With this analysis, the guidance provides example adaptation measures and Local Coastal Plan policy options to use when drafting updated or new Local Coastal Plan policies for certification with the Coastal Commission. The guidance further provides steps to implementing the policy in an updated Local Coastal Plan, monitoring, and amending the Local Coastal Plan as scientific and engineering fields advance our knowledge of adapting to sea level rise. The Local Coastal Plan regulates lands in the Coastal Zone as defined under California Law.

In the last few years, Sonoma County has focused on climate change and sea level rise. The County is updating its Local Coastal Plan for several reasons, one of which is to reflect the potential impacts of sea level rise and storm events on its coastal residents, infrastructure, and natural resources and to develop appropriate policies and actions to avoid and minimize those impacts. This Focused Vulnerability Assessment informs the Sonoma County Local Coastal Plan Update, and is part of an ongoing scientific, engineering, and public process to understand and prepare for the impacts of sea level rise.

This Focused Vulnerability Assessment tracks the Coastal Commission's Guidance, is consistent with planning standards used in hazards mitigation planning, and will be used to inform policies in the Local Coastal Plan Update. The Assessment is advisory and not regulatory.

Climate Change and Sea Level Rise

Climate change is affecting natural and built systems around the world, including the California coast. In the past century, average global temperature has increased about 1.4°F, and average global sea level has increased 7 to 8 inches. Sea level at the San Francisco tide gauge has risen 8 inches over the past century, and the National Research Council (NRC) projects that by 2100,

sea level in California south of Cape Mendocino may rise 66 inches. Recent research shows that in the worst case scenario, sea-level could rise 70 inches by 2100. The two major causes of global sea level rise are thermal expansion of warming oceans and the melting of land-based glaciers and polar ice caps. While Sonoma County's ocean coast regularly experiences erosion, flooding, and significant storm events, sea level rise would exacerbate these natural processes, and lead to significant social, environmental, and economic impacts. The third National Climate Assessment cites strong evidence showing that the cost of doing nothing exceeds the costs associated with adapting to sea level rise by 4 to 10 times. Therefore, it is critically important that Sonoma County plan and prepare to adapt to sea level rise to ensure public resources and coastal communities are resilient for present and future generations.

The Sonoma County coastline encompasses two characteristically distinct coasts (1) north of the Russian River is a rocky coast with tall bluffs punctuated with small coves; and (2) south of its mouth the coastline is comprised of low-lying grassland, sandy dunes, and pocket beaches. Exposure to coastal erosion and inundation caused by sea level rise and storm events differs significantly along the Sonoma County coastline, with distinct breaks north and south of the mouth of the Russian River. North of Jenner, the high rocky cliffs shelter much of the coastline, and extend into a rocky continental shelf dominated by kelp beds to the border with Mendocino County. The coastline south of Jenner includes the Russian River Estuary and sediment deposition influences hydrology and fisheries through inland Sonoma County. Moving south of Jenner the open coast and low lying beaches allow for greater coastal exposure; and habitats include beaches, high and low dunes, and wetlands extending south along the coast around Bodega Head and to the border with Marin County. These habitats provide some buffering of the coastline from the effects of erosion and inundation. The inland extent of Bodega Harbor is open to wave erosion due to the shallow waters and small amount of fetch. (Center for Ocean Solutions 2016a & b).

The high dunes at Doran Beach along the southern extent of Bodega Bay protect the inner harbor from northwest swells and the impacts of waves. This protection has allowed for the formation of diverse and complex inner harbor tidal mudflat, eelgrass beds, and salt marsh habitats. These habitats host a diversity of species including endangered salmonids, shorebirds, and occasionally seals, which feed on shellfish and invertebrates and seek refuge in the inner harbor. These inner harbor habitats also buffer the effects of shoreline erosion, sedimentation, and inundation during storm events by absorbing excess sediment and the nutrients necessary for production of eelgrass, shellfish, and invertebrates. (Center for Ocean Solutions 2016a & b).

5. 2. METHODS

This Focused Vulnerability Assessment process is guided by the California Coastal Commission's August 2015 *Sea Level Rise Policy Guidance*, similar to the California Emergency Management Agency's July 2012 *Climate Adaptation Planning Guide*, used by Marin County in its *Draft Marin Coast Sea Level Rise Vulnerability Assessment*. The Focused Vulnerability Assessment provides background and analysis for individuals, communities, Sonoma County, and local and state agencies to use in planning for and adapting to sea level rise.

This Focused Vulnerability Assessment does not address erosion. In addition, it does not address property under the jurisdiction of the state or federal government, including the Sonoma Coast State Park and Beach and U.S. Coast Guard Station.

In order to organize the analysis of Bodega Bay for this Assessment, we sectioned the community into three Areas: the Bodega Harbor Area to the north, Highway 1 Area to the east, and County Regional Parks Area to the south (**Figure 2**).

5.1 Modeling

Table 1 shows the range of sea level rise projections for the San Francisco, California region adopted by the National Research Council (NRC) in 2012. The NRC projections are the basis for the projections used in this Focused Vulnerability Assessment. Given the uncertainty in the magnitude and timing of future sea level rise, Sonoma County (and Marin County) used a scenario-based approach to assess a range of potential sea level rise impacts. Assessing a range of scenarios provides a framework for analyzing the vulnerability of Sonoma County's assets to sea level rise and storm events. The five scenarios selected for this Vulnerability Assessment are derived from the U.S. Geological Survey's (USGS) Coastal Storm Modeling System (CoSMoS; Storm Model).

Table 1. Sea Level Rise Projections for San Francisco, CA Region

Year	Projected Rise in Sea Level
2030	0.13 – 0.98 feet (4 – 30 cm)
2050	0.39 – 2 feet (12 – 61 cm)
2100	1.38 – 5.48 feet (42 – 167 cm)

Source: National Research Council (2012)

Sea level rise projections used in this analysis are from the Our Coast Our Future (OCOF) website and tool. OCOF was developed through a partnership of several notable institutions and agencies and represents the best available sea level rise and coastal storm science for the Bay Area Region and other parts of coastal California. OCOF uses the USGS Digital Elevation Model (DEM; Elevation Model) constructed for the region with 2-meter horizontal grid resolution and the Storm Model to produce a combination of 40 different sea level rise and storm scenarios. These scenarios include sea level rise, tides, storm surge, El Niño effects, wave set up, and wave run up. High quality elevation data incorporated into the Elevation Model delineates the current mean higher high water (MHHW) tidal elevation plus sea level rise heights and provides the option to add storm scenarios. Because the Elevation Model uses the highest tide measured, properties exposed to MHHW could be dry at lower tides. It is important to note that this tool only accounts for ocean levels and does not incorporate impacts from creek flooding or changes in the coastline (geomorphology) as erosion continues.



Sonoma County selected the sea level rise and storm scenarios in **Table 2** based on the National Research Council sea level rise projections in **Table 1** and the geographic extent and variety of storm severity. When combined, these scenarios cover a full range of impact to affected coastal communities by the end of this century. Scenarios 2-5 are the same scenarios Marin County used in its *Marin Coast Sea Level Rise Vulnerability Assessment*. Scenario 1 represents existing conditions. Scenario 2 represents near-term, and corresponds to the 2030 National Research

Council projected range in sea level rise. Scenario 3 is considered medium-term and is within the 2050 National Research Council sea level rise range. Scenarios 4 and 5 represent the long-term. Scenario 4 corresponds to the 2100 National Research Council sea level rise range. Scenario 5 represents sea level rise by 2100 based on additional research theorizing the worst case scenario for sea level rise summarized by the California Ocean Protection Council Science Advisory Team Working Group in *Rising Seas in California – An Update on Sea Level Rise Science* (Griggs et. al. 2017).

The Scenarios include storm events because they have the potential to cause catastrophic damage and hazardous coastal conditions that could increase in geographic extent as sea-levels rise. The storm frequencies presented in **Table 2** are the annual, 20-year, and 100-year storms. An annual storm has a high likelihood of happening in most years; a 20-year storm has a five percent chance of happening annually; and a 100-year storm has a one percent chance of happening in any given year.

Future storm conditions depend on the complicated interaction between the Earth's atmosphere and ocean systems, which the Storm Model attempts to simulate. Replicating storm scenarios

within the model is also difficult due to altered wave conditions varying between different storm events. Lower lying portions of Bodega Bay may experience more inundation during a five or 10-year storm event due to increased water levels, wave heights, storm surges, and altered patterns of erosion and accretion of the ocean floor. For example, the Storm Model has higher wave heights offshore than the 20-year storm; however the waves approach the coast from a more northerly direction.

Table 2. Sea Level Rise and Storm Scenarios Used in Focused Vulnerability Assessment

Scenario	Projected Sea Level Rise		Storm Event
	feet	cm	
1 - 2016	0	0	annual
2 - 2030	0.83	25	20-year
3 - 2050	1.67	50	20-year
4 – 2100 Best Case	3.33	100	100-year
5 – 2100 Worst Case	6.56	200	100-year

5.2 Assessment

An asset's vulnerability depends on its exposure, sensitivity, and its capacity to adapt to sea level rise and storm events. This Focused Vulnerability Assessment analyzes almost 40 exposed Residential, Commercial, Marine Industrial, Public Utility, Public Infrastructure, Public Access & Recreation, Private Recreation, and Wetland assets. We identified the assets that could be vulnerable to sea level rise and storm events by developing a "Sonoma County Sea Level Rise Viewer" based on the National Oceanic and Atmospheric Administration (NOAA) *Sea Level Rise and Coastal Flooding Impacts Viewer*. Geographic data layers for parcels, building footprints, land use, public & protected lands, trails, infrastructure, schools, riparian corridors, wetlands, and marine habitats were added.

To assess the potential flooding or inundation of an asset other than roads and the California Coastal Trail (Coastal Trail), a GIS shapefile was created and then entered into the Storm Model on the OCOF site to produce an "OCOF Sea Level Rise and Scenario Report". The OCOF Report includes area and elevation information and two tables: "Projected Percent Area Flooded for the Selected Area" and "Projected Average Flood Depth for the Selected Area." Based on that information, a Table was prepared showing projections for inundation (sea level rise alone) and flood (sea level rise plus storm event) as percent of the selected area.

Permit Sonoma staff assessed the potential temporary flooding or permanent inundation of County Roads or the Coastal Trail (linear assets), by measuring the total length of the road or trail on the Sonoma County Sea Level Rise Viewer. Then using the OCOF site to measure the projected temporary flooding or permanent inundation of the road or trail, staff then went back to the Sonoma County Coast Sea Level Rise Viewer to approximate and measure the extent of the flood or inundation impacts. Staff added the lengths of sections of affected road or trail together to obtain the total length of affected road or trail. Staff used the total affected length divided by the entire road length or trail to obtain the percent of road or trail inundated or flooded. Using the process above, Staff formulated the potential temporary flooding or permanent inundation of linear assets for all Sea Level Rise and Storm Scenarios in **Table 2**.

Coastal Wetland Categories

Data on the location and size of coastal wetlands is from the San Francisco Estuary Institute and Aquatic Science Center, part of the California Aquatic Resource Inventory (CARI; Inventory). The Inventory is a compilation of wetlands, streams, and riparian areas in California. This statewide dataset pulls together many sources of wetland data. In the case of Sonoma County, the National Wetlands Inventory, originally from the U.S. Fish and Wildlife Service, is the source of the wetland data. The National Wetlands Inventory was last updated in 2010 and was acquired by the San Francisco Estuary Institute in 2011. **Table 3** identifies the California Aquatic Resource Inventory wetland classifications comprising the Coastal Freshwater Marsh, Coastal Brackish Marsh, and Bodega Harbor Tidal Mudflat wetland categories.



Coastal Brackish Marsh

Table 3. California Aquatic Resource Inventory Classifications Comprising Wetland Categories

Coastal Freshwater Marsh
Freshwater Emergent Wetland - Depressional Seasonal Natural Emergent Freshwater Emergent Wetland - Depressional Seasonal Natural Emergent Freshwater Emergent Wetland - Depressional Seasonal Unnatural Emergent Freshwater Forested/Shrub Wetland - Depressional Seasonal Natural Shrub-Scrub Freshwater Forested/Shrub Wetland - Depressional Seasonal Natural Shrub-Scrub Freshwater Forested/Shrub Wetland - Depressional Seasonal Unnatural Shrub-Scrub
Coastal Brackish Marsh
Estuarine and Marine Wetland - Estuarine Saline Natural Intertidal Emergent Estuarine and Marine Wetland - Estuarine Saline Natural Intertidal Emergent
Bodega Harbor Tidal Mudflat
Estuarine and Marine Wetland - Estuarine Saline Unnatural Intertidal Non-Vegetated Estuarine and Marine Wetland - Estuarine Saline Unnatural Intertidal Vegetated

6. **3. BODEGA BAY COMMUNITY PROFILE**

Bodega Bay is a small rural community and harbor located approximately 40 miles northwest of San Francisco and 20 miles west of Santa Rosa in Sonoma County, California. The Bodega Bay Census Designated Place (CDP) has a total area of 12.5 square miles, of which 8.3 square miles of it is land and 4.2 square miles of it is water. The population of Bodega Bay was 1,411 in 2014 and 1,077 in 2010. Residential density is concentrated along Bay Flat Road and Westshore Road and near Highway 1.

Bodega Bay is a marine habitat used for navigation, recreation, and commercial and sport fishing. It is about 5 miles across and straddles the boundary between Sonoma County to the north and Marin County to the south, connecting to the mouth of Tomales Bay in Marin County. Bodega Head protects the Bay on its north end from the Pacific Ocean. Bodega Head shelters the harbor and separates it from the main bay by a jetty. The village of Bodega Bay sits on the east side of the harbor. North of the village lies a long coastal exposure of alternating rock outcrops and the sandy beaches of Sonoma Coast State Park. On the coast immediately north of Bodega Head is the University of California's Bodega Bay Marine Laboratory.

All coastal drainages between Salmon Creek and Point Reyes flow into Bodega Bay, creating a complex of fresh and brackish water marshes, tidal mudflats and coastal wetlands. Two main freshwater inputs are Johnson Gulch to the north and Cheney Gulch towards the east. The Bodega Harbor estuary empties southerly into Bodega Bay. The Estero Americano and Estero de San Antonio empty into Bodega Bay along its eastern side and Tomales Bay flows northerly into Bodega Bay. The Tomales Bay Peninsula lies across from Bodega Head, and together they create a neck for the outflow and allow Bodega Bay to function as a marine estuary (2014 Pacific Coast Joint Venture Strategic Plan). **Figures 3 and 4** show the coastal wetlands in the Bodega Bay study area.

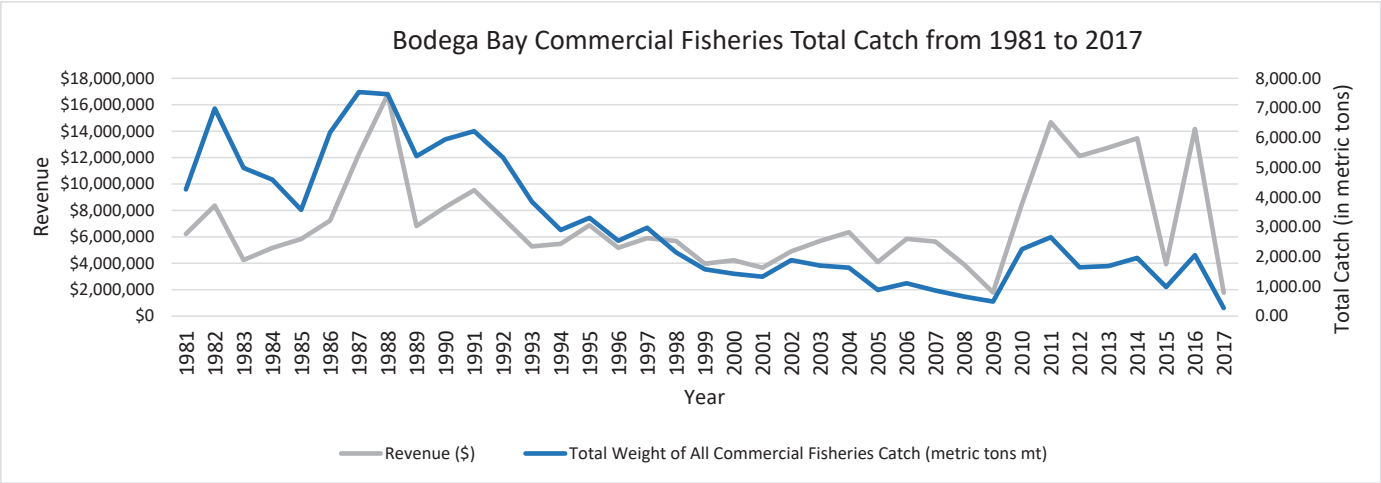
Commercial fishing remains a major component of Bodega Bay's economy. As of 2007, there was one commercial fish processing plant to which 317 commercially registered vessels delivered fish. **Figure 5** depicts the total catch in Bodega Bay commercial fisheries from 1981 to 2017. The sharp decline in 2015 is due to state officials closing the Dungeness crab fishery due to a harmful algal bloom. **Table 4** shows the 2016 total catch by west coast fishery and revenue in Bodega Bay commercial fisheries.

Table 4. 2016 Total Catch (Metric Tons) and Revenue in Bodega Bay Commercial Fisheries

West Coast Fishery	Total Catch (metric tons)	Revenue
Coastal Pelagic	0	\$0
Crab	1,816.5	\$1,047,625
Groundfish	89	\$639,074
Highly Migratory Species	0	\$0
Rockfish	3.4	\$13,759
Salmon	48.9	\$836,848

Source: Pacific Fisheries Information Network (2017)

Figure 5. Bodega Bay Commercial Fisheries: Total Catch (Metric Tons) 1981 to 2017



Marinas in Bodega Bay include the private Porto Bodega Marina & RV Park; and Mason's Marina, Spud Point Marina, and Bodega Bay Sport Fishing Center managed by Sonoma County Regional Parks. At Spud Point Marina, 80 percent of the berths are allocated to commercial fishing. Sonoma County Regional Parks also provides public boat launches at Doran Beach and Westside Regional Parks.

Commercial fishing remains a major component of Bodega Bay's economy. Expanding recreational opportunities to State and County parks in the region has increased exponentially in recent years, substantially increasing tourism to Bodega Bay. Sonoma Coast State Park encompasses 10,272 acres immediately west and north of the bay. Sonoma County Regional Parks manages Doran Beach Regional Park at the south end of the harbor and Westside Regional Park on the west side of the harbor.

About 20 businesses in Bodega Bay offer overnight accommodations including inns, hotels, bed and breakfasts, and an RV park. Four campgrounds provide low cost visitor-serving accommodations. California State Parks manages the Dunes and Wrights Beach Campgrounds in Sonoma Coast State Park, and Sonoma County Regional Parks manages the campgrounds at Doran Beach and Westside Regional Parks. **Figures 6-7** show the locations of the California Coastal Trail and County Regional Parks trails in the Bodega Bay study area.

Annual festivals demonstrate the economic and cultural significance of fishing to the Bodega Bay community: the Fisherman's Festival and Blessing of the Fleet for the approaching salmon season in April and The Seafood, Art, Music, and Wine Festival in August.



Spud Point Marina

7. 4. FLOODING AND SEA LEVEL RISE INUNDATION: IMPACTS AT BODEGA BAY

7.1 Bodega Harbor Area

The Bodega Harbor Area is the North Bay, encompassing the area from Spud Point Marina to the north end of the bay, and to the Bodega Bay Sports Fishing Center on the east. Bodega Harbor Area contains all of the Marine Industrial uses (marinas), the only Rural Residential development, and the largest area of Urban Residential development in Bodega Bay. Additional Bodega Harbor Area assets include Wetlands, County Roads, and County Trails. **Figure 8a** shows the location of and number assigned to each asset.

Assets in the Bodega Harbor Area vulnerable to sea level rise and storm events include Westshore, Eastshore, and Bay Flat Roads; public and private marinas; residential development; and coastal freshwater marsh and tidal mudflat. Sea level rise will impact these valuable assets leading to potential impacts on access; land use; habitats, including critical habitat; recreation and tourism; and commercial fishing. The floating docks at some of the marinas are resilient to rising tides; however, the residential development and the low-cost visitor-serving facilities at marinas are not as adaptable. Some residential buildings may not have direct impacts from sea level rise due to their elevation, but could become isolated and cut-off from all services due to compromised access and damaged utilities.



Bodega Harbor Area

Sea level rise will increase the salinity in freshwater sources, such as Johnson Gulch and Cheney Gulch, the two main sources freshwater to the harbor. The U.S. Fish and Wildlife Service have designated the coastal brackish water marsh at Johnson Gulch along Eastshore Road (FWMARSH-1 on **Figure 8a**) as a tidewater goby (*Eucyclogobius newberryi*) recovery sub-unit. Johnson Gulch marsh supports special status aquatic and terrestrial species. Bodega Harbor also provides rearing habitat for listed salmonids. The flow of freshwater from Johnson and Cheney Gulches into Bodega Harbor has created brackish tidal mudflats at their

convergence. As sea level rise results in higher tides, the brackish mixing of these two systems will occur further upstream, which would impact the type and diversity of plant and animal species in the gulches, potentially jeopardizing critical habitat for listed species.

The sections below provide information on the percentage area of each asset that would be inundated or flooded as a result of sea level rise and storm events and potential impacts.

Coastal Wetlands

The Bodega Harbor Area contains two types of coastal wetlands exposed to sea level rise and storm events: (1) Coastal Freshwater Marsh and (2) Bodega Harbor Tidal Mudflat.

Coastal Freshwater Marsh

Coastal Freshwater Marsh occurs in two locations: 1) the boat storage area at the eastern end of Porto Bodega Marina & RV Park to the east toward State Highway 1 (FWMARSH-1 on **Figure 8a**); and 2) north and west of Westshore Road near where it becomes Bay Flat Road (Rail Ponds; FWMARSH-2). The Rail Ponds have some characteristics of coastal brackish marsh. The Rail Ponds area was originally a coastal marsh connected to Bodega Harbor. Development of Westshore Road in 1963 separated the Rail Ponds from the bay shoreline. The Rail Ponds are labeled coastal freshwater marsh but are tidally influenced by an existing connection to Bodega Harbor. They receive freshwater from groundwater inputs and saltwater through culverts carrying the tidal flow under Westshore Road from Bodega Harbor (California Coastal Commission 2012). Vegetation in the Rail Ponds includes coastal brackish marsh plant species - salt grass (*Distichlis spicata*), franconia (*Frankenia salina*), pickleweed (*Salicornia* sp.), and cordgrass (*Spartina foliosa*).

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Coastal Freshwater Marsh. **Table 5** shows the projected percent of marsh area permanently inundated by sea level rise and with storm event flooding. **Figure 8b** illustrates the projected permanent inundation, and **Figure 8c** illustrates the projected permanent inundation with storm event flooding of Coastal Freshwater Marsh under Scenario 5 (2100 Sea Level Rise Worst Case).

FWMARSH-1 is not projected to be at risk of permanent inundation from sea level rise by 2100. However, in 2100 the marsh would experience periodic flooding during storm events at less than 1% of the marsh under the best case scenario and 3% under the worst case scenario.

FWMARSH-2 is projected to be at risk of inundation from sea level rise by 2100. In 2030 the marsh would not be permanently inundated by sea level rise and 17% of the marsh would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 37% of the marsh would be permanently inundated and 53% would be subject to periodic flooding during storm events. In 2100 under the worst case scenario, 53% of the marsh would be permanently inundated and subject to periodic flooding.

Coastal habitats are likely to differ in their vulnerability and response to climate related stressors depending on coastal exposure and local conditions. For example, as sea level rises, coastal deltas and mudflats are likely to be lost to open water. Wetlands and coastal dunes exposed to coastal hazards can migrate upslope given a path free of barriers from coastal development or shoreline hardening. The California Department of Fish and Wildlife has identified wetlands as a sensitive natural community that is vulnerable to further degradation from sea level rise inundation, flooding, and development.

Table 5. Bodega Harbor Area: Coastal Freshwater Marsh – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	FWMARSH-1 9.95 acres		FWMARSH-2 1.97 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----	----	----
2 - 2030	0.83	25	20-year	----	----	----	17%
3 - 2050	1.67	50	20-year	----	----	----	39%
4 – 2100 Best Case	3.33	100	100-year	----	< 1%	37%	53%
5 – 2100 Worst Case	6.56	200	100-year	----	3%	53%	53%

Bodega Harbor contains about 107 acres of Coastal Freshwater Marsh and 70 acres of Coastal Brackish Marsh. There are three major ways by which sea level rise can disrupt a marsh: inundation, erosion, and saltwater intrusion. The natural impact of a rising sea is to cause marsh systems to migrate upward and inland. Sea level rise increases the frequency and/or duration of tidal flooding throughout a marsh. If no inorganic sediment or peat is added to the marsh, the seaward portions become flooded so much that marsh grass drowns and marsh soil erodes; portions of the high marsh become low marsh; and upland areas immediately above the former spring tide level are temporarily flooded at spring tide, becoming high marsh. If nearby rivers or floods supply additional sediment, sea level rise slows the rate at which the marsh advances seaward.

Wetlands can grow upward fast enough to keep pace with the slow rise in sea level that most areas have experienced in the recent past. Thus, areas that might have been covered with two or three meters of water (or more) have wetlands instead. If sea level rise accelerates only slightly, marshes that are advancing today may have sufficient sediment to keep pace with sea level. But if sea level rise accelerates more rapidly, the sea will be rising much more rapidly than the demonstrated ability of wetlands to grow upward in most areas, and the increase in wetland acreage of the last few thousand years will be negated. If adjacent upland areas are developed, all the wetlands could be lost.

The net change in total marsh acreage depends on the slopes of the marsh and upland areas. If the land has a constant slope throughout the marsh and upland, then the area lost to marsh drowning will be equal to the area gained by the landward encroachment of spring high tides. In most areas, however, the slope above the marsh is steeper than the marsh, so a rise in sea level causes a net loss of marsh acreage.

The U.S. Fish and Wildlife Service has designated the coastal freshwater marsh at Johnson Gulch along Eastshore Road (FWMARSH-1 on **Figure 3**) as a tidewater goby (*Eucyclogobius newberryi*) recovery sub-unit. This marsh supports special status aquatic and terrestrial species. The ability of this freshwater marsh to migrate inland is limited because the marsh is already narrow and backed by residential development. However, under the near-term and medium-term sea level rise scenarios, this marsh habitat would buffer the effects of sea level rise for the residential development by absorbing the rising water and sediment.

Bodega Harbor Tidal Mudflat

Bodega Harbor Tidal Mudflat occurs in two locations: (1) west of Porto Bodega Marina & RV Park (1.70 acres; TIDFLT-1 on **Figure 8a**) and (2) east of the Porto Bodega Marina & RV Park and south of the Bodega Bay Sport Fishing Center (5.12 acres; TIDFLT-2).

Potential Flooding and Inundation Impacts

Data on projected inundation and flooding of Bodega Harbor Tidal Mudflat is not available.

Bodega Harbor contains about 480 acres of Tidal Mudflat that support about 130 acres of Eelgrass Bed. Bodega Harbor Tidal Mudflat links marine, freshwater, and terrestrial habitats; as well as provides economic and recreational benefits to the community. Tidal mudflats form unique habitats and maintain valuable ecosystems, buffering eelgrass beds from excess sedimentation, providing habitat for wildlife, and protecting terrestrial infrastructure from inundation (Thorne 2015). Bodega Harbor tidal waters ebb and flow over the central harbor mudflats depositing suspended sediments and organic matter from local plant production. This ecosystem is particularly unique in that the tidal velocity profile of Bodega Harbor show that water within the channel moves uniformly from top to bottom at fairly rapid flow rates, indicating a large throughput through the system and that the harbor flushes itself, contaminants, and sediments out daily (Rasmussen 2004).

Climate change effects such as sea level rise are altering this habitat, and coastal models are available to extrapolate potential effects until more site specific research is conducted. Tidal mudflat survival depends on the balance between the forces that lead to their creation (mineral and organic sediment accumulation) and the forces that lead to their deterioration (sea level rise, subsidence, and wave erosion). Sea level rise impacts to mudflats over the short and mid-term are controlled by the rate of vertical development (when accumulation exceeds deterioration) compared to relative sea level rise (the combination of the change in sea level and the change in land level; Cahoon 2010).

USGS models predict that over long-term sea level rise, mudflat deterioration will overpower accumulation, vertical development will lag behind sea level rise, permanent inundation will result in below optimum growth range for eelgrass, and tidal mudflat will convert to intertidal mudflat or subtidal open water (Cahoon 2010).

The flow of freshwater from Johnson Gulch into Bodega Harbor has created brackish tidal mudflat at their convergence. As sea level rise results in higher tides, the brackish mixing of these two systems will occur further upstream, which would impact the type and diversity of plant and animal species in the gulches, potentially jeopardizing important habitat for endangered species.

Public Access & Recreation – Trails

The Bodega Harbor Area contains a portion of one segment of the California Coastal Trail (Coastal Trail) exposed to sea level rise and storm events: an Existing Coastal Trail segment along the east side of Bodega Bay (0.54 miles, 2,849 feet). **Figure 6** shows the locations of Coastal Trail segments in the Bodega Bay Study Area.

Potential Inundation and Flood Impacts

Sea level rise and storm events may result in inundation and would result in flooding of the Coastal Trail segment. **Figure 8b** illustrates the projected permanent inundation, and **Figure 8c** illustrates the projected permanent inundation with storm event flooding of the Coastal Trail segment under Scenario 5 (2100 Sea Level Rise Worst Case).

Temporary flooding of an Existing Coastal Trail segment would result in trail damage and disrepair and require temporary closure or routing to an alternative trail segment during trail repair or re-construction. Permanent inundation of an Existing Coastal Trail segment would require relocation of the segment. The level of difficulty in relocating a Coastal Trail segment would depend on the sources of funding and the specific terms of easements with private property owners.

Marine Industrial

Bodega Harbor is the hub of commercial and sport fishing in Sonoma County, and is a popular destination during crab and salmon seasons. The marinas in the Bodega Harbor Area exposed to sea level rise and storm events include Porto Bodega Marina & RV Park (MI-1 on **Figure 8a**), Bodega Bay Sport Fishing Center (MI-2); Mason's Marina (MI-3E: east side of Westshore Road, MI-3BW: west side of Westshore Road); and Spud Point Marina (MI-4).

Porto Bodega Marina & RV Park (MI-1). The Porto Bodega Marina & RV Park is a privately owned resort off Bay Flat Road consisting of 75 open boat slips, guest docks, 58 RV sites, 2 vacation rentals, boat trailer parking, club house, and laundry.

Bodega Bay Sport Fishing Center (MI-2). The Bodega Bay Sport Fishing Center is a County-owned and operated facility east of the Porto Bodega Marina & RV Park. The County has a license agreement with sport fishing boat operators to allow them to use the Bodega Bay Sport Fishing Center License for party boats for fishing, whale watching, pelagic bird watching, and sightseeing. The facility includes a dock, boat launch, bait and tackle shop, and parking.

Mason's Marina (MI-3E & MI-3W). Mason's Marina is a County-owned and operated marina off Westshore Road that serves commercial fishing boats as well as recreational vessels including sailboats and motor launches. A small paved parking area and dock are used for fish-buying (MI-3E). The area on the west side of Westshore Road is used for storing crab pots (MI-3W).

Spud Point Marina (MI-4). Spud Point Marina is a County-owned and operated marina off Westshore Road that serves users of overnight and monthly berths and yacht club cruisers. It

consists of stable docks, fuel dock, guest dock and overnight berths, fishing and observation piers, tenant and public restrooms, laundry, dry dock storage, and parking.

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Marine Industrial assets. The marina assets analyzed comprise landside facilities only and do not include the piers or docks. **Table 6** shows the projected percent area of the marinas permanently inundated by sea level rise and with storm event flooding. **Figure 8b** illustrates the projected permanent inundation, and **Figure 8c** illustrates the projected permanent inundation with storm event flooding of the marinas under Scenario 5 (2100 Sea Level Rise Worst Case).

All of the marinas are projected to be at risk of inundation from sea level rise by 2100. Porto Bodega Marina & RV Park and Mason's Marina would be more at risk than the other marinas.

Porto Bodega Marina & RV Park. In 2030 3% of the marina would be permanently inundated by sea level rise and less than 1% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 55% of the marina would be permanently inundated and 86% would be subject to periodic flooding during storm events. Under the worst case scenario, 65% of the marina would be permanently inundated and 95% would be subject to periodic flooding.

Bodega Bay Sport Fishing Center. In 2030 the marina would not be permanently inundated by sea level rise and less than 1% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, less than 1% of the marina would be permanently inundated and 18% would be subject to periodic flooding during storm events. Under the worst case scenario, 59% of the marina would be permanently inundated and 84% would be subject to periodic flooding.

Mason's Marina (East). In 2030 less than 1% of the marina would be permanently inundated by sea level rise and 44% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 91% of the marina would be permanently inundated and 99% would be subject to periodic flooding during storm events. Under the worst case scenario, 99% of the marina would be permanently inundated and subject to periodic flooding.

Mason's Marina (West). In 2030 the marina would not be permanently inundated by sea level rise and less than 1% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 50% of the marina would be permanently inundated and 86% would be subject to periodic flooding during storm events. Under the worst case scenario, 69% of the marina would be permanently inundated and 95% would be subject to periodic flooding.

Spud Point Marina. In 2030 the marina would not be permanently inundated by sea level rise and 2% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 8% of the marina would be permanently inundated and 45% would be subject to periodic flooding during storm events. Under the worst case scenario, 63% of the marina would be permanently inundated and 81% would be subject to periodic flooding.

Table 6. Bodega Harbor Area: Marine Industrial Assets – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	Porto Bodega Marina & RV Park <i>MI-1</i> 10.34 acres		Bodega Bay Sport Fishing Center <i>MI-2</i> 1.54 acres		Mason's Marina <i>MI-3E</i> 1.51 acres		Mason's Marina <i>MI-3W</i> 3.45 acres		<i>Spud Point Marina</i> <i>MI-4</i> 3.32 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	< 1%	----	----	----	----	6%	----	----	----	----
2 - 2030	0.83	25	20-year	3%	< 1%	----	< 1%	< 1%	44%	----	< 1%	----	2%
3 - 2050	1.67	50	20-year	7%	50%	< 1%	< 1%	< 1%	94%	----	50%	----	9%
4 – 2100 Best Case	3.33	100	100-year	55%	86%	< 1%	18%	91%	99%	50%	86%	8%	45%
5 – 2100 Worst Case	6.56	200	100-year	65%	95%	59%	84%	99%	99%	69%	95%	63%	81%

Permanent inundation of all or a portion of marinas would result in the loss of marine industrial land area to bay waters.



Porto Bodega Marina & RV Park

Temporary flooding and permanent inundation from sea level rise would damage and impair land-based facilities at marinas, potentially rendering them inoperable, including: the clubhouse, laundry, and boat trailer parking at Porto Bodega Marina & RV Park; bait and tackle shop, boat launch, and parking at the Bodega Bay Sport Fishing Center; crab pot storage and parking area at Mason's Marina; and restrooms,

laundry, dry dock storage, and parking area at Spud Point Marina. Storm flooding, sea level rise, daily tidal flooding, and erosion would damage and impair docks. Temporary flooding and permanent inundation would impede or prevent access to and from the marinas.

Permanent inundation of the land-based portion of the marinas would result in loss of marine industrial area land.

Permanent inundation of Porto Bodega Marina & RV Park would result in loss of some or all of the RV sites, which would result in the temporary or permanent relocation of residents and loss of affordable housing.

Impacts on land-based facilities, docks, and public access at the marinas and the loss of marine industrial land would decrease sport fishing and other recreational opportunities at Bodega Bay, which would decrease tourism to Bodega Bay and result in the loss of tourist revenue.

Impacts on land-based facilities, docks, and public access at Mason's Marina and Spud Point Marina and the loss of marine industrial area land would decrease commercial fishing opportunities at Bodega Bay, which would reduce the viability of Bodega Bay's commercial fishing industry.

County Roads

The Bodega Harbor Area includes three County Roads exposed to sea level rise and storm events – Eastshore Road, Bay Flat Road, and Westshore Road. **Figure 8a** shows the location of these roads.

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Eastshore Road, Bay Flat Road, and Westshore Road. **Table 7** shows the projected percent of road alignment permanently inundated by sea level rise and with storm event flooding. **Figure 8b** illustrates the projected permanent inundation, and **Figure 8c** illustrates the projected permanent inundation with storm event flooding of the roads under Scenario 5 (2100 Sea Level Rise Worst Case).

Table 7. Bodega Harbor Area: County Roads – Inundation and Flood Projections (Percent Alignment)

Scenario	Projected Sea Level Rise		Storm Event	<i>Eastshore Road</i> 2,791.5 feet (0.53 mi)		<i>Bay Flat Road</i> 8,435.1 feet (1.60 mi)		<i>Westshore Road</i> 4,896.2 feet (0.93 mi)	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----	----	----	----	3%
2 - 2030	0.83	25	20-year	----	11%	----	2%	< 1%	16%
3 - 2050	1.67	50	20-year	< 1%	32%	----	16%	< 1%	48%
4 – 2100 Best Case	3.33	100	100-year	33%	37%	16%	26%	52%	78%
5 – 2100 Worst Case	6.56	200	100-year	35%	39%	28%	44%	76%	82%

These County Roads are projected to be at risk of inundation from sea level rise between 2050 and 2100. Westshore Road is the more at risk than the other County Roads.

Eastshore Road. In 2030 the road would not be permanently inundated by sea level rise and 11% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 33% of the road would be permanently inundated and 37% would be subject to periodic flooding during storm events. Under the worst case scenario, 35% of the road would be permanently inundated and 39% would be subject to periodic flooding during storm events.

Bay Flat Road. In 2030 the road would not be permanently inundated by sea level rise and 2% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 16% of the road would be permanently inundated and 26% would be subject to periodic flooding during storm events. Under the worst case scenario, 28% of the road would be permanently inundated and 44% would be subject to periodic flooding.

Westshore Road. In 2030 less than 1% of the road would be permanently inundated by sea level rise and 16% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 52% of the road would be permanently inundated and 78% would be

subject to periodic flooding during storm events. Under the worst case scenario, 76% of the road would be permanently inundated and 82% would be subject to periodic flooding.

Temporary flooding of County Roads would cause road closures during a flood event and result in road damage and accelerated deterioration. Recurring damage and deterioration from flooding could result in road failure or capacity restrictions. Road closures would temporarily restrict access to and from homes, businesses, or park and recreation areas. Residents may not be able to evacuate in emergencies, and emergency vehicles may not be able to reach locations in time, or at all. As road access becomes increasingly limited, so will the carrying capacity for visitors that contribute greatly to the regional economy.

Permanent inundation of County Roads would render road segments impassable, resulting in permanent road closures. As for many of these roads alternative routes are not available, access would be limited or non-existing to and from homes, businesses, or park and recreation areas. Homes and businesses would not be able to perform their primary function and become isolated and cut-off from all services. In the Bodega Harbor Area, permanent inundation of Eastshore, Bay Flat, and Westshore Roads would eliminate access to and from rural and urban residential areas and marinas.

Residential

The Bodega Harbor Area contains three urban residential areas and one rural residential area exposed to sea level rise and storm events. The urban residential areas are north of Porto Bodega Marina & RV Park (UR-1 on **Figure 8a**), northwest of Mason's Marina (UR-2), and west of Spud Point Marina (UR-3). The rural residential area (RR-1) is northeast of UR-2. **Table 8** shows the number of developed and vacant lots and number of dwelling units which comprise these residential areas.

Table 8. Bodega Harbor Area: Residential Assets – Lots and Dwelling Units

Asset	Lots	Vacant Lots	Dwelling Units
RR-1	9	2	7
UR-1	6	1	5
UR-2	60	14	46
UR-3	25	5	20



UR-2 and RR-1

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of these residential areas. **Table 9** shows the projected percent area permanently inundated by sea level rise and with storm event flooding. **Figure 8b** illustrates the projected permanent inundation, and **Figure 8c** illustrates the projected permanent inundation with storm event flooding of the areas under Scenario 5 (2100 Sea Level Rise Worst Case).

All of the residential areas are projected to be at risk of inundation from sea level rise by 2100. RR-1 and UR-2 would be more at risk than the other residential areas.

RR-1. In 2030 the residential area would not be permanently inundated by sea level rise and 3% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 7% of the area would be permanently inundated and 14% would be subject to periodic flooding during storm events. Under the worst case scenario, 14% of the area would be permanently inundated and 23% would be subject to periodic flooding.

UR-1. In 2030 the residential area would not be permanently inundated by sea level rise or subject to periodic flooding during storm events. In 2100 under the best case scenario, the area would not be permanently inundated and less than 1% would be subject to periodic flooding during storm events. Under the worst case scenario, less than 1% of the area would be permanently inundated and 6% would be subject to periodic flooding.

UR-2. In 2030 the residential area would not be permanently inundated by sea level rise and 9% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 10% of the area would be permanently inundated and 13% would be subject to

periodic flooding during storm events. Under the worst case scenario, 10% of the area would be permanently inundated and 19% would be subject to periodic flooding.

UR-3. In 2030 the residential area would not be permanently inundated by sea level rise or subject to periodic flooding during storm events. In 2100 under the best case scenario, the area would not be permanently inundated and 2% would be subject to periodic flooding during storm events. Under the worst case scenario, less than 1% of the area would be permanently inundated and 4% would be subject to periodic flooding.

Permanent inundation of all or a portion of residential properties would result in the loss of residential land area to bay waters.

RR-1. Permanent inundation from sea level rise would affect four properties, resulting in: (1) loss of property frontage, hence the size of the useable area; (2) loss of access to and from residences at Bay Flat Road and Westshore Road (see discussion of impacts on County Roads above), potentially isolating and cutting-off residences from essential services; and (3) the bay being closer to properties and residences, decreasing the buffer between them, which could result in inundation of one residence.

UR-1. Permanent inundation from sea level rise would affect all six properties, resulting in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to properties and residences, decreasing the buffer between them, which could result in inundation of six residences.

UR-2. Permanent inundation from sea level rise would affect mainly the area between Westshore Road and Bay Flat Road where several vacant or unbuildable properties are located. Permanent inundation would result in: (1) loss of property frontage, hence the size of the useable area; (2) loss of access to residences from Westshore Road and Bay Flat Road, including the entrance to the residential development at Whaleship Road (see the discussion of impacts on County Roads above); and (3) the bay being closer to properties and residences, decreasing the buffer between them, which could result in inundation of four residences.

UR-3. Permanent inundation from sea level rise would affect two properties, resulting in: (1) loss of access to and from the properties at the intersection of Westshore Road and Bay Flat Road; and (2) the bay being closer to the properties and residences, decreasing the buffer between them, which could result in inundation of two residences.

Table 9. Bodega Harbor Area: Residential Assets – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>RR-1</i> 6.30 acres		<i>UR-1</i> 1.09 acres		<i>UR-2</i> 12.80 acres		<i>UR-3</i> 5.35 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----		----	----	----	----	----	----
2 - 2030	0.83	25	20-year	----	3%	----	----	----	9%	----	----
3 - 2050	1.67	50	20-year	----	8%	----	----	----	10%	----	----
4 – 2100 Best Case	3.33	100	100-year	7%	14%	----	< 1%	10%	13%	----	2%
5 – 2100 Worst Case	6.56	200	100-year	14%	23%	< 1%	6%	10%	19%	< 1%	4%

Bodega Harbor Area - Summary

Potential Impacts

Table 10 summarizes the projected percent of Bodega Harbor Area assets permanently inundated by sea level rise in 2100 under the best and worst case scenarios.

By 2100 under the worst case scenario, permanent inundation from sea level rise would affect 59% to 99% of marinas; 28% to 76% of County Roads; 53% of a coastal wetland, and less than 1% to 14% of residential areas.

Table 10. Bodega Harbor Area: Summary of Projected Percent Area of Assets Permanently Inundated by Sea Level Rise by 2100

Asset	Best Case Scenario	Worst Case Scenario
Coastal Wetlands		
FWMARSH-1	----	----
FWMARSH-2	37%	53%
TIDFLT-1	N/A	N/A
TIDFLT-2	N/A	N/A
Public Access and Recreation		
California Coastal Trail	N/A	N/A
Marine Industrial		
Porto Bodega Marina & RV Park	55%	65%
Mason's Marina (East)	91%	99%
Mason's Marina (West)	50%	69%
Bodega Bay Sport Fishing Center	<1%	59%
Spud Point Marina	8%	63%
County Roads		
Westshore Road	52%	76%
Eastshore Road	33%	35%
Bay Flat Road	16%	28%
Residential		

Asset	Best Case Scenario	Worst Case Scenario
RR-1	7%	14%
UR-1	----	<1%
UR-2	10%	10%
UR-3	----	<1%

Potential Adaptation Strategies

Possible adaptation strategies for the Bodega Harbor Area are retreat and protect. The retreat strategy includes avoiding new development, redeveloping vulnerable infrastructure, and removing damaged infrastructure in hazard areas. Protecting vulnerable road infrastructure in 2030 to 2050 is anticipated until a long-term adaptation strategy has been determined. Section 5 contains a full suite of adaptation strategies for Bodega Bay informed by public outreach.

Bodega Harbor Area adaptation priorities include: (1) avoid new development within mapped hazard areas; (2) consider protection measures for shoreline roads in the short-term, and determine the feasibility of relocating shoreline roads and increasing culvert and roadside ditch capacity in the long-term; and (3) consider developing an abatement program to remove abandoned boats and docks that may degrade harbor water quality.

7.2 Highway 1 Area

The Bodega Bay Highway 1 Area is the east bay, encompassing the area from south of the Bodega Bay Sports Fishing Center to the western edge of the Bodega Harbour Subdivision and Golf Course. The Highway 1 Area contains all of the Commercial assets and the only public utility (Bodega Bay Wastewater Treatment Plant) in Bodega Bay; and a smaller area of Urban Residential development compared to the Bodega Harbor Area. Additional Highway 1 Area assets include Wetlands and County Trails. **Figure 9a** shows the location of and number assigned to each asset.

Assets in the Highway 1 Area vulnerable to sea level rise and storm events include Highway 1, residential and commercial buildings on the harbor side of Highway 1; yacht club; wastewater treatment plant; County Regional Parks trails and California Coastal Trail; and coastal freshwater marsh, coastal brackish marsh, and tidal mudflat.

Sea level rise will impact these valuable assets leading to potential impacts on access, land use, recreation and tourism, and habitats. Buildings on the harbor side of Highway 1 are more vulnerable to storm damage and sea level rise than are those on the upland side of Highway 1. Some houses on the harbor side have been elevated on wooden pilings which require maintenance. Boat docks and aquatic infrastructure at the yacht club and other harbor properties are supported by pressure treated wooden piles driven into harbor mud that are not adaptable to changing tidal heights. Residential or commercial buildings that may not be affected by sea level rise due to their elevation could become isolated and cut-off from all services due to compromised access and damaged utilities.

Cheney Gulch is a short drainage that drops steeply from coastal scrub to riparian ravines and freshwater marsh habitat. It supports special status aquatic and terrestrial species such as the California Freshwater Shrimp (*Syncaris pacifica*) and California Red-legged frog (*Rana draytonii*).

The sections below provide information on the percentage area of each asset that would be flooded or inundated as a result of sea level rise and storm events and potential impacts.

Coastal Wetlands

The Highway 1 Area contains two types of coastal wetlands: (1) Coastal Freshwater Marsh and (2) Bodega Harbor Tidal Mudflat.

Coastal Freshwater Marsh

Coastal Freshwater Marsh occurs in three locations: (1) on the north side of State Highway 1 opposite COM-2 at 935 State Highway 1 (FWMARSH-1 on **Figure 9a**; 0.80 acres); (2) on both sides of State Highway 1 in the area of Doran Park Road (FWMARSH-2, 8.58 acres); and (3) on the north side of Highway 1 opposite the Dredge Spoil Disposal Ponds site along Cheney Gulch (FWMARSH-3, 4.72 acres).

Potential Inundation and Flood Impacts

According to the analysis based on the Our Coast Our Future (OCOF) website tool and model, these Coastal Freshwater Marsh areas are not at risk of inundation from sea level rise or flooding from storm events by 2100 under the best and worst case scenarios. However, the model is limited in that it does not incorporate tidal flow through culverts. In the case of FWMARSH-3 along Cheney Gulch, there is tidal flow through the culvert under the Highway 1 bridge that affects this marsh, and the Cheney Gulch drainage system extends out to the bay between the Dredge Spoil Disposal Ponds Site and the Bodega Bay PUD Wastewater Treatment Plant. Up to 2050, the coastal freshwater marsh along Cheney Gulch would buffer the effects of sea level rise for the surrounding land uses by absorbing the rising water and sediment. However, sea level rise inundation would have an adverse impact on the non-saline tolerant plant and animal species which occur in or use the marsh. The potential for inland migration of this marsh would be limited because the dredge spoil ponds site, wastewater treatment plant, and residential development confine the drainage.

Public Access & Recreation – Trails and Areas

Trails

The Highway 1 Area contains two County Regional Parks Trails exposed to sea level rise and storm events: (1) Birdwalk Loop Trail (0.6 miles, 3,168 feet) and (2) Cheney Creek Trail (0.5 miles, 2,640 feet). The Area also contains portions of two segments of the California Coastal Trail (Coastal Trail): (1) an Existing Coastal Trail segment at the Dredge Spoil Disposal Ponds Site (0.53 miles, 2,804 feet) and (2) a Proposed Coastal Trail segment along the east side of Bodega Bay (1.1 miles, 5,880 feet). Coastal Trail segments. **Figures 6 and 7** show the locations of Coastal Trail segments and County Regional Parks Trails in the Bodega Bay Study Area.

Potential Inundation and Flood Impacts

Sea level rise and storm events may result in inundation and would result in flooding of the County Regional Parks Trails and Coastal Trail segments. **Figure 9b** illustrates the projected permanent inundation, and **Figure 9c** illustrates the projected permanent inundation with storm event flooding in the area of the trails under Scenario 5 (2100 Sea Level Rise Worst Case).

Temporary flooding of a County Regional Parks Trail or Existing Coastal Trail segment would result in trail damage and disrepair and require temporary closure or routing to an alternative trail section during trail repair or re-construction. Permanent inundation of a County Regional Parks Trail or Existing Coastal Trail segment would require relocation of the trail section. The level of difficulty in relocating a County Regional Parks Trail or Existing Coastal Trail segment would depend on the sources of funding and the specific terms of easements with private property owners.

Areas

The Highway 1 Area contains an area consisting of two dredge spoil disposal ponds and a County Regional Parks Trail (Birdwalk Loop Trail). The Dredge Spoil Disposal Ponds Site (PUBACC-1 on **Figure 9a**) is owned and operated by Sonoma County Regional Parks and used by the public for recreation.

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of the Dredge Spoil Disposal Ponds Site. **Table 11** shows the projected percent area permanently inundated by sea level rise and with storm event flooding. **Figure 9b** illustrates the projected permanent inundation, and **Figure 9c** illustrates the projected permanent inundation with storm event flooding of the Dredge Spoil Disposal Ponds Site under Scenario 5 (2100 Sea Level Rise Worst Case).

The Dredge Spoil Disposal Ponds Site is projected to be at risk of permanent inundation from sea level rise by 2100. In 2030 less than 1% of the site would be permanently inundated by sea level rise and 2% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 2% of the area would be permanently inundated and 3% would be subject to periodic flooding during storm events. Under the worst case scenario, 2% of the area would be permanently inundated and 5% would be subject to periodic flooding.



Birdwalk Loop Trail

Table 11. Highway 1 Area: Dredge Spoil Disposal Ponds Site – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	Dredge Spoil Disposal Ponds Site PUBACC-1 23.91 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	<1%	<1%
2 - 2030	0.83	25	20-year	<1%	2%
3 - 2050	1.67	50	20-year	<1%	2%
4 – 2100 Best Case	3.33	100	100-year	2%	3%
5 – 2100 Worst Case	6.56	200	100-year	2%	5%

Public Utility

The Highway 1 Area includes the only Public Utility in Bodega Bay – the Bodega Bay PUD Wastewater Treatment Plant (UTIL-1 on **Figure 9a**).

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in flooding of the Bodega Bay PUD Wastewater Treatment Plant. **Table 12** shows the projected percent area permanently inundated by sea level rise and with storm event flooding. **Figure 9b** illustrates the projected permanent inundation, and **Figure 9c** illustrates the projected permanent inundation with storm event flooding of the public utility site under Scenario 5 (2100 Sea Level Rise Worst Case).

The Bodega Bay PUD Wastewater Treatment Plant is not projected to be at risk of permanent inundation from sea level rise by 2100. However, the utility site would experience periodic flooding during storm events at 40% of the site under the 2100 worst case scenario. Flooding would occur at the southern boundary of the utility property, not at the structures or systems. Periodic flooding during storm events could result in temporary disruption of plant operations.



Bodega Bay PUD Wastewater Treatment Plant

Table 12. Highway 1 Area: Bodega Bay PUD Wastewater Treatment Plant – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>Bodega Bay PUD Wastewater Treatment Plant UTIL-1 4.08 acres</i>	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----
2 - 2030	0.83	25	20-year	----	----
3 - 2050	1.67	50	20-year	----	----
4 – 2100 Best Case	3.33	100	100-year	----	----
5 – 2100 Worst Case	6.56	200	100-year	----	40%

Commercial

The Highway 1 Area includes five commercial areas along the east side of Bodega Bay, four of which are exposed to sea level rise and storm events: the area currently occupied by Diekmann's Bay Store (COM-1 on **Figure 9a**); the area currently occupied by Harbor View Gifts (COM-2); the area currently occupied by Patrick's of Bodega Bay, Gourmet Au Bay, and Tides Wharf Restaurant (COM-3); and the area currently occupied by Fisheterian Fish Market and Lucas Wharf Restaurant & Bar (COM-4). COM-5 is the area currently occupied by Bodega Bay & Beyond, Sonoma Coast Living Real Estate, Coffee Cove, Bodega Bay Escapes, Jessica Brianne Carpenter Photos, and Bodega Coast Inn & Suites.

Potential Inundation and Flooding

Sea level rise and storm events would result in inundation and flooding of these commercial areas. **Table 13** shows the projected percent area permanently inundated by sea level rise and with storm event flooding. **Figure 9b** illustrates the projected permanent inundation, and **Figure 9c** illustrates the projected permanent inundation with storm event flooding of the areas under Scenario 5 (2100 Sea Level Rise Worst Case).

All of these commercial areas except COM-5 are projected to be at risk of inundation from sea level rise by 2100. COM-2 and COM-3 would be more at risk than the other commercial areas.

COM-1. In 2030 5% of the area would be permanently inundated by sea level rise and 9% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 10% of the area would be permanently inundated and 14% would be subject to periodic flooding during storm events. Under the worst case scenario, 9% of the area would be permanently inundated and 19% would be subject to periodic flooding.



Lucas Wharf Restaurant & Bar

COM-2. In 2030 the area would not be permanently inundated by sea level rise and 11% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 12% of the area would be permanently inundated and 66% would be subject to periodic flooding during storm events. Under the worst case scenario, 70% of the area would be permanently inundated and 91% would be subject to periodic flooding.

COM-3. In 2030 2% of the area would be permanently inundated by sea level rise and 9% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 10% of the area would be permanently inundated and 14% would be subject to periodic flooding during storm events. Under the worst case scenario, 69% of the area would be permanently inundated and 84% would be subject to periodic flooding.

COM-4. In 2030 5% of the area would be permanently inundated by sea level rise and 16% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 18% of the area would be permanently inundated and 27% would be subject to periodic flooding during storm events. Under the worst case scenario, 34% of the area would be permanently inundated and 56% would be subject to periodic flooding.



Diekmann's Bay Store

Permanent inundation of all or a portion of commercial properties would result in the loss of commercial land area to bay waters.

COM-1 and COM-4. Permanent inundation from sea level rise would result in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to the commercial building and parking area, decreasing the buffer between them, which could result in inundation of the building and parking area.

COM-2 and COM-3. Permanent inundation from sea level rise would result in: (1) partial loss of access to the commercial building and parking area; (2) loss of property frontage, hence the size of the useable area; and (3) the bay being closer to the commercial building and parking area, decreasing the buffer between them., which could result in inundation of the building and parking area.

Table 13. Highway 1 Area: Commercial Assets – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	COM-1 0.50 acres		COM-2 0.19 acres		COM-3 3.56 acres		COM-4 1.21 acres		COM-5 5.43 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	2%	< 1%*	----	----	< 1%	3%	2%	5%	----	----
2 - 2030	0.83	25	20-year	5%	9%	----	11%	2%	9%	5%	16%	----	----
3 - 2050	1.67	50	20-year	7%	10%	5%	42%	5%	12%	10%	19%	----	----
4 – 2100 Best Case	3.33	100	100-year	10%	14%	39%	73%	12%	66%	18%	27%	----	----
5 – 2100 Worst Case	6.56	200	100-year	9%**	19%	70%	91%	69%	84%	34%	56%	----	----

* Unknown why a decrease in % area affected with a storm event

** Decrease in permanent inundation under an increase in sea level rise is likely due to a small circulation change that occurs as a result of the higher sea-level and its interaction with flood water (Maya Hayden, Point Blue Conservation Science, personal communication, 201

Private Recreation

Owned and operated by the Bodega Harbour HOA, the Bodega Harbour Yacht Club is the only Private Recreation asset in the Highway 1 Area (PRIV-1 on **Figure 9a**). Situated on the bay off Smith Brothers Road, the Bodega Harbour Yacht Club is a two-story hall with kitchen available for rent.

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of the Bodega Harbour Yacht Club. **Table 14** shows the projected percent area of the property permanently inundated by sea level rise and with storm event flooding. **Figure 9b** illustrates the projected permanent inundation, and **Figure 9c** illustrates the projected permanent inundation with storm event flooding of the Bodega Harbour Yacht Club property under Scenario 5 (2100 Sea Level Rise Worst Case).

The Bodega Harbour Yacht Club is projected to be at risk of permanent inundation from sea level rise by 2100. In 2030 8% of the site would be permanently inundated by sea level rise and 34% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 13% of the site would be permanently inundated and 49% would be subject to periodic flooding during storm events. Under the worst case scenario, 48% of the site would be permanently inundated and 60% would be subject to periodic flooding.



Bodega Harbour Yacht Club

While inundation and flooding would not prevent access to the Bodega Harbour Yacht Club property at the entrance off Smith Brothers Road, it would impact building ingress (and egress) and most if not all of the parking lot. Impacts on access to the Bodega Harbour Yacht Club would decrease private recreational opportunities and the number of private facilities available for social gatherings in Bodega Bay, and would decrease revenue for the Bodega Harbour Homeowners' Association.

Table 14. Highway 1 Area: Bodega Harbour Yacht Club– Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>Bodega Harbour Yacht Club PRIV-1 0.48 acres</i>	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	4%	< 1%
2 - 2030	0.83	25	20-year	8%	34%
3 - 2050	1.67	50	20-year	13%	49%
4 – 2100 Best Case	3.33	100	100-year	48%	60%
5 – 2100 Worst Case	6.56	200	100-year	51%	73%

Residential

The Highway 1 Area contains two urban residential and three resources and rural development areas along the east side of Bodega Bay exposed to sea level rise and storm events (UR-1 to UR-2 and RRD-1 to RRD-3 on **Figure 9a**). **Table 15** shows the number of developed and vacant lots and number of dwelling units which comprise these residential areas.

Table 15. Highway 1 Area: Residential Assets – Lots and Dwelling Units

Asset	Lots	Vacant Lots	Dwelling Units
UR-1	3	0	3
UR-2	13	2	12
RRD-1	2	1	1
RRD-2	2	0	3
RRD-3	1	0	1

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of these residential areas. **Table 16** shows the projected percent area permanently inundated by sea level rise and with storm event flooding. **Figure 9b** illustrates the projected permanent inundation, and **Figure 9c** illustrates the projected permanent inundation with storm event flooding of the areas under Scenario 5 (2100 Sea Level Rise Worst Case).

All of these residential areas are projected to be at risk of inundation from sea level rise by 2100.

UR-1. In 2030 less than 1% of the area would be permanently inundated by sea level rise and subject to periodic flooding during storm events. In 2100 under the best case scenario, 28% of the area would be permanently inundated and 31% would be subject to periodic flooding during storm events. Under the worst case scenario, 17% of the area would be permanently inundated and 42% would be subject to periodic flooding.

UR-2. In 2030 5% of the area would be permanently inundated by sea level rise and 9% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 11% of the area would be permanently inundated and 15% would be subject to periodic flooding during storm events. Under the worst case scenario, 13% of the area would be permanently inundated and 21% would be subject to periodic flooding.

RRD-1. In 2030 4% of the area would be permanently inundated by sea level rise and 10% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 13% of the area would be permanently inundated and 17% would be subject to periodic flooding during storm events. Under the worst case scenario, 19% of the area would be permanently inundated and 32% would be subject to periodic flooding.



UR-2

RRD-2. In 2030 7% of the area would be permanently inundated by sea level rise and 11% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 14% of the area would be permanently inundated and 20% would be subject to periodic flooding during storm events. Under the worst case scenario, 22% of the area would be permanently inundated and 30% would be subject to periodic flooding.

RRD-3. In 2030 the area would not be permanently inundated by sea level rise and 12% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 14% of the area would be permanently inundated and 16% would be subject to periodic flooding during storm events. Under the worst case scenario, 17% of the area would be permanently inundated and 24% would be subject to periodic flooding.

Permanent inundation of all or a portion of these residential properties would result in the loss of residential land area to bay waters.

UR-1. Permanent inundation from sea level rise would affect one property, resulting in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to the property and residence, decreasing the buffer between them, which could result in inundation of the residence.

UR-2. Permanent inundation from sea level rise would affect six developed properties, resulting in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to the properties and residences, decreasing the buffer between them, which could result in inundation of six residences. Permanent inundation of the two vacant properties would result in loss of property frontage, hence the size of the useable area.

RRD-1. Permanent inundation from sea level rise would affect two properties, resulting in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to the residences, which could result in inundation of one residence.

RRD-2. Permanent inundation from sea level rise would affect two properties, resulting in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to the two duplexes, which could result in inundation of the duplexes.

RRD-3. Permanent inundation from sea level rise would affect one property, resulting in: (1) loss of property frontage, hence the size of the useable area; and (2) the bay being closer to the residence, which could result in inundation of the residence.

Table 16. Highway 1 Area: Residential Assets – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>UR-1</i> 0.46 acres		<i>UR-2</i> 1.47 acres		<i>RRD-1</i> 0.5 acres		<i>RRD-2</i> 0.10 acres		<i>RRD-3</i> 0.07 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----	2%	2%	< 1%	3%	4%	3%	----	----
2 - 2030	0.83	25	20-year	< 1%	< 1%	5%	9%	4%	10%	7%	11%	----	12%
3 - 2050	1.67	50	20-year	< 1%	28%	7%	11%	6%	13%	8%	14%	6%	14%
4 – 2100 Best Case	3.33	100	100-year	28%	31%	11%	15%	13%	17%	14%	20%	14%	16%
5 – 2100 Worst Case	6.56	200	100-year	17%*	42%	13%	21%	19%	32%	22%	30%	17%	24%

* Decrease in permanent inundation under an increase in sea level rise is likely due to a small circulation change that occurs as a result of the higher sea-level and its interaction with flood water (Maya Hayden, Point Blue Conservation Science, personal communication, 2017)

Summary – Highway 1 Area

Potential Impacts

Table 17 summarizes the projected percent of Highway 1 Area assets permanently inundated by sea level rise in 2100 under the best and worst case scenarios.

By 2100 under the worst case scenario, permanent inundation from sea level rise would affect 9% to 70% of commercial areas, 51% of the Bodega Harbour Yacht Club, 13% to 22% of residential areas, and 2% of a public access and recreation area (Dredge Spoil Disposal Ponds Site).

Table 17. Highway 1 Area: Summary of Projected Percent Area of Assets Permanently Inundated by Sea Level Rise by 2100

Asset	Best Case Scenario	Worst Case Scenario
Coastal Wetlands		
FWMARSH-1	----	----
FWMARSH-2	----	----
FWMARSH-3	----	----
Public Access and Recreation		
Dredge Spoil Disposal Ponds Site	2%	2%
County Regional Parks Trails	N/A	N/A
California Coastal Trail	N/A	N/A
Public Utility		
Bodega Bay PUD Wastewater Treatment Plant	----	----
Commercial		
COM-1	10%	9%
COM-2	39%	70%
COM-3	12%	69%
COM-4	18%	34%
Private Recreation		

Asset	Best Case Scenario	Worst Case Scenario
Bodega Harbour Yacht Club	48%	51%
Residential		
UR-1	28%	17%
UR-2	11%	13%
RRD-1	13%	19%
RRD-2	14%	22%
RRD-3	14%	17%

Potential Adaptation Strategies

Possible adaptation strategies for the Highway 1 Area are accommodate and retreat. Accommodate strategies employ methods that modify existing development to decrease hazard risks and increase resiliency. Because most of the residential and commercial structures have been built on piling, maintenance of these pilings will be necessary as wave and tidal scours undermine footings over time. Some buildings may need to be incrementally relocated and in-water structures removed. Relocation of the wastewater treatment plant would have to comply with Coastal Act policy (Section 30231) to minimize adverse effects of wastewater discharges and entrainment.

Highway 1 Area adaptation priorities include: (1) potentially accommodate sea level rise through redevelopment and maintenance strategies, (2) protect or increase adaptive capacity of shoreline roads and trail access, and (3) consider relocating the wastewater treatment plant.

7.3 County Regional Parks Area

The County Regional Parks Area is the west and south bay, encompassing the area from Westside Regional Park south to the tip of Sonoma Coast State Park, east across Bodega Harbor, across Doran Beach Regional Park, to where it meets the Highway 1 Area at the western edge of the Bodega Harbour Subdivision and Golf Course. The County Regional Parks Area includes all of the Institutional and most of the Public Access & Recreation (County Regional Parks) assets in Bodega Bay. Additional County Regional Parks Area assets include Private Recreation, Trails, and Coastal Wetlands. **Figure 10a** shows the location of and number assigned to each asset.

The assets most vulnerable to sea level rise and storm events in the County Regional Parks Area are Westshore Road, Westside Regional Park, and Doran Beach Regional Park.

Westshore Road is a critical north-south access route that originates in the north harbor and terminates at the Bodega Head trailhead. Sea level rise inundation would substantially affect access to and along Westshore Road. West Bodega Harbor residents and U.C. Davis Bodega Marine Laboratory personnel depend on Westshore Road for access to homes and research facilities/employment. County residents and tourists depend on Westshore Road for access to Westside Regional Park. Potential adaptation measures include relocation of the road alignment or elevating the road.

Westside and Doran Beach Regional Parks combined provide recreational and commercial boat



Doran Beach

launches, campsites, day use areas, picnic areas, and parking. Sea level rise inundation would affect almost the entire Westside Regional Park and almost 40 percent of Doran Beach Regional Park. Parkland and facilities would be lost or damaged, substantially reducing the available recreational opportunities and the Bodega Bay tourism economy.

Bodega Harbor's inlet is a 100-foot wide channel protected by two rubble mounded jetties built by the U.S. Army Corps of Engineers in 1943. The north jetty is 1,130 feet long, and the south jetty is 1,650 feet long. The north jetty is perpendicular to Doran Beach on the

bay side. It may disrupt shoreline currents by reflecting wave energy back towards the beach, exacerbating sand loss between the north jetty and the beach. Sea level rise will increase the frequency of waves overtopping the jetties, which can erode and weaken the structures.

Doran Beach is a two-mile long dune spit that separates Bodega Harbor from Bodega Bay. Its high sand dunes protect the inner harbor by absorbing wave energy. Normally dunes migrate inland on uninhabited shoreline. However, water surrounds Doran Beach on both sides, increasing erosion potential and reducing the habitat's resiliency to exposure. Sea level rise increases wave height and volume, which would accelerate erosion of these protective dunes.

The sections below provide information on the percentage area of each asset that would be inundated or flooded as a result of sea level rise and storm events and potential impacts.

Coastal Wetlands

The County Regional Parks Area contains three types of coastal wetlands exposed to sea level rise and storm events: (1) Coastal Freshwater Marsh, Coastal Brackish Marsh, and (3) Bodega Harbor Tidal Mudflat.

Coastal Freshwater Marsh

Coastal Freshwater Marsh occurs in three locations: (1) west of Westside Regional Park (FWMARSH-1 on **Figure 10a**); (2) south of Westside Regional Park, west of Westshore Road (FWMARSH-2); and (3) south of FWMARSH-2 (FWMARSH-3).

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Coastal Freshwater Marsh. **Table 18** shows the projected percent of marsh area permanently inundated by sea level rise and with storm event flooding. **Figure 10b** illustrates the projected permanent inundation, and **Figure 10c** illustrates the projected permanent inundation with storm event flooding of Coastal Freshwater Marsh under Scenario 5 (2100 Sea Level Rise Worst Case).

FWMARSH-1 and FWMARSH-2 are projected to be at risk of permanent inundation from sea level rise by 2100.

FWMARSH-1. In 2030 the marsh would not be permanently inundated by sea level rise or subject to periodic flooding during storm events. In 2100 under the best case scenario, less than 1% of the marsh would be permanently inundated and 3% would be subject to periodic flooding during storm events. Under the worst case scenario, 35% of the marsh would be permanently inundated and 76% would be subject to periodic flooding.

FWMARSH-2. In 2030 and in 2100 under the best case scenario, the marsh would not be permanently inundated by sea level rise or subject to periodic flooding during storm events. Under the worst case scenario, 20% of the marsh would be permanently inundated and 37% would be subject to periodic flooding.

Table 18. County Regional Parks Area: Coastal Freshwater Marsh – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	FWMARSH-1 42.26 acres		FWMARSH-2 8.74 acres		FWMARSH-3 1.1 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----	----	----	----	----
2 - 2030	0.83	25	20-year	----	----	----	----	----	----
3 - 2050	1.67	50	20-year	----	<1%	----	----	----	----
4 – 2100 Best Case	3.33	100	100-year	<1%	3%	----	----	----	----
5 – 2100 Worst Case	6.56	200	100-year	35%	76%	20%	37%	----	----

Coastal Brackish Marsh

Coastal Brackish Marsh occurs in both the Highway 1 and County Regional Parks Areas, but mainly in the County Regional Parks Area, at the following location: north and south of the Dredge Spoil Disposal Ponds Site and south of the Bodega Bay PUD Wastewater Treatment Plant; west of the Bodega Harbour Subdivision and within and west of the Links at Bodega Harbour Golf Course; and along the northern boundary of Doran Beach Regional Park (BRMARSH-1 on **Figure 10a**).

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Coastal Brackish Marsh. **Table 19** shows the projected percent of marsh area permanently inundated by sea level rise and with storm event flooding. **Figure 10b** illustrates the projected permanent inundation, and **Figure 10c** illustrates the projected permanent inundation with storm event flooding of Coastal Brackish Marsh under Scenario 5 (2100 Sea Level Rise Worst Case).

BRMARSH-1 is currently at risk of permanent inundation from sea level rise. In 2030 32% of the marsh would be permanently inundated by sea level rise and 70% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, less than 72% of the marsh would be permanently inundated and 74% would be subject to periodic flooding during storm events. Under the worst case scenario, 73% of the marsh would be permanently inundated and 78% would be subject to periodic flooding.

See Coastal Freshwater Marsh – Inundation and Flood Impacts under the Bodega Harbor Area.

Table 19. County Regional Parks Area: Coastal Brackish Marsh – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>BRMARSH-1</i> 69.56 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	21%	32%
2 - 2030	0.83	25	20-year	32%	70%
3 - 2050	1.67	50	20-year	61%	71%
4 – 2100 Best Case	3.33	100	100-year	72%	74%
5 – 2100 Worst Case	6.56	200	100-year	73%	78%

Bodega Harbor Tidal Mudflat

Bodega Harbor Tidal Mudflat occurs in both the Highway 1 and County Regional Parks Areas, but mainly in the County Regional Parks Area in four locations: (1) along the west side of Bodega Bay, west of the main bay channel, from Westside Regional Park south to the first turnout off Westshore north of the access to Bodega Head (134.48 acres; TIDFLT-1 on **Figure 10a**); (2) east of the main bay channel, along and north of Doran Beach Regional Park, and west of the Dredge Spoil Disposal Ponds Site and COM-5 (278.70 acres; TIDFLT-2); (3) east of the Bodega Head turnout and parking area along Campbell Cove State Beach (5.57 acres; TIDFLAT-3); and (4) west of the Links at Bodega Harbour Golf Course north of Doran Beach Road (6.42 acres; TIDFLAT-4).

Potential Inundation and Flood Impacts

Data on projected permanent inundation and storm event flooding of Bodega Harbor Tidal Mudflat is not available.

See Bodega Harbor Tidal Mudflat - Potential Inundation and Flood Impacts under the Bodega Harbor Area.

Public Access & Recreation – Parks and Trails

County Regional Parks

The County Regional Parks Area contains the only Sonoma County Regional Parks in Bodega Bay – Westside Regional Park (PUBACC-1 on **Figure 10a**) and Doran Beach Regional Park (PUBACC-2).

Westside Regional Park. Westside Regional Park features campsites and boat launch facilities. Amenities include 47 RV and tent campsites, 76 boat trailer and 31 day use parking spaces, three boat and kayak launch lanes, docks and gangway, fish-cleaning and boat rinsing stations, day use picnic area, and RV dump station.

Doran Beach Regional Park. Doran Beach Regional Park has a wide, 2-mile stretch of beach on Bodega Bay and is ideal for walking, picnicking, playing in the sand, flying kites, surfing, and bird-watching. Over 120 tent and RV campsites are available. A boat launch provides access to Bodega Harbor for sport fishing, kayaking, stand-up paddling, and kite surfing. A jetty at the harbor mouth is a popular spot for rock fishing and exploring sea life.



Doran Beach Regional Park

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Westside Regional Park and Doran Beach Regional Park. The Regional Parks assets analyzed comprise landside facilities only and do not include piers or docks. **Table 20** shows the projected percent area of the Regional Parks permanently inundated by sea level rise and with storm event flooding.

Figure 10c illustrates the projected permanent inundation, and **Figure 10b** illustrates the projected permanent inundation with storm event flooding of the Regional Parks under Scenario 5 (2100 Sea Level Rise Worst Case).

Westside Regional Park is projected to be more at risk than Doran Regional Park of permanent inundation from sea level rise by 2100.

Westside Regional Park. In 2030 the park would not be permanently inundated by sea level rise or subject to periodic flooding during storm events. In 2100 under the best case scenario, less than 1% of the park would be permanently inundated and 83% would be subject to periodic flooding during storm events. Under the worst case scenario, 98% of the park would be permanently inundated and 100% would be subject to periodic flooding. Permanent inundation would affect almost the entire park, resulting in the loss of recreational land area and many Bodega Bay recreational amenities, including RV and tent campsites and parking. The loss of these recreational amenities would result in a decrease in tourism to Bodega Bay and the loss of tourist revenue.

Doran Beach Regional Park. In 2030 7% of the area would be permanently inundated by sea level rise and 17% would be subject to periodic flooding during storm events. In 2100 under the best case scenario, 19% of the area would be permanently inundated and 35% would be subject to periodic flooding during storm events. Under the worst case scenario, 36% of the area would be permanently inundated and 75% would be subject to periodic flooding. Permanent inundation of the park would result in loss of the following recreational amenities: (1) entire Doran Beach, (2) Jetty Day Use Area, (3) Miwok Tent Campground, and (4) Boat Launch & Parking.



Doran Beach Regional Park – Jetty Campground



Westside Regional Park

Table 20. County Regional Parks Area: Regional Parks – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>Westside Regional Park (PUBBACC-1)</i> 12.54 acres		<i>Doran Beach Regional Park (PUBACC-2)</i> 102.51 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----	< 1%	8%
2 - 2030	0.83	25	20-year	----	----	7%	17%
3 - 2050	1.67	50	20-year	----	2%	12%	20%
4 – 2100 Best Case	3.33	100	100-year	< 1%	83%	19%	35%
5 – 2100 Worst Case	6.56	200	100-year	98%	100%	36%	75%

Permanent inundation would also affect a portion of, or bring sea level closer to, the following facilities, decreasing their buffer from sea level rise: (1) Jetty Campground; (2) Cove, Gull, and Shell Campgrounds; (3) Cypress Day Use Area; and (4) day use parking areas. It would also render eastern and western segments of Doran Beach Road permanently impassible. The above impacts of temporary flooding and permanent inundation could result in temporary or permanent closure of Doran Beach Regional Park. Temporary or permanent closure of the park

would result in loss of a significant recreational opportunity in Bodega Bay, and a decrease in tourism and loss of tourist revenue.

Trails

The County Regional Parks Area includes sections of four segments of the California Coastal Trail: (1) an Existing Coastal Trail segment at the Cheney Creek Trail (0.2 miles, 1,261 feet), (2) an Existing Coastal Trail along Doran Beach Regional Park Beach (1.8 miles, 9,504 feet), (3) an Existing Coastal Trail segment on the coast south of Doran Beach Regional Park Beach (0.8 miles, 4,475 feet), and (4) a Future Coastal Trail segment from Doran Beach Regional Park to Sonoma Coast State Beach (1.1 miles, 5,987 feet). **Figure 6** shows the locations of Coastal Trail segments.

Potential Inundation and Flood Impacts

Sea level rise and storm events may result in inundation and would result in flooding of the County Coastal Trail segments. **Figure 10b** illustrates the projected permanent inundation, and **Figure 10c** illustrates the projected permanent inundation with storm event flooding in the area of the trails under Scenario 5 (2100 Sea Level Rise Worst Case).

Periodic flooding during storm events of an Existing Coastal Trail segment would result in trail damage and disrepair and require temporary closure or routing to an alternative trail section during trail repair or re-construction. Permanent inundation of an Existing Coastal Trail segment would require relocation of the trail section. The level of difficulty in relocating an Existing Coastal Trail segment would depend on the sources of funding and the specific terms of easements with private property owners.

County Roads

The County Regional Parks Area includes two County Roads exposed to sea level rise and storm events – Doran Beach Road and Westshore Road.

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of Doran Beach and Westshore Roads. **Table 21** shows the projected percent of road alignment permanently inundated by sea level rise and with storm event flooding. **Figure 10a** illustrates the projected permanent inundation, and **Figure 10b** illustrates the projected permanent inundation with storm event flooding of the roads under Scenario 5 (2100 Sea Level Rise Worst Case).

Westshore Road is projected to be more at risk than Doran Beach Road of permanent inundation from sea level rise by 2100.

Doran Beach Road. In 2030 the road would not be permanently inundated by sea level rise and 10% of the road would be subject to periodic flooding during storm events. In 2100 under

the best case scenario, 12% of the road would be permanently inundated and 25% would be subject to periodic flooding during storm events. Under the worst case scenario, 26% of the road would be permanently inundated and 68% would be subject to periodic flooding.

Westshore Road. In 2030 the road would not be permanently inundated by sea level rise or subject to periodic flooding during storm events. In 2100 under the best case scenario, 3% of the road would be permanently inundated and 18% would be subject to periodic flooding during storm events. Under the worst case scenario, 39% of the road would be permanently inundated and 90% would be subject to periodic flooding.

Table 21. County Regional Parks Area: County Roads – Inundation and Flood Projections (Percent of Alignment)

Scenario	Projected Sea Level Rise		Storm Event	<i>Doran Beach Road</i> 9,503.2 feet (1.80 miles)		<i>Westshore Road</i> 9,025.9 feet (1.71 miles)	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood	Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----	----	----
2 - 2030	0.83	25	20-year	----	10%	----	----
3 - 2050	1.67	50	20-year	7%	12%	----	5%
4 – 2100 Best Case	3.33	100	100-year	12%	25%	3%	18%
5 – 2100 Worst Case	6.56	200	100-year	26%	68%	39%	90%

See Potential Inundation and Flood Impacts under County Roads in the Bodega Harbor Area. In the County Regional Parks Area, permanent inundation of Westshore Road would affect access to and from Westside Regional Park and the U.C. Davis Marine Laboratory. Permanent inundation of Doran Beach Road would affect access to and from Doran Beach Regional Park.

Westshore Road

Institutional

The County Regional Parks Area includes the only Institutional asset in Bodega Bay – the U.C. Davis Bodega Marine Laboratory (INST-1 on **Figure 10a**). For nearly 50 years, the Bodega Marine Laboratory has provided hands-on training to students who have become leaders in the fields of marine science and policy. Faculty and researchers address a diverse array of basic and applied research problems. An Organized Research Unit of U.C. Davis, the Bodega Marine Laboratory is a specialized facility equipped with a meteorological and oceanographic observation network and long-term data set, Cadet Hand Library, teaching classrooms, wet labs, seawater system, greenhouses, dive training facility, facility-wide animal care and support, Bodega Marine Reserve, housing and conference facilities, and vessel fleet.

and

Sea
storm
result

U.C.



Potential Inundation Flood Impacts

level rise and
events would
in negligible
inundation and
flooding of the
Davis Bodega
Marine
Laboratory
property.

Table 22 shows the projected percent area of the property permanently inundated by sea level rise and with storm event flooding. **Figure 10b** illustrates the projected permanent inundation,

and **Figure 10c** illustrates the projected permanent inundation with storm event flooding of the Marine Laboratory property under Scenario 5 (2100 Sea Level Rise Worst Case).

Table 22. County Regional Parks Area: U.C. Davis Marine Laboratory Property – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise		Storm Event	<i>INST-1</i> 274.69 acres	
	feet	cm		Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	< 1%	< 1%
2 - 2030	0.83	25	20-year	< 1%	< 1%
3 - 2050	1.67	50	20-year	< 1%	< 1%
4 – 2100 Best Case	3.33	100	100-year	< 1%	< 1%
5 – 2100 Worst Case	6.56	200	100-year	< 1%	2%

In 2030 and 2100 under the best case scenario, less than 1% of the property would be permanently inundated by sea level rise and subject to periodic flooding during storm events. Under the worst case scenario, less than 1% of the property would be permanently inundated and 2% would be subject to periodic flooding. Under the 2100 worst case scenario, flooding would prevent access to the property entrance off Westshore Road and to Westshore Road itself. While inundation would not prevent access to the property right at the entrance, it would prevent access to Westshore Road, essentially preventing access to the property. If there is no access to the property, it may become necessary to close the facility. Closure of the U.C. Davis Marine Laboratory would result in the loss of a major marine science and policy training and research facility in California.

Private Recreation

The Links at Bodega Harbour Golf Course is the only Private Recreation asset in the County Regional Parks Area. This analysis addresses only the grounds of the Golf Course exposed to sea level rise and storm events (PRIV-1 on **Figure 10a**).

Potential Inundation and Flood Impacts

Sea level rise and storm events would result in inundation and flooding of the affected grounds of the Links at Bodega Harbour Golf Course. **Table 23** shows the projected percent area of the affected grounds permanently inundated by sea level rise and with storm event flooding. **Figure 10b** illustrates the projected permanent inundation, and **Figure 10c** illustrates the

projected permanent inundation with storm event flooding of the affected grounds under Scenario 5 (2100 Sea Level Rise Worst Case).

In 2030 the grounds would not be permanently inundated by sea level rise, and 6% of the grounds would be subject to periodic flooding during storm events. In 2100 under the best case scenario 9% of the grounds would be permanently inundated and 21% would be subject to periodic flooding during storm events. Under the worst case scenario, 23% of the grounds would be permanently inundated and 40% would be subject to periodic flooding.

Links at Bodega Harbour Golf Course



Table

**Parks
Links**

Golf

**23.
County
Regional
Area:
at
Bodega
Harbour
Course**

(affected grounds) – Inundation and Flood Projections (Percent Area)

Scenario	Projected Sea Level Rise	Storm Event	<i>PRIV-1</i> 19.07 acres

	feet	cm		Inundated by Sea Level	Plus Storm Event Flood
1 - 2016	0	0	annual	----	----
2 - 2030	0.83	25	20-year	----	6%
3 - 2050	1.67	50	20-year	----	15%
4 – 2100 Best Case	3.33	100	100-year	9%	21%
5 – 2100 Worst Case	6.56	200	100-year	23%	40%

Permanent inundation and periodic flooding would affect the grounds of three of 18 holes at the Links at Bodega Harbour Golf Course - those located south of Heron Drive and southwest of the Bodega Harbour Clubhouse. Periodic flooding could result in damage and disrepair to the grounds of three holes, which may result in temporary closure of the grounds while they are being repaired or reconstructed. Permanent inundation of the grounds of two holes could result in temporary closure of the grounds while they are being relocated and constructed, or in their permanent closure. Temporary or permanent closure of the grounds for up to three holes at the golf course could decrease tourist attraction to the golf course, hence could decrease revenue for the Bodega Harbour Homeowners' Association.

Summary – County Regional Parks Area

Potential Impacts

Table 24 summarizes the projected percent of County Regional Parks Area assets permanently inundated by sea level rise in 2100 under the best and worst case scenarios.

By 2100 under the worst case scenario, permanent inundation from sea level rise would affect 20% to 73% of coastal wetlands, almost 100% of Westside Regional Park and 36% of Doran Beach Regional Park, 26% to 39% of County Roads, 23% of the Links at Bodega Harbour Golf Course, and less than 1% of the U.C. Davis Bodega Marine Laboratory.

Table 24. Highway 1 Area: Summary of Projected Percent Area of Assets Permanently Inundated by Sea Level Rise by 2100

Asset	Best Case Scenario	Worst Case Scenario
Coastal Wetlands		
FWMARSH -1	<1%	35%
FWMARSH -2	----	20%
FWMARSH -3	----	----
BRMARSH-1	72%	73%
TIDFLT-1	N/A	N/A
TIDFLT-2	N/A	N/A
TIDFLT-3	N/A	N/A
TIDFLT-4	N/A	N/A
Public Access and Recreation		
Westside Regional Park	<1%	98%
Doran Beach Regional Park	19%	36%
California Coastal Trail	N/A	N/A
County Roads		
Doran Beach Road	12%	26%
Westshore Road	3%	39%
Institutional		

Asset	Best Case Scenario	Worst Case Scenario
U.C. Davis Bodega Marine Laboratory	<1%	<1%
Private Recreation		
Links at Bodega Harbour Golf Course	9%	23%

Potential Adaptation Strategies

Possible adaptation strategies for the County Regional Parks Area are accommodate and retreat. Accommodate strategies employ methods that modify existing development to decrease hazard risks and increase resiliency of the development. Sonoma County Regional Parks may consider moving the campgrounds and parking areas upland to a higher elevation. Potential adaptation strategies for Westshore Road are addressed under the Bodega Harbor Area.

County Regional Parks Area adaptation priorities include: (1) potentially accommodate sea level rise through redevelopment, (2) relocate facilities out of hazard areas, and (3) protect beaches through a sand enrichment program.

8. 5. ADAPTATION STRATEGIES

Introduction

As described in this Focused Vulnerability Assessment, Bodega Bay faces a number of threats from a rising sea and bay. Sea level rise exacerbates existing climate-related hazards such as an increased number of flooding incidents, increased ocean acidification, or bluff erosion and failure. The previous sections of this assessment identify the assets and resources of Bodega Bay vulnerable to sea level rise and coastal storms; and in this section the County considers potential adaptation strategies to prepare for future changes in coastal hazards. Vulnerable assets and resources identified include development and infrastructure; public access and recreational opportunities; beaches, wetlands, and other environmentally sensitive habitat areas; scenic and visual resources; agricultural resources; and water quality.

As the County prepares for these changes, we must evaluate the feasibility of adaptation strategies necessary to protect public safety, health, and quality of life. Such strategies are still developing and evolving, so the County will have to evaluate whether the cost, legal, or permitting constraints for these strategies are manageable. The strategies we present below are not panaceas to protect, accommodate, or retreat the Sonoma County assets impacted by sea level rise. Rather, these strategies are meant to continue our discussion with the community about the suite of possibilities and constraints to consider for climate adaptation starting from the sea level rise adaptation workshop we held in November.

Legal Context for Sea Level Rise Adaptation

The California Coastal Act, the public trust doctrine, California Environmental Quality Act (CEQA), Coastal Zone Management Act, Clean Water Act, Porter Cologne Act, River and Harbors Act, constitutional protections for property, and other laws provide the context for evaluation of appropriate adaptation measures for Bodega Bay. Section 30235 of the Coastal Act states:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply...

Section 30253(b) requires new development to avoid risk and prohibits new development from in any way requiring the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. The Coastal Commission guidance suggests rezoning hazard areas as open space; and anticipating that sea level rise will impact new development, assuring that critical infrastructure will be safe from inundation.

Some of the adaptation strategies may involve the adoption of Local Coastal Plan policies and programs, changes to zoning and building codes, or permit conditions that focus on avoidance and minimization of risks and protection of coastal resources. Other adaptation strategies could

build adaptive capacity into projects themselves, thus addressing future changes in hazard risks while ensuring long-term resource protection.

General Adaptation Categories

Adaptation strategies for vulnerable resources or assets fall into three broad categories: protect, accommodate, and retreat. These strategies are reciprocal, and one strategy does not preclude using another later in time. For purposes of implementing the Coastal Act, no single category or specific strategy should be considered the “best” option (California Coastal Commission 2015). Sea Level Rise planning for Bodega Bay includes strategies from multiple adaptation categories, and may be modified over time as science and engineering evolve. Some adaptation strategies may have legal or procedural constraints. For example, in order to construct and maintain coastal armoring, the County would need to work closely with various regional, state, and federal permitting agencies to meet design standards, both for the structures themselves and the adjacent shoreline environment. Adaptive responses will also need to be consistent with the Coastal Act, California Environmental Quality Act, and outside agency permit conditions.

The following paragraphs describe each adaptation strategy and potential areas for implementation in the Bodega Bay community.

Strategies to Protect Assets

Protection strategies generally employ some sort of engineered structure or other measure to defend development or other resources from sea level rise while allowing the resource or asset to remain in its current location. There are two main types of protection strategies: hard and soft defensive measures or armoring. Hard armoring refers to engineered structures such as seawalls, revetments, and bulkheads that defend against coastal hazards such as wave impacts, erosion, and flooding. Armoring is a common response to coastal hazards, but it can result in serious negative impacts to coastal resources, particularly as sea level rises (California Coastal Commission 2015). Soft armoring refers to the use of natural or green infrastructure like beaches, dune systems, wetlands, and other natural systems to buffer coastal areas.

Hard armoring is common along the harbor in Bodega Bay - large rock boulders protect Westshore Road substructure and pavement from tidal erosion and storm surges. The Bodega Harbor Jetty is a rubble mound jetty seawall and another example of a hard protection strategy. Hard structures have an ecological cost since they form barriers that impede the ability of natural beaches and habitats to migrate inland over time. If they are unable to move inland, public recreational beaches, wetlands, and other habitats will be lost as sea level continues to rise. Passive erosion is the narrowing of beaches because the back of the beach on an eroding shoreline is fixed in place (Flick et al. 2012). In Bodega Bay, this occurs on the harbor side of Doran Beach where the back of the beach is lined with large rock boulders. Other detrimental impacts of hard armoring may include negative visual impacts or interference with other ecosystem services (California Coastal Commission 2015).

Soft armor buffering strategies like using wetlands, beach nourishment, dune management or the construction of living shorelines capitalize on the natural ability of these systems to protect coastlines. At the same time, these strategies provide benefits such as habitat enhancement,

recreational areas, more pleasing views, and the continuation or enhancement of ecosystem services. The engineering of green infrastructure is a somewhat newer concept, and because of this the effectiveness of some of these strategy types is not well known or tested. In cases where soft armor strategies might not be completely effective or preferred, a hybrid approach using both hard and soft armoring could be considered. A potential adaptation strategy for Doran Beach would be beach nourishment.

Although the Coastal Act provides for potential protection strategies for existing development, it requires adaptive capacity in new development to prevent altering a natural shoreline (California Coastal Commission 2015). The Coastal Commission recommends prioritizing “hard” or “soft” protection options that enhance and maximize coastal resources and access. Innovative nature-based approaches such as living shoreline techniques or managed/planned retreat should be considered in Sonoma County.

Strategies to Accommodate Sea Level Rise

Accommodation strategies employ methods that design or modify developments to decrease hazard risks and thus increase the resiliency of developments to the impacts of sea level rise. Accommodation strategies include actions such as elevating structures, retrofits and/or the use of materials meant to increase the strength of development, building structures that can easily be moved and relocated, or using extra setbacks. Sonoma County Regional Parks’ Doran Beach and Westside Regional Parks boat launches use floating docks that will fall and rise with the tides and rising harbor water levels.

On a community scale, accommodation strategies could include zoning ordinances for redevelopment actions that will help support the resiliency of the built environment. For example, the County could create a combining district for vulnerable areas that would setback development from bluffs or beaches. Strategies to accommodate sea level rise seek to prevent exposure by clustering development in less vulnerable areas.

As with protection strategies, some accommodation strategies could result in negative impacts to coastal resources. For example, redevelopment such as elevating structures may block coastal views and degrade community character and beach ambience. Pile-supported structures could erode into a form of shoreline protection that interferes with coastal processes, blocks beach and trail access, and deters from the scenic character of the bay. Pile-supported structures that occur on the southside of Highway 1 will accommodate sea level rise, but may require reinforcing due to scour.

Strategies to Retreat from Sea Level Rise

Retreat strategies are those that relocate or remove existing development out of hazard areas and limit the construction of new development within vulnerable areas. These strategies include providing land use designations and zoning to encourage building in more resilient areas, or gradually removing and relocating existing development. Acquisition and buyout programs, transfer of development credits programs, and removal of structures (i.e., after reasonable amortization periods) are examples of strategies designed to encourage managed retreat.

Potential Adaption Strategies for Bodega Bay

In this section, the County cautiously applied the general adaptation categories defined above to vulnerable assets to help increase resilience to sea level rise. These potential strategies may change over time as science and engineering evolve. The County will refine these potential adaptation strategies during the development of Local Coastal Plan programs and policies for the diverse geography and conditions of the Sonoma Coast. For this focused vulnerability assessment, the adaptation strategies focus on Bodega Bay.

Sonoma County hosted a Sea Level Rise Adaptation Planning Workshop for the community of Bodega Bay on November 29, 2016 at the U. C. Davis Bodega Bay Marine Laboratory. The County provided members of the community with a presentation of the three broad categories of strategies for adaptation, along with examples of how and where different adaptation strategies might be used. County staff requested that the community consider implementation locations for adaptation measures by marking aerial photomaps of Bodega Bay. The County incorporated these suggestions into the adaptation strategies discussion for each Bodega Bay area below.

Bodega Harbor Area

Assets vulnerable to sea level rise and storms in the Bodega Harbor Area include: Westshore, Eastshore, and Bay Flat Roads; public and private marinas; residential development; and coastal habitats. Anticipated impacts include road substructure and pavement degradation, ditches clogged with excess sediment, and the possibility of saltwater contaminating private wells and coastal freshwater habitats.

Possible adaptation strategies for Bodega Harbor fall into the categories of retreat and protect. The retreat strategy includes avoiding new development, redeveloping vulnerable infrastructure, and removing damaged infrastructure in hazard areas. Protecting vulnerable road infrastructure in the near to mid-term is anticipated until a long-term relocation strategy has been determined. The measures below combine suggestions from the community and guidance from the Coastal Commission.

Land Use Adaptation Strategies

Bodega Harbor Area Priorities: Avoid new development within mapped hazard areas, protect or relocate shoreline roads and access, remove boats and infrastructure that may damage or degrade harbor water quality, and increase culvert and roadside ditch capacity.

Retreat:

- **Consider avoiding new development in hazardous areas:** avoid construction of new development in zones or overlay areas identified or designated as hazardous due to potential flooding and inundation.
- **Determine the feasibility of a “Transfer of Development Credit” program (TDC):** Restrict development in one area (“sending area”) and allow for the transfer of

development credits to another area more appropriate for intensive use (“receiving area”). Local Coastal Plans can establish policies to implement a TDC program to restrict development in areas vulnerable to sea level rise and allow for transfer of development credits to parcels with less vulnerability to hazards. A TDC program can encourage the relocation of development away from at-risk locations, and may be used in combination with a buy-out program.

- **Consider options for future removal when planning and designing new development:** Design options should not place an undue burden on future property owners or coastal resources. For new development in high hazard areas or resource-constrained areas, ensure that foundation designs or other aspects of the development will not preclude future incremental relocation or managed retreat. Certain foundation and building elements such as deep perimeter foundations may be difficult to remove in the future, thus alternative design options should be considered.
- **Consider developing a plan to remove or relocate structures that become threatened:** This measure would require authorization through a Coastal Development Permit for removal or relocation of new development vulnerable to wave action, erosion, or other hazards should it become threatened in the future.
- **Consider developing a plan to remove or relocate existing structures that become threatened:** This measure would require authorization through a Coastal Development Permit for removal or relocation of redevelopment subject to wave action, erosion, or other hazards should it become threatened in the future.
- **Consider developing a boat abatement program:** Sea level rise and coastal storms may result in the sinking, breaking apart, or washing ashore of boats abandoned in Bodega Harbor. This program would prevent abandoned, unregistered boats moored at Sonoma County Regional Parks and marinas from contaminating the harbor or damaging other infrastructure; and would include evaluating and enforcing anchorage rules.
- **Plan and design transportation systems to accommodate anticipated sea level rise impacts:** Ensure that transportation networks are designed to function even if the highest projected sea level rise occurs. Efforts to realign, retrofit, and/or protect infrastructure should be coordinated with Caltrans, local public works/transportation agencies, and coastal planning efforts. Individual transportation projects would be implemented through Coastal Development Permits.
- **Consider retrofitting existing transportation infrastructure as necessary:** In instances where relocation of existing transportation infrastructure is not an option, repair the damage and/or retrofit the existing structures to better withstand sea level rise impacts. For example, use stronger materials, elevate bridges or sections of roadway, and build larger or additional drainage systems to address flooding concerns.
- **Attempt to build redundancy into the transportation system:** Provide alternate routes, as possible, to allow for access to and along the coast for instances in which sections of roadways may become temporarily impassible as a result of coastal hazards.

Ensure that alternate route information is provided to residents and visitors to coastal areas.

Protect:

- **Evaluate locations for hard protection use only if allowable and if no feasible less damaging alternative exists:** “Hard” coastal protection is a broad term for most engineered features such as seawalls, revetments, cave fills, and bulkheads that block the landward retreat of the shoreline. In some cases, caissons and pilings may also be considered hard shoreline protective devices. Due to adverse effects on shoreline sand supply and beach area available for public use, such protective devices should be avoided where feasible. Under current law, shoreline protection for existing structures in danger from erosion may be allowed if coastal resource impacts are avoided or minimized and mitigated.
- **Potentially survey and determine feasibility of retaining existing shoreline protection:** Westshore Road, Highway 1, and Bayflat Road run along developed shoreline with no or limited alternate routes. The structural integrity of existing armoring along these roads should be determined, and potential long-term strategies for road resiliency to sea level rise should be considered.
- **Consider increasing capacity of stormwater infrastructure:** Actions to reduce impacts from higher water levels could include widening drainage ditches, improving carrying and storage capacity of tidally-influenced streams, installing larger pipes and culverts, adding pumps, converting culverts to bridges, creating retention and detention basins, and developing contingency plans for extreme storm events. Encouraging and supporting these types of efforts upstream may also be important.

Highway 1 Area

The assets vulnerable to sea level rise and storms in the Highway 1 Area include Highway 1, residential and commercial buildings on the harbor side of Highway 1, yacht club, wastewater treatment plant, Regional Parks and California Coastal Trails access, and environmentally sensitive habitat areas. Soldier pile walls and hard armoring reinforce the low-lying areas of Highway 1. Residential and commercial buildings on the harbor side of Highway 1 are more vulnerable to storm surges, kind tide inundation, and sea level rise. Some of the buildings have been elevated on wooden pilings, which require maintenance.

The adaptation strategies to consider for these assets are based on accommodate and retreat. Accommodate strategies employ methods that modify existing developments to decrease hazard risks and increase resiliency of the development. Because most of the residential and commercial structures have been built on pilings already, maintenance of these pilings will be necessary as wave and tidal scours undermine footings over time. Some buildings may need to be incrementally relocated and in-water structures removed. Relocation of the wastewater treatment plant would be required to follow Coastal Act policy (Section 30231) to minimize the adverse effects of wastewater discharges and entrainment.

Land Use Adaptation Strategies

Highway 1 Area Priorities: Potentially accommodate sea level rise through redevelopment and maintenance strategies, protect or increase adaptive capacity of shoreline roads and trail access, determine wastewater treatment plant resiliency.

Accommodate:

- **Consider revising setbacks for new development:** Ensure structures (especially wells and septic systems) are set back far enough inland from the beach or bluff edge such that they will not be endangered by erosion (including sea level rise induced erosion) over the life of the structure, without the use of a shoreline protective device. When used to address future risk, setbacks are normally defined by a measurable distance from an identifiable location such as a bluff edge, line of vegetation, dune crest, or roadway.
- **Examine non-conforming structure policies and definitions:** Consider developing policies and regulations to define development in the area between the sea and the first coastal roadway or other known hazard zones as non-conforming, in order to avoid perpetuating development that may become at risk.
- **Consider policies for the gradual phase out of uses in hazardous areas subject to future sea level rise:** Over time, sea level rise is going to create hazardous or harmful conditions that will make some uses unworkable. In some cases it will be difficult or not feasible to mitigate impacts of sea level rise. In these cases, the County will consider policies to phase out existing uses in high hazard or emerging nuisance areas over time. Consider the adoption of policies, including phase out times, for amortization of the uses. Until an amortization schedule is adopted, existing uses that become non-conforming will be allowed to remain for their economic life, but would not be allowed to be rebuilt.
- **Scrutinize redevelopment or upgrades to existing structures in at risk locations:** Use redevelopment policies or regulations to limit expansions, additions, or substantial renovations of existing structures in danger from erosion. Require removal of non-conforming portions of the existing structure, when possible, when a remodel or renovation is proposed.
- **Evaluate redevelopment of existing structures and encourage use of current standards.** Use Local Coastal Plans and CDPs to require that renovations meeting the threshold for redevelopment not be approved unless the entire structure meets the standards for new development, including but not limited to a waiver of right to protection. Specify that if any existing non-conforming elements are permitted to remain, those non-conforming elements are not subject to rights to protection pursuant to Coastal Act Section 30235. Consider limiting cumulative improvement or additions to existing structures:
- **Consider retrofitting existing transportation infrastructure as necessary:** In instances where relocation is not an option, repair damage and/or retrofit existing

structures to better withstand sea level rise impacts. For example, use stronger materials, elevate bridges or sections of roadways, and build larger or additional drainage systems to address flooding concerns.

- **Consider developing ecological buffer zones and/or increase the size of buffers:** Buffer zones are intended to protect sensitive habitats from the adverse impacts of development and human disturbance. An important aspect of buffers is that they are distinct ecologically from the habitat they are designed to protect. Local Coastal Plans can establish requirements for ecological buffers and provide guidance on how to establish or adjust these buffers to accommodate sea level rise. Coastal Permits should require buffers to be designed, where applicable, to provide “habitat migration corridors” that allow sensitive habitats and species to migrate inland or upland as sea level rises.
- **Carefully consider siting and design of wastewater disposal systems to avoid risks from sea level rise:** Wastewater treatment and disposal systems are particularly challenging in that they are often located in areas that will be impacted by sea level rise. Damage to these facilities could result in impacts to water quality or other coastal resources. New facilities should not be sited in hazardous areas. Existing facilities already located within hazardous areas should be modified to withstand worst-case scenario sea level rise impacts.
- **Encourage siting and design wastewater disposal systems to avoid risks from sea level rise:** Wastewater treatment and disposal systems are particularly challenging in that they are often located in areas that will be impacted by sea level rise. Ensure that these systems are not adversely affected by the impacts of sea level rise over the full life of the structure and ensure that damage to these facilities would not result in impacts to water quality or other coastal resources. Avoid locating new facilities in hazardous areas if possible. If complete avoidance is not possible, minimize elements of the system that are in hazardous areas (for example, locate the main facility on higher ground and only place pump stations in potentially hazardous areas), and design any facilities in hazardous areas to withstand worst-case scenario sea level rise impacts.
- **Evaluate water quality risks from wastewater treatment plants, septic systems, and ocean outfalls:** Consider conducting a feasibility study of wastewater treatment plant operations, berm stability, and emergency operations. Consider establishing a program to retrofit, decommission, relocate, or eliminate ocean outfalls and other wastewater infrastructure deemed at risk. Alternatives include modifications to outfall lines, the use of green infrastructure, and redesign of waste and stormwater systems.
- **Identify research and monitoring needs to more precisely understand local issues:** Research programs may be established to analyze the particular local challenges related to water quality and supply as a result of sea level rise. Opportunities for innovative solutions to these challenges should be identified.

Retreat:

- **Consider avoiding the expansion or perpetuation of existing structures in at-risk locations:** On an eroding shoreline, the seaward portions of an existing structure may become threatened as the setback or buffer zone between the structure and the mean high tide line or bluff edge is reduced due to erosion of the beach or bluff. When the seaward portion of the structure no longer meets the standards or setback that would be required for new development, it becomes a “non-conforming” structure for purposes of redevelopment policies and regulations. The following should be considered, as consistent with the Coastal Act, FEMA policies, and other relevant standards, to address existing non-conforming development to avoid the need for shoreline or bluff protective devices and associated impacts to coastal resources.
- **Consider retrofitting or relocating vertical accessways:** Consider options to retrofit existing accessways to reduce impacts from sea level rise. Such retrofits could include using different materials that can better withstand impacts, or re-orienting the layout or other features of accessways to lessen damage and other impacts. Also begin to plan for and identify triggers and options for relocating accessways over time as conditions change.
- **Evaluate the potential of retrofitting or relocating sections of the Coastal Trail:** Use boardwalks, bridges, and/or other design features to ensure continuity of the California Coastal Trail (Coastal Trail) in sections that are vulnerable to sea level rise hazards. Some sections may need to be relocated over time. A Local Coastal Plan could identify vulnerable sections of the Coastal Trail and establish a phased approach to relocate sections of the trail in such a way that is consistent with provisions of the Coastal Act and ensures that the Coastal Trail remains within sight, sound, or smell of the sea.
- **Determine the feasibility of establishing conservation easements or other development restrictions to protect habitat:** Establish a formalized program to identify, acquire, and manage areas appropriate for some form of conservation protection. Easements or other strategies may be used to limit or restrict development on portions of a lot parcel that are most vulnerable to sea level rise impacts. The program might develop standard agreements to be used for easements and identify the entities that could hold the easements. A conservation easement program could be established on a community wide basis through a Local Coastal Plan and implemented on a parcel by parcel basis through individual Coastal Permits.
- **Encourage open space protection as a component of new development located adjacent to coastal habitats:** The Local Coastal Plan can require permit conditions for new development in certain areas that buffers around natural resource areas be protected through a conservation easement, deed restrictions, or other comparable mechanism.
- **Identify opportunities for Regional Sediment Management:** Sediment supplies will be important for the long-term sustainability of many beaches and wetland areas. Strategies to maintain or restore natural sediment supplies and to coordinate sediment removal efforts with opportunities for reuse can provide multiple benefits to coastal ecosystems. See Strategy A.19c above for more detail on RSM programs.

County Regional Parks Area

The assets most vulnerable to sea level rise and storms are Westshore Road, Doran Beach, and Westside Regional Parks, and the inlet to Bodega Harbor. Sea level rise inundation would affect access to and along Westshore Road. Permanent sea level rise inundation would affect almost all of Westside Regional Park facilities including parking and campgrounds by 2100. Doran Beach Regional Park will have permanent inundation of up to 35 percent of the beach and campground by 2100.

The adaptation strategies to consider for these assets are accommodate and retreat. Accommodate strategies employ methods that modify existing developments to decrease hazard risks and increase resiliency of the development. Sonoma County Regional Parks may consider moving the campgrounds and parking areas higher upland. Potential adaptation strategies for Westshore Road have been discussed in the Bodega Harbor Area section.

Land Use Adaptation Strategies

County Regional Parks Area Priorities: Potentially accommodate sea level rise through redevelopment, relocate facilities out of hazard areas, and protect beaches through a sand enrichment program.

Accommodate:

- **Consider long-term hazards in site design for access sites and facilities to minimize impacts:** May include policies that encourage public access sites, segments of the CCT, and recreation and visitor-serving facilities to be sited and designed to avoid impacts from sea level rise, while maximizing public access and recreation opportunities. Examples of siting and design standards for development can be found in section A. Where facilities can be safely sited for the near term but future impacts are likely, require an adaptive management plan detailing steps for maintenance, retrofitting, and/or relocation.
- **Consider protecting existing Parks and Open Space adjacent to the coast:** Plan for future coastal recreational space and parkland by protecting open space adjacent to coastal habitats so that beaches and other habitats can migrate or so that there is open space available as parkland or other areas are lost.
- **Support research on impacts to recreation and public access:** Changes in sea level will affect wave conditions and sediment transport, but additional research is needed to understand how these changes will affect specific conditions for surfing and other recreation activities. While such research programs may be outside the scope of individual local jurisdictions, statements of support for the local issues that need to be addressed can help guide research agendas at the regional state or federal level. Or, such needs can serve to guide grant applications to undertake the needed projects within a jurisdiction. To the extent possible, add policies to promote research on sea

level rise impacts to recreational activities like surfing or other coastal recreational uses in the Local Coastal Plan jurisdiction.

Retreat:

- **Consider the feasibility of retrofit or relocate recreation and visitor-serving facilities:** Consider options to retrofit existing recreation and visitor-serving facilities to better accommodate sea level rise impacts. Such retrofits could include use of different building materials and/or relocating facilities.

Protect:

- **Consider incorporating sea level rise into a comprehensive beach management strategy:** Potentially develop a new comprehensive beach management strategy to address loss of beach areas, including loss of lateral access, or changes in beach management due to sea level rise. Establish a program to minimize loss of beach area through, as may be appropriate, a beach nourishment program; restoring sand and sediment supply to the littoral cell; removal, adjustments, or maintenance to shoreline protection structures; use of man-made structures such as terminal groins or artificial reefs to retain sediment; or other actions.
- **Determine the feasibility of establishing a beach nourishment program and protocols:** The County may need to develop new policies to address the need for beach nourishment with sea level rise. Policies within a Local Coastal Plan may identify locations where nourishment may be appropriate or ecologically feasible. Beach nourishment programs should also consider how nourishment options may need to change over time as sea level rises.
- **Determine the feasibility of establishing management actions to maintain and restore dunes and natural dune processes.** Dunes provide buffers against erosion and flooding by trapping windblown sand, storing excess beach sand, and protecting inland areas, and they provide habitat. Doran Beach is a sand spit with dune habitat that provides wind protection to the inner Harbor, and is a sensitive ecosystem. The County would have to determine the ecological feasibility of this adaptation strategy. This is likely most effective for areas with some existing dune habitat and where there is sufficient space to expand a foredune beach for sand exchange between the more active (beach) and stable (dune) parts of the ecosystem. This strategy requires incremental amounts of sand due to increased erosion from sea level rise.

9. 6. BIBLIOGRAPHY AND REFERENCES

Cahoon, Donald, United States Geological Survey (USGS). 2010. *Sea Level Rise Impacts on Salt Marsh Processes in the Northeast Region*. Proceedings from the Sea Level Rise and Salt Marsh Restoration Workshop, NOAA Restoration Center, Gloucester MA, September 14, 2010. 48 pp.

California Coastal Commission. August 2015. *California Coastal Commission Sea Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits*. 293 pp incl Appendices.

County of Marin. September 2015. *Draft Marin Ocean Coast Sea Level Rise Vulnerability Assessment*. Prepared by Community Development Agency and Sea-Level Marin Adaptation Response Team. 292 pp incl Appendices.

County of Sonoma. June 10, 2016. *General Vulnerability Assessment*. Prepared by Permit Sonoma for Ocean Protection Council (OPC) under OPC Sea Level Rise Adaptation Planning Grant CO300500. 11 pp.

County of Sonoma, Regional Parks Department. January 14, 2013. *Staff Report - Bodega Bay Opportunities: Business Improvement Proposal and Potential Long-Term Strategies*. 13 pp.

Flick E.R., K. Knuuti, and S.K. Gill. 2012. *Matching Mean Sea Level Rise Projections to Local Elevation Datums*. J. Waterway, Port, Coastal, Ocean Eng. doi: 10.1061/(ASCE)WW.1943-5460.0000145.

Grifman, P.M., J.F. Hart, J. Ladwig, A.G. Newton-Mann, M. Schulhof. 2013. *Sea Level Rise Vulnerability Study for the City of Los Angeles*. Prepared by the University of Southern California Sea Grant Program, USCSG-TR-05-2013. 87pp + Appendices.

Griggs, G, J. Arvai, D. Cayan, R. DeConto, J. Fox, H.A. Fricker, R.E. Kopp, C. Tebaldi, E.A. Whiteman (California Ocean Protection Council Science Advisory Team Working Group). April 2017. *Rising Seas in California: An Update on Sea Level Rise Science*. California Ocean Science Trust.

Hartge, E., L. Wedding, J. Reiblich, W. McEnery. April 21, 2016. *Initial General Vulnerability Assessment: Sonoma County*. Center for Ocean Solutions. Prepared for County of Sonoma Permit & Resource Management Department under Ocean Protection Council (OPC) Sea Level Rise Adaptation Planning Grant CO300500. 12 pp.

Hartge, E., L. Wedding, J. Reiblich, D. Gourlie, M. Moritsch, W. McEnery. July 29, 2016. *Focused Vulnerability Assessment: Sonoma County*. Center for Ocean Solutions. Prepared for County of Sonoma Permit & Resource Management Department under Ocean Protection Council (OPC) Sea Level Rise Adaptation Planning Grant CO300500. 25 pp.

Herzog, Megan and Hecht Sean. 2013 *Combatting Sea Level Rise in Southern California: How Local Governments Can Seize Adaptation Opportunities While Minimizing Legal Risk*. Hastings West Northwest J. Environmental Law and Policy. 63 pages.

National Research Council (NRC). 2012. *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*. National Academies Press. 216 pp.

Norman, K., J. Sepez, H. Lazrus, N. Milne, C. Package, S. Russell, K. Grant, R.P. Lewis, J. Primo, E. Springer, M. Styles, B. Tilt, and I. Vaccaro. 2007. *Community profiles for West Coast and North Pacific fisheries – Washington, Oregon, California, and other U.S. states*. U.S. Department of Commerce, NOAA Technical Memo NMFS-NWFSC-85, 602 pp.

Pacific Fisheries Information Network (PacFIN) Bodega Bay commercial fisheries (From 1980-2017) data query dated April 20, 2017, Pacific States Marine Fisheries Commission, Portland, Oregon (www.psmfc.org).

Rasmussen, L., J. Largier, M. Carter. 2004. *Bodega Harbor Circulation Study Final Report*. Scripps Institution of Oceanography, University of California, San Diego. 67 pp.

Russell, N. and G. Griggs. 2012. *Adapting to Sea Level Rise: A Guide for California's Coastal Communities*. Prepared for the California Energy Commission Public Interest Environmental Research Program. 49 pp.

Thorne, K.M., B.D. Dugger, K.J. Buffington, C.M. Freeman, C.N. Janousek, K.W. Powelson, G.R. Gutenspergen, and J.Y. Takekawa. 2015. *Marshes to Mudflats - Effects of Sea Level Rise on Tidal Marshes along a Latitudinal Gradient in the Pacific Northwest*. U.S. Geological Survey Open-File Report 2015-1204, 54pp + Appendices.

Titus, J.G. July 1988. *Greenhouse Effect, Sea Level Rise and Coastal Wetlands*. U.S. Environmental Protection Agency, Office of Wetland Protection. 35 pp.

10. 7. GLOSSARY

Land Use Categories

Marine Industrial (MI). Land designated for or occupied by marine industrial development. The MI land use category encompasses land to accommodate a variety of commercial, light to medium industrial, and service uses which support the commercial fishing and other coastal dependent industries which depend on the marine environment and resources.

Rural Residential (RR). Land designated for very low density residential development (1 to 20 acres per dwelling unit) which has few if any public services but which has access to county maintained roads.

Urban Residential (UR). Land planned for public services for low and medium density residential development (1 to 6 dwelling units per acre) to accommodate a variety of housing and tenure types.

Resources and Rural Development (RRD). Land designated for very low density residential development and to protect lands needed for use and production of natural resources (e.g., water, timber, geothermal steam, or aggregate production); protect water resources and biotic habitats; and protect from intensive development lands constrained by geologic, flood, or fire hazards or other constraints.

Inundation and Flooding

Permanent Inundation. Permanently covered by water from sea level rise.

Temporary Flooding. Temporarily covered by flood water from storm events.

California Coastal Trail

Existing Coastal Trail. The trail has been constructed.

Proposed Coastal Trail. The approximate location of the trail alignment has been identified as described in the Public Access Plan of the Local Coastal Plan Update.

Future Coastal Trail. The trail alignment between two end points is unknown. In some cases, where the alignment has not been identified, the beginning and end points of the trail are shown and the future alignment is illustrated along State Highway 1.

Coastal Wetlands

Section 30122 of the 1976 California Coastal Act defines wetlands as lands within the coastal zone which may be covered periodically or permanently with shallow water and include

saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

**Sonoma County
Local Coastal Plan**

**APPENDIX H: 2010 SONOMA BICYCLE AND PEDESTRIAN PLAN –
COASTAL ZONE PROJECTS**



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

LIST OF PROJECTS – COASTAL ZONE

Route Segments	Project Area	Supervisorial District	Project Number	Bikeway	Begin Point	End Point	Miles	Cost / Mile	Cost Estimate	Notes	Priority
Bean Ave. – Ocean View Ave.	Coast	5	128	Class III	Ocean View Ave.	Sonoma Coast State Beach	0.23	\$5,000	\$1,000	Signs and striping only. Bodega Bay Trail segment B.	MEDIUM
Bodega Ave.	Coast	5	131	Class III	State Hwy. 1	Windy Lane	0.23	\$5,000	\$1,000	Signs and striping only. Bodega Bay Trail segment 3C-1	MEDIUM
Bodega Bay Trail	Coast	5	197E	Class I	Eastshore Rd.	Taylor St.	0.2	\$7,605,000	\$1,521,000	Cost estimate from Bodega Bay Trails Plan feasibility study. Bodega Bay Trail segments 3A, and 3B-1.	HIGH
Bodega Bay Trail	Coast	5	197B	Class I	Harbor View Dr.	State Hwy. 1	0.65	\$400,000	\$259,000	Switch-back section recommended by the Harbor View feasibility study. Bodega Bay Trail segment 3C-2	HIGH
Bodega Bay Trail	Coast	5	197F	Class I	Keefe Ave.	Bay Flat Rd.	1.43	\$400,000	\$572,000	Bodega Bay Trail segments 1B, 1C, and 2B	HIGH
Bodega Bay Trail	Coast	5	197G	Class I	Bay Flat Rd.	Smith Bros. Rd.	0.92	\$2,228,000	\$2,050,000	Cost estimate from Bodega Bay Trails Plan feasibility study. Bodega Bay Trail segments 3D-1 and 3D-2.	HIGH
Bodega Bay Trail	Coast	5	197C	Class I	Lucas Warf/ Smith Bros. Rd.	Doran Beach Rd.	0.66	\$400,000	\$266,000	Bodega Bay Trail segments 5B, 6B, and 6C.	HIGH
Bodega Bay Trail	Coast	5	197A	Class I	State Hwy. 1	Jetty Campground	1.78	\$400,000	\$713,000	Bodega Bay Trail segments I and J	MEDIUM
Coleman Valley Rd.	Coast	5	122	Class III	State Hwy. 1	Bohemian Hwy.	9.54	\$5,000	\$48,000	Signs and striping only.	MEDIUM
Fort Ross Rd.	Coast	5	123	Class III	State Hwy. 1	Cazadero Hwy.	10.59	\$5,000	\$53,000	Signs and striping only.	LOW
Gualala River Bridge Trail	Coast	4	204	Class I	Mendo. Co. Line	Mendo. Co. Line	0.3	\$400,000	\$119,000	Provides connection to Mendocino County via Class I across the Highway 1 Gualala River Bridge.	HIGH
Harbor View Dr.	Coast	5	134	Class III	Bodega Ave.	State Hwy. 1	0.25	\$5,000	\$1,000	Signs and striping only. Bodega Bay Trail segment 3C-2	MEDIUM
Keefe Ave.	Coast	5	130	Class III	Bodega Bay Trail (1B)	Ocean View Ave.	0.12	\$5,000	\$1,000	Signs and striping only. Bodega Bay Trail segment C. Connects Hwy 1 with segment 1B Class I.	MEDIUM
Kruse Ranch Rd.	Coast	5	126	Class III	Seaview Rd.	State Hwy. 1	3.65	\$5,000	\$18,000	Signs and striping only.	LOW
Meyers Grade Rd.	Coast	5	124	Class III	State Hwy. 1	Fort Ross Rd.	4.92	\$5,000	\$25,000	Signs and striping only.	LOW
Ocean View Ave.	Coast	5	129	Class III	Keefe Ave.	State Hwy. 1	0.12	\$ N/A	\$1,000	Connects segments B and C of the Bodega Bay Trail with Hwy 1.	MEDIUM
Smith Brothers Rd.	Coast	5	135	Class III	State Hwy. 1	State Hwy. 1	0.3	\$5,000	\$2,000	Signs and striping only. Bodega Bay Trail segment 5B.	MEDIUM
State Hwy. 1	Coast	5	4E	Class II	Slaughter House Rd.	Doran Beach Rd.	7.23	\$25,000	\$181,000	Adequate right-of-way for Class II. Signs, striping, brush removal, and minor improvements.	HIGH
State Hwy. 1	Coast	5	4F	Class II, Shoulders	Valley Ford Rd.	Slaughter House Rd.	1.49	\$750,000	\$1,119,000	Roadway must be widened and additional right-of-way acquired.	HIGH
State Hwy. 1	Coast	5	4D	Class II, Shoulders	Doran Beach Rd.	State Hwy. 116	11.04	\$750,000	\$8,278,000	Roadway must be widened and additional right-of-way acquired.	HIGH
State Hwy. 1	Coast	5	4G	Class II	Marin Co. Line	Valley Ford Rd.	1.52	\$25,000	\$38,000	Adequate right-of-way for Class II. Signs, striping, brush removal, and minor improvements.	MEDIUM
State Hwy. 1	Coast	5	4C	Class II, Shoulders, Class III	State Hwy. 116	Meyer's Grade Rd.	6.05	\$390,000	\$2,360,000	Class II in climbing lanes, Class III in descending lanes. Roadway must be widened and additional right-of-way acquired.	MEDIUM
State Hwy. 1	Coast	5	4A	Class II, Shoulders, Class III	Kruse Ranch Rd.	Gualala River Bridge	15.47	\$390,000	\$6,034,000	Class II in climbing lanes, Class III in descending lanes. Roadway must be widened and additional right-of-way acquired.	MEDIUM
State Hwy. 1	Coast	5	4B	Class III	Meyer's Grade Rd.	Kruse Ranch Rd.	16.12	\$5,000	\$81,000	Signs and striping only.	MEDIUM
State Hwy. 116	Russian River	5	1A	Class II	Moscow Road	State Hwy. 1	3.71	\$750,000	\$2,784,000	Roadway must be widened and additional right-of-way acquired. Regional Network.	
Taylor St.	Coast	5	132	Class III	State Hwy. 1	Bodega Ave.	0.04	\$ N/A	\$1,000	Signs and striping only. Bodega Bay Trail segment 3C-1.	MEDIUM

Windy Lane	Coast	5	133	Class III	State Hwy. 1	Bodega Ave.	0.06	\$	N/A	\$1,000	Signs and striping only. Bodega Bay Trail segment 3C-1.	MEDIUM

**Sonoma County
Local Coastal Plan**

APPENDIX J: HISTORIC RESOURCES INVENTORY



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Adopted by Resolution No. 23-0356
of the Sonoma County Board of Supervisors
July 17, 2023

This page intentionally left blank

APPENDIX J: HISTORIC RESOURCES INVENTORY

Feature	Location	Ownership	Description
Sea Ranch North			
Del Mar	West of Highway 1 in The Sea Ranch at Del Mar Landing	Private	This gable roof board and batten cottage is one of the few remaining buildings that was the town of Del Mar, a lumber town. The roof has a rarely found shingle pattern in that shingles are very long. Adjacent are barns and evidence of a lumber mill and moorings.
Sea Ranch South			
Sea Ranch stable and barn	West of Highway 1 in The Sea Ranch	Private	The Sea Ranch stable barn has a wide gable roof and is topped with two large ventilators. The sides are vertical boards and the south gable end, which appears to have been replaced, is horizontal siding. Estimated construction date: 1905.
Sea Ranch barn and cottage	West of highway 1 at Black Point near The Sea Ranch Lodge	Private	The house and barn are deteriorating but are an important part of The Sea Ranch landscape. The house has vertical board and batten siding and long wood shingles on the roof and centered porch. The large barn has the same exposed shingle roof over the entire structure. The siding is vertical redwood. Estimated construction date: 1890.
Condominium I	End of Sea Walk Drive, The Sea Ranch	Private	Condominium I includes ten units designed by Moore, Lyndon, Turnbull and Whitaker in Sea Ranch Modern, forerunner of this style of architecture in the United States. Construction date: 1965.
Espherick Cluster House	Black Point Reach, The Sea Ranch	Private	One of the Espherick cluster houses, first detached residential units at Sea Ranch. Hedge Row housing related to cypress windbreak, Construction date: 1965.
Stewarts Point / Horseshoe Cove			
Stewarts Point Post Office	Highway 1 and Skaggs Springs Road, Stewarts Point	Private	The Post Office building and cluster of houses appear to be built at various times and date from 1890 to 1920, but are similar with gable roofs, are small and painted white.
Stewarts Point Store	Highway 1 and Skaggs Springs Road, Stewarts Point	Private	The general merchandise store is a two story Greek Revival building painted blue with white trim and horizontal shiplap siding. The gable roof has a broken pediment. There are six symmetrically placed windows at the front and rear. Construction date: 1868.
Stewarts Point Hotel and Barns	Highway 1 and Skaggs Springs Road, Stewarts Point	Private	This group of buildings appears to range in date from 1870 to 1900. The hotel has two buildings, the one to the west appearing older because of the wider shiplap siding. The salt box barn to the south is an excellent example, with long shingles on the gable roof and vertical unpainted siding. These and various barns and outbuildings, along with the adjacent store building and one-room school, demonstrate every facet of rural Greek Revival architecture and are the first example of a small rural complex in Sonoma County.

Appendix J: Historic Resources Inventory

Feature	Location	Ownership	Description
Stewarts Point / Horseshoe Cove (cont.)			
Stewarts Point School	West of Highway 1, south of Stewarts Point	Private	The Stewarts Point School is an excellent example of the one-room Greek Revival schoolhouses that dotted Sonoma County before the turn of the century. The main gable roof and the two side gablets have broken pediments, and a cupola with flagpole sits on the eave toward the front of the building. Estimated construction date: 1860.
Richardson House	29601 Highway 1	Private	This vernacular residence shows distinctive styles of the late nineteenth and early twentieth century. The wide, steep-pitched gable roof covers a square bay on the second floor and tall, narrow windows below. Various wings have been added. A small gable roof barn sitting in the rocks overlooking the ocean exemplifies the small sheep feeder barns in the region. Estimated construction date: 1900.
Kruse Barn and House	Highway 1 at Cannon Gulch	Public	The Kruse Ranch barn is a very large gable roof wood structure with vertical wood siding. A large portion of the roof collapsed in the last year. Across the road are two gable roof cottages. Estimated construction date: 1880.
Salt Point			
Plantation	34285 Kruse Ranch Road	Private	Plantation is a small town of gable roof structures built around San Andreas Fault sag ponds. The existing residence is a gable roof structure. Estimated construction date: 1870
Sawmill Teepee	31090 Seaview Road	Private	The sawmill teepee, remnant of a lumber mill, is believed to be the only remaining on in the Sonoma Coastal Zone.
Timber Cove / Fort Ross			
Stillwater Cove Ranch	22555 Coast Highway 1	Private	The house is a simple colonial style structure with gable roof and roof dormers. There are two stone buildings on the property and stone pillars at the entrance. The complex has been used as a boys' school but is currently operated as a guest ranch.
Fort Ross School	Stillwater Cove Regional Park, Highway 1	Public	The one-room school has recently been restored after being moved to its present site. The schoolhouse, constructed around 1885 at Fort Ross, is Greek Revival with simple, clean lines and precise detailing. It has horizontal lap siding and the distinguishing bell tower of a school. The Fort Ross School is Sonoma County Landmark No. 27.
Ocean Cove	23125 Coast Highway 1	Private	There are four structures on this site: A grocery store, barn and two houses. The store and the two houses are sided with long shingles. Estimated construction date: 1900.
Town of Fort Ross	20700 Coast Highway 1	Private	The town of Fort Ross has three gable roof houses with natural wood, horizontal siding. There is a large water tank between the houses and the cove. Estimated construction date: 1920.

Feature	Location	Ownership	Description
Timber Cove / Fort Ross (cont.)			
Plummer Graveyard	Highway 1 near Timber Cove	Private	Gravestones are located within a wood picket fenced area. Fence posts feature decorative top pieces. Also on the site are remnants of a log building. Estimated establishment date: 1860.
Residence	21085 Coast Highway 1	Private	Greek Revival house with horizontal siding and attached shed. The house has tall, narrow windows. Estimated construction date: 1890
Bufano Statue at Timber Cove Inn	Coast Highway 1, Timber Cove	Private	Large statue of a human figure with a hand affixed to the head, symbol of peace. made of mosaic by Italian sculptor Benny Bufano in 1960.
Sea View Ranch	27780 Sea View Road	Private	This gable roof barn has lean-to extensions on both sides. The walls are vertical unpainted redwood. Estimated construction date: 1900.
Eckert Ranch	18001 Coast Highway 1	Private	The ranch contains several red board and batten sheep barns with gable roofs along Highway 1. Estimated construction date: 1900.
Fort Ross Call Ranch	19005 Coast Highway 1	Public	The Call Ranch Home is a gable roof cottage with the oldest continuing weather station on the West Coast, starting in 1874. The ranch is part of the Fort Ross Historic Park.
Fort Ross Chapel	Highway 1, Fort Ross	Public	The chapel is one of the many fine structures presently in the compound of Fort Ross Park, with a domical roof and vertical siding. Originally built in 1825, it was rebuilt many times.
High Cliffs / Jenner			
Four Clapboard Houses	9081, 9089, 9095, 9101 Balboa Ave., Jenner	Private	These four gable cottages were built in 1904-05 and were homes to lumber mill workers for the Jenner lumber mill which operated from 1904 to 1914. The cottages, originally identical, have been altered over time.
Mill Cottage	9500 Balboa Ave	Private	Mill Cottage built in 1904 or 1905
Bungalow Residence	9440 Balboa Ave.	Private	Stepped into the hillside of a crag overlooking Jenner, this bungalow is two stories with a raised foundation and a hop and gable roof. A second story veranda with a solid balustrade wraps around three sides of the house. Estimated construction date:; 1904-05.
Double bunkhouse	9498 Pomo Ave.	Private	This residence once served as a double bunkhouse for lumber mill workers.
Bungalow Residence	10609 Highway 1 Jenner	Private	One story, gabled bungalow, with distinctive craftsman detailing in the stickwork trim of the gables, site on a raised foundation and has a porch extension facing the Russian River. Estimated construction date: 1910.
Bungalow Residence	9509 Pomo Ave. Jenner	Private	One story shingled bungalow with a gable roof and exterior brick chimney reflecting a craftsman influence. An enclosed porch extends across the gable end. The residence is situated on the side of Castle Crag overlooking Jenner. Construction date: 1904-05

Appendix J: Historic Resources Inventory

Feature	Location	Ownership	Description
High Cliffs / Jenner (cont.)			
Board and Batten Structure	Willig Drive and Riverside Drive, Jenner	Private	Two and a half story gabled frame building with board and batten siding stepped into the hillside.
Cottages	Willig Drive and El Camino, Jenner	Private	A row of derelict cottages are partially concealed by trees behind Murphy's Restaurant at the intersection of Willig Avenue and Highway 1.
Jenner School	Willig Drive, Jenner	Private	A gable roof, one story schoolhouse stepped into the hillside, the Jenner School has the shingle siding typical of the bungalow era. The gable façade facing Willig Avenue has shiplap siding. Construction date: 1904.
Mill Hospital	10483 Willig Drive	Private	This residence once served as the lumber mill hospital and was built 1904-05.
Mill House Bungalow	Willig Drive, Jenner	Private	Hip roof bungalow on raised foundation, two and a half stories, with shiplap siding, brick chimney, and a second story veranda. Construction date 1904-05.
Three mill cottages	10467, 10469, and 10471 Willig Drive, Jenner	Private	These three mill cottages have a prominent location at the intersection of Highway 1 and Willig Drive and were located across Willig from the lumber mill. They have been altered over the years. Construction date: 1904-05.
Duncans Mills			
Sheep Ranch	26600 Highway 116	Private	A cluster of sheep ranch building which includes two gable roof barns, one with vertical siding and another particularly find barn with board and batten siding, a gabled L-shape farmhouse and several frame outbuildings. Estimated construction date: 1880.
Greek Revival Residence	Duncans Mills	Private	The one and a half story residence sits on a hillside overlooking Duncans Mills. It has a gable roof and sits on a raised foundation. The shed roof porch supported by four square posts has a fine turned balustrade. Estimated construction date: 1878
Hip Roof Cottage	Duncans Mills	Private	A one story cottage with a hip roof and shiplap siding, it has a shed roof porch, supported by square posts extending the length of the front of the building. The cottage is adjacent to an avenue distinguished by large cypress and eucalyptus trees. Construction date: 1880
Dentist office	Main Street, Duncans Mills	Private	A one story gable roof cottage with a front porch which extends the length of the front of the building and is supported by four wood posts. The cottage was removed from its original location near the Russian River in the area called Pig Allen after the 1906 earthquake. Estimated construction date: 1880.
The Jeweler	Main Street, Duncans Mills	Private	A one and a half story gable roof building with an Italianate false front, the building is unusual in that the false front is attached to the non gable side. The elaborate cornice has a paneled frieze, pierced and scrolled brackets and dentils. Estimated construction date: 1877.

Feature	Location	Ownership	Description
Duncans Mills (cont.)			
DeCarly General Store	B Street, Duncans Mills	Private	Two commercial false fronts are joined by a third smaller building to form a continuous commercial streetscape that is virtually unaltered. The frame buildings have gable roofs, shiplap siding, and stepped false fronts. A 1920's gas pump is located in front. Estimated construction date: 1888.
Country Store	Main Street, Duncans Mills	Private	A one-and-a-half story frame building with shiplap siding, a gable roof, and a false front attached to the gable end, the building occupies the corner of Main and B Streets. Attached to the rear of the building is a two-story gable roof building which appears to have served as a barn or stable on the first floor with quarters on the second floor. The two buildings form an L shape. Estimated construction date: 1880.
Duncans Mills School	Near B St., Duncans Mills	Private	The schoolhouse is a one-story rectangular frame building with a gable roof and an open, square bell tower above the entrance in the gable end. Siding is channel rustic. The schoolhouse is in an open field near the original road, now closed, that once swept around the outer perimeter of Duncans Mills. Estimated construction date: 1885.
Duncans Mills Depot	Highway 116, Duncans Mills	Private	The depot is a recently restored frame building with a central core and open waiting platform area sheltered under a hip roof. The open waiting area roof overhang is supported by square posts. Stick style influence is evident. Date constructed: 1910.
The Slaughterhouse	Duncans Mills Campground	Private	A rectangular frame building, one story in height, with a metal gable roof. Vertical board siding is of single-wall construction. In the gable end is a door of vertical boards and the legend "The Slaughterhouse, Vic Pedroia, Prop.".
Moscow Mill Pond	22855 Moscow Road	Private	A 19th century mill pond believed to be one of the earliest in Sonoma County.
Moscow Barn Casini Ranch	22855 Moscow Road	Private	A two-story gabled barn with gabled dormers and shiplap siding. There have been considerable alterations with the addition of windows, verandas, and interior remodeling. Estimated construction date: 1890.
Willow Creek State Beach			
Greek Revival Farmhouse	Willow Creek Road	Public	This farm cluster includes a Greek Revival farmhouse, gabled barn and several outbuildings. The farmhouse is two stories. The central doorway has a transom; the pedimented frame porch appears added. Estimated construction date: 1900.
Farmhouse Barns	Willow Creek Road	Public	This farm cluster includes a one-story farmhouse, two barns, and frame outbuildings. The farmhouse carries craftsman stick details and is in an L-shape form with a gabled roof and narrow, horizontal siding. Estimated construction date: 1910.

Appendix J: Historic Resources Inventory

Feature	Location	Ownership	Description
Willow Creek State Beach (cont.)			
Farmhouse	Willow Creek Road	Private	This farmhouse and cluster of ranch buildings are located in a small valley at the edge of the redwoods. The farmhouse is two stories on a raised foundation with a hip and gabled roof and shiplap siding. A partially-enclosed porch wraps around two sides. Estimated construction date: 1890.
Bridgehaven Resort	Highway 1 and Russian River	Private	The resort includes a cluster of three gable roof cottages and a garage. The cottages are one-story with exposed rafters, narrow horizontal siding, interior brick chimneys and sash windows. The two-story gable roof garage is stepped into the hillside. Estimated construction date: 1925.
Sheep Ranch	9275 Highway 1 South of Jenner	Public	A gabled one-story cottage with channel rustic and vertical siding is the ranch house for this sheep ranch which has adjacent gabled frame barns with vertical wood siding. Estimated construction date: 1910.
Ranch	Highway 1, Ocean View	Private	A ranch cluster with a two-story, gabled structure with a saltbox form and a one-story gabled shed. Estimated construction date: 1910.
Water Tower	Cliff Avenue, Ocean View	Private	A water tower raised to an unusual height, has a wood tank on a frame tower.
Duncans Point Duncans Landing	Highway 1	Public	Landscape feature and site of early lumbering, shipping operations
Mann Ranch	Highway 1 and Scotty Creek	Private	This scenic farm complex includes what may have been the oldest frame building in Sonoma County.
Bodega Bay			
Greek Revival Residence	McChristian Avenue, Salmon Creek	Private	A two-story Greek Revival clapboard residence with an interior brick chimney at the gable end. The front entrance is in the non-gable facade facing the original roadway. Extensive greenhouse additions have been made as well as a one-story gabled addition with shiplap siding. The house sits on a knoll and is shielded by a cypress grove. Estimated construction date: 1860.
Carrington Ranch	Coleman Valley Road and Highway 1	Private	High on a knoll surrounded by a cypress windbreak is this two-story Greek Revival clapboard residence. The main non-gable facade faces the ocean. A two-story water tower with a hip roof, a large gable roof frame barn, and outbuildings are adjacent to the house. Estimated construction date: 1860.
Queen Anne	Bay Flat road, Bodega Bay	Private	A Queen Anne corner tower with a tent roof transforms this hip roof bungalow into a more formal residence, unique in Bodega Bay. One story with shiplap siding, the house rests on a raised foundation typical of seaside residences.

Feature	Location	Ownership	Description
Bodega Bay (cont.)			
"Marin"	Bay Flat Road and Whaleship Road	Public	A derelict 1920's California river boat, the "Marin" is beached just off Bay Flat Road. The boat carried a two-story superstructure with a pilot house and had a shallow draft.
Bodega Bay Union Church	Bay View Road, Bodega Bay	Private	Craftsman church similar in size and scale to craftsman bungalow cottages in Bodega Bay. The gabled roof has exposed rafters and gable trim. Wood siding is narrow and horizontal. A gabled portico and gabled wing extend from one side. In front is a square bell tower. Estimated construction date: 1910.
Craftsman Bungalow	Bodega Avenue and Kent Avenue	Private	A one-story craftsman bungalow with the characteristic gently pitched double gables exposed rafters and purlins, and a large gable sheltering a front porch. Estimated construction date: 1915.
Ghislini House	1215 Highway 1, Bodega Bay	Private	Stepped into the steep hillside beneath Highway 1 is this one-story hip-roof bungalow surrounded by cypress trees overlooking the bay. A gabled wing projecting toward the water is flanked by side and front porches and an enclosed sun porch beneath a shed roof. Construction date: 1917.
Medley Shop Antiques	Highway 1 and Windy Lane	Private	An excellent example of a craftsman bungalow, two stories, stepped into the hillside. It carries a low-pitched gable roof with exposed rafters, a strong central front gable with split columns and detailed craftsman windows. Estimated construction date: 1915.
Woodhaven	Highway 1 and Windy Lane	Private	Woodhaven, the seaside residence of the Wood family, a prominent Sonoma County family, is one-and-a-half stories with a gabled roof and projecting gable dormer. Balconies extend to each side of the dormer. The house sits on a raised foundation on a knoll overlooking the harbor and is surrounded by a picket fence. Estimated construction date: 1910.
Queen Anne Bungalow	Highway 1, Bodega Bay	Private	A hip roof bungalow with a projecting gable reflecting the Queen Anne style, this one-story house extends over the water on pylons. A distinguishing feature is the two-story water tower with a hip roof on the hillside above the house. Estimated construction date: 1910.
Meredith's Fish Company	Highway 1, Bodega Bay	Private	Functional gable roof industrial frame building on a wharf extending into Bodega Bay, central to the commercial fisheries district. Varying roof levels and siding indicate a number of add-on stages. Estimate construction date: 1920
Gas Station	Highway 1, Bodega Bay	Private	In the style of a hip roof bungalow, common to seaside communities of the 1920's, this one-story building, once serving as a gas station, has a low-pitched hip roof with exposed rafters extending over a drive-through area. Estimated construction date: 1920.

Appendix J: Historic Resources Inventory

Feature	Location	Ownership	Description
Bodega Bay (cont.)			
Greek Revival Residence	Highway 1 and Bay Hill Road	Private	A one-and-a-half story Greek Revival house with its non-gable main facade to the highway. The gable roof has a boxed cornice and plain frieze. A shed roof porch extends the length of the front of the building supported by plain square posts. Siding is clapboard. Estimated construction date: 1875.
Farm	19000 Highway 1	Private	A farm cluster with a one-and-a-half story, gable roof farmhouse, a gabled frame barn and several frame outbuildings. The house has clapboard gables and vertical frame siding on the non-gable main facade, with a partially enclosed porch. Estimated construction date: 1875.
Valley Ford			
Greek Revival Farm	18300 Highway 1	Private	A cluster of 19th century farm buildings including a Greek Revival farmhouse, a small gabled vertical frame barn and a grove of eucalyptus trees. The farmhouse has a T-shape with a two-story gable wing facing the road. Estimated construction date: 1875.
Greek Revival Farm	1600 Valley Ford Freestone Road	Private	Greek Revival farm with a residence, barn, outbuildings, and wood bridge over creek.
Dinucci's Italian Dinners	Valley Ford Road, Valley Ford	Private	A two-and-a-half story square building with a hip roof and gables displaying the decorative shingles characteristic of the Queen Anne style. The first floor has been enlarged with the enclosure of a porch. Estimated construction date: 1905.
Bungalow Dairy	Valley Ford Estero Road	Private	A one-and-a-half story bungalow with a hip roof and shed dormers which is the farmhouse for a dairy ranch. The frame house has a front porch extending the length of the house supported by turned columns. Clustered near the bungalow are three gable roof barns, several outbuildings, and a round tower. Estimated construction date: 1910.
Valley Ford Market	14400 Highway 1, Valley Ford	Private	A one-story rectangular brick building with a stucco surface and a flat roof, the market had a curvilinear false front added about 1930. The painted mural on the false front commemorates the Running Fence. Estimated construction date: 1895.
Fire Department Tank and Frame Garage	14445 Highway 1, Valley Ford	Public	Behind a gable roof metal building housing the present volunteer fire department equipment stands a water tank. The tank, an exposed wood cask, sits on a raised frame platform. A fire siren rises above. To one side is a shed-roof building with two bays and siding of vertical board.
Frame False front	14390 Highway 1, Valley Ford	Private	Adjacent to the west side of Valley Ford Market is a one-story gable roof false front building with channel rustic siding. Characteristic of the earliest false front frame buildings, it is one-room wide with a central door in the false front. Estimated construction date: 1880.

Feature	Location	Ownership	Description
Valley Ford (cont.)			
Bank of America	14435 Highway 1, Valley Ford	Private	A one-story masonry building with neo-classical influence, the Dairyman's Bank suffered damage in the 1906 earthquake and has been subsequently remodeled. In front of the brick facade is a stepped parapet concealing a flat roof. A sign carried the legend, "1893 - the Dairyman's Bank - 1914". Estimated construction date: 1893.
Sandy's	14415 Highway 1, Valley Ford	Private	A two-story gable roof building with its non-gable facade to the road, the hotel has a channel rustic siding and a porch extending the length of the front. Six posts support the low hip roof of the porch which has a raised foundation. Estimated construction date: 1870.
Hip Roof Bungalow	14405 Highway 1, Valley Ford	Private	A one-story residence on a raised foundation with a hip roof and channel rustic siding. The front porch is sheltered under the main hip roof. Porch posts are square with sawn and pierced brackets. Estimated construction date: 1900.
Greek Revival Residence	14380 Highway 1, Valley Ford	Private	Facing the Valley Ford Road is this one-and-a-half story gable roof residence with its gable end to the road. To the rear are several additions. Estimated construction date: 1875.
Italianate Residence	14395 Highway 1, Valley Ford	Private	An Italianate influence is seen in the windows and door of the one-and-a-half story gable roof cottage with channel rustic siding. A porch partially extends across the front. It is supported by distinctive turned columns with intricate brackets, bracket extensions, and decorative button detailing on the columns and column bases. Estimated construction date: 1875.
Shingle Bungalow	14350 Highway 1, Valley Ford	Private	A one-and-a-half story shingled bungalow with a hip roof dormer, the residence sits on a raised foundation which is sheathed with narrow horizontal siding. To the rear is a shingled water tower with a hip roof finial and a large frame gable roof barn. Estimated construction date: 1910.
Greek Revival Cottage	14220 Highway 1, Valley Ford	Private	A one-and-a-half story Greek Revival cottage which reflects several distinctive architectural influences of the mid-19th century, including board and batten siding and a hip roof porch. Estimated construction date: 1870.
Greek Revival Cottage	14210 Highway 1	Private	This one-and-a-half story residence has channel rustic siding and quoins at the corners. A carved and sawn sunburst panel marks the gable end. A gable roof portico over the front entrance is supported by square posts. Estimated construction date: 1880.
Eucalyptus Windbreak	Valley Ford, Petaluma Road	Public	Eucalyptus windbreak along the road. Estimated planting date: 1900.

Appendix J: Historic Resources Inventory

Feature	Location	Ownership	Description
Valley Ford (cont.)			
Soil Conservation Service Building	School Street, Valley Ford	Public	A one-and-a-half story building, with Spanish Colonial Revival influence, with a raised foundation, the former school was built into a hillside. The hip roof has a central gable over the main entrance with its round-arched entryway. Siding is stucco with a concrete and stucco staircase. Estimated construction date: 1920.
Hip Roof Queen Anne Cottage	14460 School Street, Valley Ford	Public	A one-story cottage with a steep hip roof, a Queen Anne influence is visible in the pedimented gable with its decorative shingles. Siding is channel rustic. Estimated construction date: 1900.
Bridge	Middle Road near Valley Ford	Public	A timber and iron bridge over the Estero Americano marking the boundary between Sonoma County and Marin County.
Christo's Running Fence	Main Street, Valley Ford	Private	Pole No. 7-33 is a 21-foot steel pole with small portions of steel cable and guy wires used in the construction of the Christo Running Fence in September, 1976. On opposite sides of the pole are two steel monuments displaying two bronze plaques. This site is Sonoma County Historic Landmark No. 24.

**Sonoma County
Local Coastal Plan**

APPENDIX K: STATE ROUTE 1 REPAIR GUIDELINES



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

Final Sonoma State Route 1 Repair Guidelines



California Department of Transportation
District 04

March 2019



Note to the Project Development Team

FROM HELENA 'LENKA' CULIK CARO:

I am pleased to present the Sonoma State Route 1 Repair Guidelines. Consistent with Caltrans' Strategic Management Plan, these guidelines will help promote stewardship and sustainability of our transportation resources by streamlining projects through a shared vision with our partners. The shared vision promotes sustainability by reducing environmental impacts through design flexibility.

The objective of these repair guidelines is to provide guidance that integrates and balances safety, mobility, and maintenance goals with environmental values. This document provides a framework to enable more timely repairs that are not only functional but are also consistent with the landscape, uses, and regulatory and land management policies associated with Highway 1. This allows the Project Development Team to have a shared understanding of practices and features best suited for the Highway 1 corridor. With a corridor-centric approach, all those who work on repair projects on Highway 1 in Sonoma County share a common vision rather than approaching each project with separate design considerations. This vision not only bridges Caltrans functional units, it also supports and connects the requirements of the California Coastal Act, Sonoma County Local Coastal Plan, California State Park Services and is supported by Caltrans' policy of Context Sensitive Solutions and the Highway Design Manual flexibility guidance.

These guidelines, as put into practice, will help promote the organizational excellence goals of Caltrans and help the Project Development Team to produce a quality project. Thank you for your hard work, public service and dedication.



Helena 'Lenka' Culik-Caro
Deputy District Director, Design
District 4

Acknowledgements

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Arnica MacCarthy, Planner, Environmental Analysis
Betsy Joseph, Regional Project Manager
Dianne Yee, Associate Transportation Planner, Pedestrian and Bicycle Branch
Helena 'Lenka' Culik-Caro, Deputy District Director, Design
Jeanne Gorham, Office Chief, Landscape Architecture
Manny Caluya, Office Chief, Design SHOPP
Robert Effinger, Project Delivery Coordinator
Sergio Ruiz, Office Chief, Pedestrian and Bicycle Branch
Stefan Galvez, Office Chief, Environmental Analysis
Stephen Yokoi, Office Chief, System and Regional Planning
Steven Kakihara, Maintenance Design Engineer

INTERAGENCY AND STAKEHOLDER COLLABORATORS

Alisha O'Loughlin, formerly of Sonoma County Bicycle Coalition
Brendan O'Neil, California Department of Parks and Recreation
Crystal Acker, Sonoma County Permit and Resource Management Department
Jeannine Manna, California Coastal Commission
Ken Tam, Sonoma County Regional Parks
Sara Pfeifer, California Coastal Commission
Shannon Fiala, formerly of California Coastal Commission
Stephanie Rexing, California Coastal Commission
Tami Grove, California Coastal Commission

WITH SUPPORT FROM

Jeanette Weisman, Clarice Ericsson, and Bryan Bell, Jacobs

Table of Contents

Note to the Project Development Team	iii
Acknowledgements.....	v
List of Abbreviated Terms	ix
Glossary	xi
Chapter 1 Purpose	1-1
Chapter 2 How to Use these Guidelines	2-1
Chapter 3 Environmental and Permitting Considerations	3-1
3.1 The Uniqueness of Highway 1.....	3-1
3.2 Guiding Authorities	3-3
3.2.1 State Parks Policies	3-3
3.2.2 Coastal Zone Management Act.....	3-4
3.2.3 California Coastal Act.....	3-5
3.2.4 Local Coastal Programs	3-8
3.2.5 California Coastal Trail.....	3-9
3.2.6 Sonoma County Transportation Authority Countywide Bicycle and Pedestrian Master Plan, 2014 Update	3-10
3.2.7 Additional Permitting, Concurrences, and Authorizations	3-10
3.2.8 Caltrans Standards and Directives	3-15
Chapter 4 Process	4-1
4.1 Process for Major Damage Repairs	4-1
4.1.1 Project Development for Storm Damage Projects	4-2
4.1.2 Federal Funding	4-4
Chapter 5 Design Guidelines	5-1
5.1 Overview of Recommendations.....	5-1
5.2 Roadway	5-9
5.2.1 Design Speeds.....	5-9
5.2.2 Posted Speeds	5-10
5.2.3 Landscape Segments and Speeds.....	5-11
5.2.4 Horizontal and Vertical Alignment.....	5-12
5.2.5 Sight Distance, Superelevation, and Horizontal and Vertical Curves...	5-13
5.2.6 Travel Lanes and Shoulders.....	5-13
5.3 Bicycle and Pedestrian Facilities	5-15
5.3.1 Sonoma Countywide Bicycle and Pedestrian Master Plan	5-16
5.3.2 Bicycle and Pedestrian Crossings	5-16
5.3.3 California Coastal Trail.....	5-16
5.3.4 Parking, Pullouts, and Turnouts.....	5-16
5.4 Bridges.....	5-17
5.5 Guardrail, Railing, End Treatment, and Fences.....	5-18
5.5.1 Railing.....	5-18
5.5.2 End Treatments	5-18
5.5.3 Fencing.....	5-19
5.6 Slope Stabilization	5-20
5.6.1 Nonstructural Slope Stability Recommendations	5-20
5.6.2 Retaining Walls.....	5-21
5.7 Roadside Features	5-22
5.7.1 Drainage.....	5-22

5.7.2	Headwalls and Wingwalls	5-23
5.7.3	Pipes and, Inlets.....	5-23
5.7.4	Outfalls	5-23
5.7.5	Ditches.....	5-23
5.8	Landscaping and Revegetation.....	5-23
5.8.1	Revegetation and Erosion Control.....	5-23
5.8.2	Invasive and Exotic Vegetation Control.....	5-24
5.8.3	Signage	5-25
5.8.4	Delineators.....	5-25
5.9	Miscellaneous.....	5-25
5.9.1	Fish Passage and Wildlife Accommodations	5-25
5.9.2	Construction/Maintenance Access Roads	5-26
5.9.3	Scenic Highway Status	5-26
Chapter 6	References	6-1

List of Tables

Table 5-1	Design Recommendations	5-3

List of Figures

Figure 1-1	State Route 1 in Sonoma County	1-2

List of Appendices

Appendix A	Landscape Units and Existing Conditions
Appendix B	Coastal Act Repair Maintenance Exclusions
Appendix C	Highway Design Manual Topics

List of Abbreviated Terms

AASHTO	American Association of State Highway and Transportation Officials
ADT	average daily traffic
Caltrans	California Department of Transportation
CCC	California Coastal Commission
CCT	California Coastal Trail
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
Coastal Act	California Coastal Act
Conservancy	California Coastal Conservancy
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DIB	Design Information Bulletin
DSDD	Design Standard Decision Document
EO	emergency opening
FWS	U.S. Fish and Wildlife Service
Guidelines	State Route 1 Repair Guidelines
HDM	<i>Highway Design Manual</i>
Highway 1	California State Route 1
KPRA	kingpin-to-rear-axle

List of Abbreviated Terms

LCP	Local Coastal Program
Master Plan	Sonoma County Transportation Authority Countywide Bicycle and Pedestrian Master Plan
MGS	Midwest Guardrail system
mph	mile(s) per hour
NEPA	National Environmental Policy Act
PDT	Project Development Team
PRC	Public Resources Code
State Parks	California Department of Parks and Recreation
USACE	U.S. Army Corp of Engineers

Glossary

Complete Streets: A transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including pedestrians, bicyclists, motorists, and transit users, appropriate to the function and context of the facility.

Design Vehicle: For Highway 1 in Sonoma County, the design vehicle is a California Legal Kingpin-to-Rear-Axle Distance (KPRA) Advisory Route, with a KPRA of 30 feet.¹ See also *Highway Design Manual* Topic 404.4(2)(b).

Design Standard Decision Document (DSDD): A DSDD is required on a project if any element on a project does not meet current standards. The DSDD must justify a design exception and must be approved prior to the nonstandard feature being constructed.

Roadside: A general term denoting the area adjoining the outer edge of the roadbed to the right-of-way line.

Roadway: That portion a highway between the outside lines of the sidewalks, or curbs and gutters, or side ditches, including the appertaining structures and all slopes, ditches, channels, waterways, and other features necessary for proper drainage and protection.

Scenic Highway: A state or county highway—in total or in part—that is recognized for its scenic value, is protected by a locally adopted corridor protection program, and has been officially designated by Caltrans.

Shoulder: The portion of the roadway contiguous with the traveled way for the accommodation of stopped vehicles, for emergency use, for errant vehicle recovery, and for lateral support of base and surface courses. The shoulder may accommodate bicyclists and pedestrians, and in towns, it may accommodate parking.

Travel Lane: The portion of the roadway for the movement of vehicles and bicycles, exclusive of shoulders.

¹ See <http://www.dot.ca.gov/trafficops/trucks/docs/truckmap-d04.pdf>.

Chapter 1 Purpose

The purpose of these *Sonoma State Route 1 Repair Guidelines* (Guidelines) is to provide California Department of Transportation (Caltrans) staff and stakeholders with a consistent vision and direction when working on or reviewing damage repair (permanent restoration) projects along that portion of California State Route 1 (Highway 1) traversing Sonoma County (Figure 1-1). While this damage is predominantly related to storm events, the recommendations apply to any major event that damages the roadway. The Guidelines allow Caltrans District 4 and its partner agencies to respond with timely and consistent efforts to repair projects in a manner that minimizes alterations, acknowledges the special sensitivity of this segment of Highway 1, supports the existing aesthetics, and protects natural resources while meeting the needs of all user groups.

Dialogue with the California Department of Parks and Recreation (State Parks), Sonoma County, and the California Coastal Commission (CCC) helped identify the great need for shared damage repair guidance. No Highway 1 corridor-wide recommendations previously existed as references for Caltrans staff and partnering agencies when considering potential treatments for damage repair.

To respond to these concerns, Caltrans convened an interdisciplinary working group with these partners to create recommendations that maintain sensitivity to the Highway 1 corridor's social, historic, scenic, and environmental values while also protecting the safety of users. The objective is to provide guidance that Caltrans and its partnering agencies can reference to promote efficient, appropriate repairs to this highly valued highway. The Guidelines reflect compromises made by all partners to find consensus, and to provide more suitable design guidance to Project Development Teams (PDTs) working on repair projects along this corridor.



Legend

- U.S. Highway
- State Route
- Local
- State Route 1 Sonoma County
- County Boundary

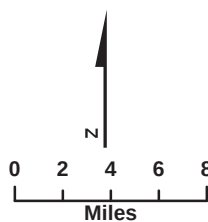


FIGURE 1-1
STATE ROUTE 1 IN SONOMA COUNTY
 Sonoma State Route 1 Repair Guidelines

Exhibit 2

LCP-2-SON-23-0058-2

Page 615 of 708

Chapter 2 How to Use these Guidelines

These Guidelines have been developed to provide consistency and clarification in design development for Caltrans roadway damage repair projects within Sonoma County along Highway 1. Damage repair projects are typically spot improvement projects no more than 0.5 mile in length. They may or may not involve structures, such as bridges or retaining walls. Although these Guidelines were created in response to the ongoing need for repair projects, they contain context and stakeholder information that would benefit all projects being considered in the scenic coastal environment.

These Guidelines are intended to instruct users on how to align the design of repair projects with the existing transportation needs of Highway 1 while preserving and enhancing the resources and aesthetics of the project location. Applying these approaches should also streamline the process for meeting the requirements for local, state, and federal approvals of projects in the corridor. This chapter provides a brief description of each remaining chapter in the Guidelines, along with the target audience for each chapter.

Chapter 3 – Environmental and Permitting Conditions

Chapter 3 outlines the issues and key players involved in the project development process. Staff involved in developing projects along Highway 1 in Sonoma County should thoroughly understand this section. The District Landscape Architecture Office and Environmental Division will be able to answer any additional questions regarding individual project issues and solutions.

Chapter 4 – Process

Chapter 4 covers the fundamentals of the project development process for damage repair projects. Staff involved in developing projects along Highway 1 in Sonoma County should thoroughly understand this section. The District Maintenance Office and District Design Liaison will be able to provide additional details.

Chapter 5 – Design Guidelines

Chapter 5 contains specific recommendations regarding the design of the permanent restoration portion of a damage repair project and is the essence of this document. Recommendations can be specific or general in nature, and the designer should use judgment when applying these recommendations and keep the context of the Highway 1 facility in mind. All staff involved in the design of a damage repair project

along Highway 1 should review this section in its entirety. Note that the design guidelines in this section do not replace the *Highway Design Manual* (HDM) (Caltrans 2016), and any deviations from the standards contained in the HDM will require an approved Design Standard Decision Document (DSDD). The design guidelines, however, are intended to provide ancillary information for these DSDDs. On January 30, 2015, the design exception approval process was delegated to the District for this type of highway.

It is important to understand the project location, natural context, landscape setting, vehicle and bicycle volumes and speeds, stakeholder needs, and other key site conditions when designing projects. To support Caltrans' Context-Sensitive Solutions policy as part of these design recommendations, the Highway 1 corridor is segmented according to landscape units. Each landscape unit represents an area with similar visual character based on vegetation, topography, and other visual elements. Fifteen designated Highway 1 segments are located in Sonoma County. Appendix A, Landscape Units and Existing Conditions, describes each unit. Staff should use these recommendations in tandem with Table 5-1, Design Recommendations, presented in Chapter 5.

Chapter 3 Environmental and Permitting Considerations

3.1 The Uniqueness of Highway 1

Throughout most of Sonoma County, Highway 1 is a two-lane rural highway that meanders along the Pacific coastline. Highway 1 traverses several State Parks, including Fort Ross State Historic Park, Kruse Rhododendron State Natural Reserve, Salt Point State Park, and Sonoma Coast State Park. Highway 1 connects, and has become a well-known feature of, the scenic coastline and pastoral inland areas that dominate this region. This scenic quality is protected by the California Coastal Act (Coastal Act), Sonoma County's Local Coastal Program (LCP) (Sonoma County, 2001), and State Parks land management policies. Highway 1 is currently eligible for scenic highway status.

Residents in the area greatly value the unrushed and rural lifestyle of their communities. For many coastal residents along the route, Highway 1 is the only transportation connection to the rest of California and constitutes their economic lifeline and access to emergency services. The stunning natural beauty of the landscape has also made this section of Highway 1 a popular destination corridor for outdoor enthusiasts of all types. The Highway 1 corridor serves both as a basic means of transportation and a source of multimodal recreation; therefore, and roadway design must comprehensively consider and account for a variety of user needs and values.

The geographic context and proximity to the Pacific Ocean means Highway 1 is subject to serious damage from winter storms and earthquakes. Depending on the extent of roadway damage, effects can range from mere traveling inconveniences to full roadway closures. The Loma Prieta earthquake on October 17, 1989, caused significant damage along Highway 1 in Sonoma County.

Sonoma County lies in the Coast Range geomorphic province. The Coast Range comprises northwest-trending folded and faulted mountains and intermountain valleys that roughly parallel the San Andreas fault zone. The range extends from the Pacific Ocean on the west to the edge of the Great Valley to the east. The topography through which most of Highway 1 traverses Sonoma County is dominated by the Pacific Ocean and the San Andreas fault.

The geology of Highway 1 through Sonoma County comprises four distinct terrains underlain by four different rock units (from south to north): Tertiary Wilson Grove Formation, Quaternary marine terraces, Cretaceous Franciscan Complex Mélange, and Cretaceous granitic rocks (Salinian block).

The Tertiary Wilson Grove Formation underlies Highway 1 in the southern part of Sonoma County from the Marin County line to roughly Bodega Bay. This formation comprises marine sedimentary rocks (e.g., sandstones, siltstones, and conglomerates) overlying the Franciscan Complex. This section of Highway 1 traverses gently rolling topography and is generally not prone to extensive instability.

North of Bodega Bay, the San Andreas fault heads offshore, and Highway 1 hugs a slightly elevated coastline underlain by Quaternary marine terraces. These very young, poorly lithified sedimentary rocks were deposited over Franciscan Complex rocks when sea levels were slightly higher. They form the bluffs just above the beach from Bodega Bay to Jenner. Strong wave action is the primary erosional feature, over steepening the bluffs and creating local instabilities.

Franciscan Mélange underlies Highway 1 from Jenner to about Fort Ross. This unit consists of sedimentary rocks that include greywacke sandstone, siltstone, shale, limestone, and chert, along with volcanic and metamorphic blocks in a sheared matrix of argillite. Franciscan rocks can be weak—especially where argillite is present—and weather quickly to clayey soil. The Franciscan Complex is known for extensive deep-seated earth flows and landslides and is considered highly susceptible to erosion due to heavy rainfall and wave action generated from winter storms. This unit is found exclusively on the east side of the San Andreas fault. This stretch of coast is steep and often requires structural solutions to repair unstable slopes.

The San Andreas fault crosses Highway 1 again just south of Fort Ross. Cretaceous granitic rocks, found exclusively on the west side of the San Andreas fault, are capped by a thin sequence of Quaternary marine terrace rocks. The granitic rocks are of varying compositions (e.g., granites, granodiorites) and crop out locally as intact blocks. This section of Highway 1 from Fort Ross to the Mendocino County line traverses gently rolling terrain, and instabilities are often localized and shallow.

Highway 1 in Sonoma County is located near, and often within, the seismically active San Andreas strike-slip fault complex. This fault system forms the boundary between the North American and Pacific Plates and often comprises one or more distinctive strands, any or all of which can rupture during a seismic event. Movement along these

faults, characterized as strike-slip, allow the plates to grind past each other. The entire length of Highway 1 in Sonoma County is expected to experience strong ground motion and possible surface rupture at specific locations during a large seismic event on the San Andreas Fault. Several major earthquakes have occurred in the San Francisco Bay Area since 1800. Protecting against impacts to the geological, biological, visual, cultural, and archeological resources along Highway 1 can constrain and often delay its maintenance and repair. Historically, repair and maintenance projects have been challenging and usually take longer than similar projects in inland portions of the Caltrans system.

In addition to its unique natural features, Highway 1 is distinguished by its political boundaries. Most of Highway 1 falls within the California coastal zone, where specific policies govern development in an effort to protect the access, qualities, and resources of the California coast.

3.2 Guiding Authorities

3.2.1 State Parks Policies

State Parks has extensive policies that direct the management and use of their lands. These policies span natural resource protection, transportation, recreational uses, and protection of their viewsheds. These policies affect activities in and adjacent to State Parks lands. Highway 1 traverses parks at various locations in Sonoma County, as indicated in the Landscape Units Map in Appendix A. A selection of State Parks policies is presented in the following subsections and should be considered when projects occur adjacent to or may affect these lands.

State Parks policies relating to Highway 1 include the following:

- ***Department Operations Manual, State Parks (0304.2.3) (State Parks 2010).***
The purpose of State Parks shall be to preserve outstanding natural, scenic, and cultural values; indigenous aquatic and terrestrial fauna and flora; and the most significant and representative examples of ecological regions.
- ***Department Operations Manual, Scenic Values and Viewshed (0312.2) (State Parks, 2010).*** The principal objective in the management of scenic areas is preservation of the quality of the visual environment. More specific objectives in scenic resource management should include the following:
 - Identify and protect scenic resources and qualities

- Avoid or minimize modifications to scenic resources
- Remove intrusive human-made elements that are not significant cultural resources, including intrusive light and noise
- Where modifications of scenic resources are necessary, design attractive structures, subordinate to the character of their surroundings and that appear to belong to their setting, in sympathy with the sense of place
- Locate structures in the background as much as possible, isolated from primary views
- Use visually harmonious materials, colors, textures, and scale that blend into and are subordinate to their landscapes' background
- Unify structures on the site with a consistent style of architecture and materials

Protection of scenic resources goes beyond State Parks boundaries. Development outside of the park boundary that is out of scale with its surroundings, with contrasting colors or reflective surfaces, or poorly sited, can impact views from within the park.

3.2.2 Coastal Zone Management Act

The U.S. Congress passed the Coastal Zone Management Act (CZMA) of 1972 to preserve, protect, develop, and (where possible) restore or enhance the resources of the nation's coastal zone. Additionally, Congress intended to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and aesthetic values, as well as the needs for compatible economic development.

For all of the California Coast, except the San Francisco Bay, the CCC is responsible for implementing the CZMA. The CCC is responsible for reviewing proposed federal and federally authorized activities to assess their consistency with the approved state coastal management program.

The CCC's federal consistency authority applies to activities that are undertaken, funded, or permitted by federal agencies or if they occur on federal lands. Such activities, whether or not they occur inside of the coastal zone, are subject to the federal consistency CZMA provisions if they have the potential to affect resources in

the coastal zone. During such reviews, the CCC determines whether the proposed activities are consistent with the policies of the Coastal Act and may refer to certified LCP policies as guidance for determining such consistency.

3.2.3 California Coastal Act

The resource protection policies and planning processes underpinning the Coastal Act were established by voter initiative in 1972 (Proposition 20) and later adopted by the California Legislature through the Coastal Act of 1976 (Public Resources Code sections 30000-30900). The law is administered by the CCC and is the backbone of the State's federally approved coastal management program. The CCC issues coastal development permits; reviews federal activities affecting the coastal zone; reviews LCPs; educates the public; and works with local governments and other agencies to protect a number of coastal resources, including public beach access, wetlands, sensitive habitats, agricultural lands, water quality, scenic vistas, and coastal tourism. The CCC's jurisdiction extends to all areas within the coastal zone, which includes approximately 1.5 million acres of coastal land extending from Oregon to Mexico. The coastal zone's western boundary begins 3 miles at sea and extends inland to varying degrees that range from a few blocks up to 5 miles. Highway 1 in Sonoma County falls within the coastal zone.² Projects within the coastal zone that include activities not specifically excluded by the Coastal Act are subject to regulatory review by the CCC or, where the CCC has certified a LCP, by the local government implementing that program. A large proportion of Caltrans' projects that are subject to local government review for necessary Coastal Development Permits are also appealable to the CCC.

Several Coastal Act policies apply specifically to Highway 1, including, but not limited to the following:

- **Public Resources Code (PRC) Section 30251:** "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas."

² See <https://databasin.org/maps/new#datasets=ece6ae2d026b43959cfa11cceb2c07ac>.

- **PRC Section 30254:** “it is the intent of the (California) Legislature that State Highway 1 in rural areas of the coastal zone remain a scenic two-lane highway.”
- **PRC Section 30240:** “Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”
- **PRC Section 30610:** “no coastal development permit shall be required pursuant to this chapter for...(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.”

The permit exclusion described above (PRC 30610) applies to a number of activities covered in the CCC’s regulations. Local governments can also request that these exclusions be included in their LCPs, as certified by the CCC.

So long as there is no risk of causing substantial adverse impacts on public access, environmentally sensitive habitat areas, wetlands, or public views to the ocean and there is no expansion of the roadway facility, no permit is required for repair and maintenance of existing public roads. This includes landscaping; signalization; lighting; signing; resurfacing; installing or expanding retaining walls, safety barriers, and railings; and other comparable development within the existing right-of-way.³ Designers are encouraged to contact the District’s Coastal Liaison in the Environmental Division to determine the applicability of the exclusion.

Maintenance activities are generally those necessary to preserve the highway facility as it was constructed, including constructing temporary detours; removing slides and slip outs; restoring and repairing drainage appurtenances; installing slope protection devices; installing minor drainage facilities for preservation of the roadway or adjacent properties; restoring, repairing, and modifying bridges and other highway structures for public safety; and restoring pavement and base to original condition by

³ 14 California Code of Regulations 13252(a) & Repair, Maintenance and Utility Hook-up Exclusions from Permit Requirements - <http://www.coastal.ca.gov/legal/rmu-exclusions.pdf>

replacement, resurfacing, or pavement grooving. A permit is required for excavation or disposal of fill outside of the roadway prism.

The following Caltrans maintenance and alteration programs (or their equivalent conducted by local road departments) “that do not result in an addition to or enlargement or expansion of the existing public road facility itself” do not require a permit except as noted:

- Flexible Roadbed Program
- Rigid Roadbed Program
- Roadside Maintenance Program
- Roadway Litter and Debris Program
- Vegetation Control Program
- Pavement Delineation Program
- Sign Program
- Electrical Program
- Traffic Safety Devices Program
- Public Service Facility Program (except that a permit is required for construction of new facilities)
- Landscape Program
- Bridge and Pump Maintenance Program
- Tubes, Tunnel, and Ferry Maintenance Program
- Bridge Painting Program
- Miscellaneous safety projects, provided there is not expansion in the roadway or number of traffic lanes
- Major damage maintenance, repair, and restoration

- Comparable minor alterations

Appendix B, Coastal Act Repair Maintenance Exclusions, provides a full description of the activities listed previously.

3.2.4 Local Coastal Programs

LCPs are the local governments' planning guidelines for coastal development and, once approved by the CCC, provide cities and counties with the authority to issue Coastal Development Permits, with a defined appeal authority resting with the CCC. The CCC retains the primary permit jurisdiction for tidelands, submerged lands, and public trust lands. An LCP must be consistent with Coastal Act policies and allows local governments to specify further actions and policies for their own regional setting. Sonoma County's LCP includes a Land Use Plan—which prescribes land use classifications, types, and densities of allowable development, goals, and policies surrounding development—and an Implementation Plan, primarily zoning ordinances, that provides for the Land Use Plan's implementation. Sonoma County reviews projects and issues Coastal Development Permits, based on its LCP, in areas within the coastal zone occurring outside of the CCC's primary jurisdiction.

Sonoma County adopted its LCP in 1981 and updated it in 1989 to be consistent with its revised General Plan. Other than this focused update, the County has not conducted large-scale revisions. Several of the policies in the Sonoma County LCP directly address projects on Highway 1 and bicycle accommodations. The following are notable LCP policies relevant to this corridor:

- **Road Improvements:** “Providing turning lanes at intersections and parking areas is the most effective approach to improving the capacity of Highway 1, while maintaining it as a two-lane scenic highway....Other minor highway safety and capacity improvements proposed for Highway 1 are selective widening and road alignments; parking management, development and enforcement programs; and other types of road improvements such as roadway striping and marking, bicycle lanes and pedestrian ways....Road construction projects should include sufficient shoulder width to accommodate bicycles and pedestrians where off-road facilities are not feasible” (Sonoma County LCP, VII-33, p. 157).
- **Bikeways, Pedestrian Walks, and Transit:** “...Separated or Class I bike paths are the most desirable option...Where separate paths are not feasible, bicycle lanes adjacent to the travel lane or Class II bike paths are preferable to the existing narrow shoulder. With this option, however, parking restrictions and

enforcement may be needed to keep parked vehicles out of roadside bike lanes” (Sonoma County LCP, VII-39, p. 163).

- **Recommendations for Bikeways – Pedestrian Walks – Transit:** “Where off-road facilities are not feasible, provide adequate shoulder width to accommodate bicyclists and pedestrians on Highway 1 through Sonoma County.”

“Where engineering problems or gradient differences prevent standard four foot shoulders, a minimum of two foot shoulders on both sides of travel lanes is acceptable for bicyclists.”

3.2.5 California Coastal Trail

The California Coastal Trail (CCT) is a product of multiple regulations and state and federal policies, including the following:

- The Coastal Act, which calls for protecting and providing maximum public access to the shoreline, including such measures as a statewide coastal trail system (PRC Section 30220-30224).
- Section 31408 of the State Coastal Conservancy Act of 1976 (PRC Section 31000 et al.), which calls for the California Coastal Conservancy (Conservancy) to have a principal role in the implementation of a coastal trail.
- State and federal designation of the CCT as California’s Millennium Legacy Trail in 1999.
- Senate Bill 908, passed into law in 2001, which requires the completion of the CCT.
- Assembly Bill 1396, passed into law in 2007, directing the Conservancy to coordinate development of the CCT with Caltrans, State Parks, and the CCC. Under this bill, Caltrans is responsible for notifying the Conservancy quarterly, as well as other specified agencies, regarding excess property suitable for the CCT. In addition, the law requires that provisions for the CCT be included in regional transportation plans and that, to the extent feasible, state agencies with property interests or regulatory authority along the coast cooperate in planning and making lands available for the completion of the trail, including constructing trail links, placing signs, and management.

The CCT is envisioned to be a continuous, interconnected, braided public trail system along the California coastline. The CCT may take the form of an informal footpath, shared sidewalk, bicycle path, or, where no other alternative exists, may connect along the shoulder of the roadway, on either an interim or a permanent basis.

While primarily for pedestrians, the CCT is intended to accommodate a variety of users, including bicyclists, wheelchair users, equestrians, and other complementary forms of non-motorized transportation.

Caltrans designers are encouraged to contact Sonoma County Regional Parks and State Parks to evaluate the potential for collaboration on coastal trail development for projects along SR 1 in Sonoma County.

3.2.6 Sonoma County Transportation Authority Countywide Bicycle and Pedestrian Master Plan, 2014 Update

The Sonoma County Transportation Authority Countywide Bicycle and Pedestrian Master Plan (Master Plan) (Sonoma County Transportation Authority 2014) designates Highway 1 in Sonoma County as part of the regional bicycle network with proposed Class II bicycle lanes from the Marin County line to Meyer's Grade Road and from Kruse Ranch Road to the Mendocino County line and a proposed Class III bicycle route from Meyer's Grade Road to Kruse Ranch Road. The Master Plan also calls for the development of the Bodega Bay Trail as a Class I path parallel to Highway 1 in Bodega Bay. Proposed bicycle network maps and list of projects can be found in the Master Plan appendices.

3.2.7 Additional Permitting, Concurrences, and Authorizations

In addition to the policies and restrictions unique to the coastal zone, Highway 1 repairs in Sonoma County are subject to regulations that apply to all project activities in California in general. Depending on the scope of the damage, the location, and the necessary response, Caltrans may be required to obtain permits, concurrences, or authorizations from the following: California Department of Fish and Wildlife (CDFW), the California Regional Water Quality Control Board, State Parks, the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (FWS), the State Lands Commission, the Gulf of Farallones National Marine Sanctuary, or the National Oceanic and Atmospheric Administration. Each of these agencies examines Caltrans' efforts through a different lens and policy, adding another layer of complexity to the regulatory matrix that applies to any Highway 1 repair project.

For a comprehensive list and description of these requirements, refer to the State Environmental Reference site.⁴ An overview of those requirements that are frequently triggered in repair projects along this corridor follows.

For damage repair projects adjacent to State Parks lands, or other areas of exceptional scenic quality, including the coastal zone, Caltrans should consult with the affected land manager as early in the planning process as possible, before project scoping and at approximately the 30-, 60-, and 90-percent design reviews; this will ensure that all feasible measures to avoid and minimize harm are incorporated, public lands resources are considered in the project development process, and resources are adequately protected. In addition, designers are encouraged to engage with resource agencies, such as State Parks, throughout the project development process to keep the lines of communication open and to learn of potential concerns or conflicts as well as opportunities. This collaboration and coordination will need to be managed to keep the project on schedule and to minimize potential impacts to sensitive biological and cultural resources.

3.2.7.1 NATIONAL ENVIRONMENTAL POLICY ACT (1969)

The National Environmental Policy Act (NEPA) applies when the project is entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies. When Caltrans road projects are federally funded, Caltrans must complete a NEPA evaluation of the effects of the project on the human environment (comprising economic, social, and environmental impacts). NEPA compliance also requires compliance with all federal laws under the NEPA “umbrella,” including the National Historic Preservation Act, the federal Endangered Species Act, and Section 4(f).

3.2.7.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) maintains a quality environment for the people of California by giving the people responsibility for engaging in the environmental review process. CEQA applies to governmental action, which may involve (1) activities directly undertaken by a governmental agency, (2) activities financed in whole or in part by a governmental agency, or (3) private activities that require approval from a governmental agency. Any California agency with discretionary approval (the “lead agency”) over such an action that has the potential to affect the physical environment (a “project”) must complete a CEQA determination that is subject to public scrutiny before granting approval.

⁴ See <http://www.dot.ca.gov/ser/vol1/vol1.htm>.

Caltrans will prepare an environmental document that describes the project and assesses its impacts. Depending on the extent of the impacts, additional mitigation work may be required. For details on the process, refer to the State Environmental Reference site.⁵

3.2.7.3 CLEAN WATER ACT OF 1977 AND 1987

The purpose of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of waters through prevention and elimination of pollution. It applies to any discharge of a pollutant into waters of the U.S.

Section 401: Section 401 of the CWA requires a water quality certification from the State Board or Regional Board when a project (1) requires a federal license or permit (a Section 404 permit is the most common federal permit for Caltrans projects) and (2) will result in a discharge to waters of the U.S. Section 401 water quality certification apply to the construction and subsequent operation of a facility.

Section 402: This section of the CWA establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into waters of the U.S. A National Pollutant Discharge Elimination System permit is required for all point discharges of pollutants to surface waters. A point source is a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel. Permits (National Pollutant Discharge Elimination System permit) for all other discharges are obtained from U.S. Environmental Protection Agency or appropriate State agency, which in most cases is the appropriate Regional Water Quality Control Board (Section 402).

Section 404: Section 404 of the CWA establishes a permit program administered by USACE, regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands). Section 404 guidelines allow the discharge of dredged or fill material into the aquatic system only if no practicable alternatives would have less adverse impacts. This coordination is conducted through consultation with USACE.

3.2.7.4 ENDANGERED SPECIES ACT OF 1973

This act and subsequent amendments provides guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend.

Section 7: This section requires federal agencies to ensure that the actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification

⁵ See <http://www.dot.ca.gov/ser/vol1/vol1.htm>.

of critical habitat for these species. FWS and National Marine Fisheries Service share responsibilities for administering the Act. Section 7 allows for incidental take of a listed species for activities funded or carried out by federal agencies if the take is incidental to, and not the purpose of, an otherwise lawful activity.

Section 9: This section lists those actions that are prohibited under the Endangered Species Act. The take of a species listed in accordance with the act is prohibited. Two processes (Section 7 and Section 10) allow a take when it is incidental to an otherwise legal activity.

Section 10: This section provides a means whereby a nonfederal action with a potential take of a listed species could be allowed under an incidental take permit.

3.2.7.5 CALIFORNIA ENDANGERED SPECIES ACT

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy.

No state agency consultation procedures are provided under CESA; however, projects that might result in a take of a state-listed species require a permit from CDFW. For projects that affect both a state- and federal-listed species, compliance with the federal Endangered Species Act may satisfy CESA if CDFW determines that the federal incidental take authorization is consistent with CESA. For projects that will result in a take of a state-only listed species, Caltrans must apply for an incidental take permit under Fish and Game Code § 2081(b).

3.2.7.6 FISH PASSAGE AND WILDLIFE ACCOMMODATIONS

With the passage of California Senate Bill 857 in 2005, Caltrans must provide for the unimpeded passage for anadromous fish (fish that are born in freshwater, migrate to the ocean to mature and return to freshwater to spawn). Damage repair projects that include existing stream or river crossings must incorporate into the design the remediation of conditions that impede fish passage. Designers and PDTs should work with the Caltrans District Fish Passage Coordinator to review fish barrier locations. Resource information is available online.⁶ Design guidance can be found in the Caltrans (2007a) publication *Fish Passage Design for Road Crossings*.

⁶ See <http://www.calfish.org/>.

Repair projects will include, where appropriate, safe crossings for terrestrial and aquatic wildlife and other accommodations to promote biodiversity and avoid or mitigate harm to individual animals, the fragmentation of plant and animal habitats, and the disruption of natural systems.

3.2.7.1 SECTION 4(F)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at United States Code, Title 49, §303, declares that “[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that “[t]he Secretary [of Transportation] may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if –

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f).

In general, a Section 4(f) “use” occurs with a Department of Transportation-approved project or program when the following criteria are met: 1) Section 4(f) land is permanently incorporated into a transportation facility; 2) a temporary occupancy of Section 4(f) land is adverse in terms of the Section 4(f) preservationist purposes as determined by specified criteria (Code of Federal Regulations Title 23, §771.135[p][7]); and 3) Section 4(f) land is not incorporated into the transportation project, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are

substantially impaired (constructive use) (Code of Federal Regulations Title 23, §§771.135[p][1] and [2]).

3.2.7.2 CALIFORNIA STATE CONCURRENT RESOLUTION 17 – RELATIVE TO OAK WOODLANDS (1989)

This resolution requires that state agencies undertake in the performance of their duties to preserve and protect native oak trees to the greatest degree feasible or provide for replacement plantings where Blue, Engleman, Valley, or Coast live oak trees are removed.

3.2.7.3 THREE FEET FOR SAFETY ACT

On September 16, 2014, Assembly Bill (AB) 1371, known as the Three Feet for Safety Act, went into effect in California. This Act is designed to reduce car-bicycle crashes by reminding drivers to give bicyclists more safe space when passing. The California Vehicle Code was amended, requiring drivers to give people riding a bicycle at least 3 feet of clearance when passing in the same direction. If the street width doesn't allow for that, the driver is required to slow down to a "reasonable and prudent" speed, and may pass "only when doing so would not endanger the safety of the operator of the bicycle, taking into account the size and speed of the motor vehicle and bicycle, traffic conditions, weather, visibility, and surface and width of the highway."

This policy confirms the need to provide adequate roadway width, where feasible and where the speed differential between bicyclists and motorist is expected to be significant, such that motorists can safely pass bicyclists.

3.2.8 Caltrans Standards and Directives

Additionally, many internal Caltrans standards and guidance will apply to these projects. An overview of these follows.

3.2.8.1 DESIGN STANDARDS

Caltrans designs roadways in accordance with the HDM. For example, the HDM calls for new construction to have a 40-foot-wide roadway section (width), consisting of two 12-foot-wide lanes (one in each direction) with 8-foot-wide paved shoulders on conventional highways. A design exception is required for any project intending to install a section that is less than 40 feet wide. However, there are many good reasons to seek out a narrower roadway section. These include avoiding impacts to archaeological resources, sensitive or listed biological resources, and visual resources, as well as topographical and right-of-way constraints, conflicts with context

sensitivity and regulatory policy, and excessive costs. In addition to the HDM's standards, many more have been developed to provide mobility and safety for all users. For additional standards, see Caltrans Design Information Bulletin (DIB) No. 79-03 (Caltrans 2007b). This bulletin, currently in its third edition and contains standards for most damage repair projects.

3.2.8.2 CONTEXT-SENSITIVE SOLUTIONS

In November 2001, Caltrans adopted a policy, Director's Policy 22 (Caltrans 2001), stating that all approaches toward planning, designing, constructing, maintaining, and operating the Caltrans system should look for "Context-Sensitive Solutions." This means that transportation decision making should be inclusive, considering and integrating aesthetic, historic, and environmental values into the process of project delivery. The policy recognizes that highways are more than just the paved roadway—they are corridors that support communities' economic, aesthetic, cultural, and social needs. The Context-Sensitive Solutions policy asks staff to reach resolutions through a collaborative interdisciplinary approach involving all stakeholders. Staff should coordinate within State Parks staff for projects bordering a state park. See the map and Existing Conditions table in Appendix A for state parks adjacent to Highway 1 in Sonoma County. The County of Sonoma and the CCC should be included for projects in, or affecting the resources of, the coastal zone.

3.2.8.3 COMPLETE STREETS POLICY

In 2008, Caltrans strengthened its policy on Complete Streets in Deputy Directive 64 (Caltrans 2008), which requires that Caltrans provide for the needs of travelers of all ages and abilities. Several revisions were made to the HDM in 2012 to incorporate features of Complete Streets.

3.2.8.4 MAIN STREET: FLEXIBILITY IN DESIGN AND OPERATIONS

The *Main Street, California A Guide for Improving Community and Transportation Vitality* booklet (Caltrans 2013a) is a planning reference and compilation of options that can enhance established traffic engineering and design practices in the implementation of Deputy Directive 64. Although the ideas and practices in this report do not supersede existing Caltrans' manuals, the suggestions support existing multimodal policies and standards, offering stakeholder engagement and traffic-calming practices for projects focused on main streets in communities.

3.2.8.5 CLIMATE CHANGE POLICY

On June 22, 2012, Caltrans issued Director's Policy 30 on Climate Change (Caltrans 2012). Director's Policy 30 directs the coordination of climate change mitigation and

adaptation across all Caltrans programs, to include design and construction of transportation infrastructure, support of climate change-related research, ensuring that adequate resources are allocated toward project-level climate change-related studies, and further development, coordination, and implementation of Caltrans Climate Change policy.

Chapter 4 Process

4.1 Process for Major Damage Repairs

Caltrans District 4 Maintenance is responsible for providing documentation to secure funding for major damage repairs. This documentation requires input from a wide range of functional units, including the following:

- Geotechnical Design
- Design (Roadway)
- Landscape Architecture
- Environmental
- Structures
- Materials
- Hydraulics
- Right-of-Way
- Traffic
- Construction

A Caltrans Director's Order is necessary to perform emergency damage repairs. A Director's Order is a formal document, signed by the Director or delegated Deputy Director, that grants authority to a district to accelerate project award and set aside the standard project advertising, bidding, and award processes. Director's Orders are critical to Caltrans' ability to respond effectively and quickly to emergencies on the state highway system.

The typical approach for most major damage sites is a standard two-step process consisting of two projects. The first project is an emergency opening (EO) project, such as debris removal, asphalt concrete pavement leveling, or setting up traffic control to restore essential transportation functions. The second project is a permanent restoration project for the full repairs.

EO projects are repairs made during and immediately following major damage to restore essential traffic, minimize the extent of damage, and protect the remaining facilities. Permanent restorations are repairs performed after emergency repairs have been completed to restore the highway to its pre-disaster operating condition. These Guidelines apply to permanent restoration repair projects.

There are instances when EO and permanent restoration projects are performed concurrently. If this is the case, the Guidelines would also apply to the project. EO-only efforts are directed by the Division of Maintenance and should use these guidelines as a reference for best practices.

4.1.1 Project Development for Storm Damage Projects

Most permanent restoration projects and replacement projects use the normal design-bid-build process, following the guidelines in the *Project Development Procedures Manual* (see Reference Section) for a normal bid with plans, specifications, and an engineer's estimate. A Damage Assessment Form can serve as the project initiation and project approval document for some straightforward projects. For more complex projects, a Project Initiation Report and a Project Report are required (the Damage Assessment Form is an attachment to these documents). The District Maintenance Engineer will coordinate with Design and Headquarters programming to make this determination.

All projects must comply with state and federal regulations intended to protect the public and environment from damage or impacts. Response to events that have been declared a disaster by the state or federal government, or in which a state of emergency has been declared, may have some or all of these regulations suspended for a short period of time. It is during this time that EO projects typically are executed.

The following is an overview of the permanent restoration project development process:

- 1) Perform a field assessment.
- 2) Conduct a preliminary consultation with staff of agencies with permitting authority over the project. As part of this consultation, participants will determine what additional review may be desirable before and during Caltrans' 30-, 60-, and 90-percent design review processes.
- 3) Ensure that design is based on the HDM, the parameters of this document, and other constraints identified by field assessment, including the following:
 - a. Forming a PDT—The project will be refined based on functional group guidance. Base any design exceptions on site context and impacts and document them in a Design Standard Decision Document (DSDD). Fulfilling

the policy objectives listed in Chapter 3, and their underlying mandates, should be a high priority in guiding the design process.

- b. Maintaining current roadway geometry, where feasible, while providing for safe multimodal travel should guide design rather than achieving a greater design speed. See section 5.1.1, Design Speed.
 - c. Considering how the various design parameters of Chapter 5 can be synthesized to best fulfill policy objectives and inform the overall design.⁷
- 4) Ensure environmental compliance, including developing and preparing the NEPA and CEQA documents as needed and incorporating alternative design analysis and other information needed for any required coastal development permits, Section 4(f) coordination, or other agency approvals. This task requires continued coordination with relevant permitting agencies and other relevant resource agencies. This includes Sonoma County Regional Parks and State Parks for potential coastal trail improvements. Additional or revised design exceptions may need to be prepared as part of this planning process. Depending on the level of environmental document, it may require public involvement activities.
 - 5) Secure environmental permits,⁸ which may involve appearing before an approval authority and participating in a public involvement process.
 - 6) Finalize project design, satisfy permit conditions, and obtain right-of-way clearances.
 - 7) Send project construction plans out to bid.
 - 8) Administer the construction contract consistent with issued permit; any proposed changes must be reviewed by appropriate functional units for consistency with standards, these guidelines, and permits. Proposed changes that are inconsistent with issued regulatory waivers or permits must receive appropriate regulatory clearances prior to being implemented.

⁷ For example, relative to roadway geometrics and lane/shoulder widths, while 12-foot lanes might provide safe truck turning, one or both shoulders could be narrower where appropriate to minimize overall roadway/structure width, or vice versa (designing a narrower travel lane and increasing the width of the shoulder[s]).

⁸ A coastal permit may be required, as discussed in Chapter 3. Depending on the scope and location of the damage and the necessary repair response, Caltrans may also be required to obtain permits, concurrences, or authorizations from the following: CDFW, the California Regional Water Quality Control Board, State Parks, USACE, FWS, State Lands Commission, or the National Oceanic and Atmospheric Administration. Each of these agencies examines Caltrans' efforts through a different lens of policy requirements, adding another layer of complexity to the regulatory matrix that applies to any Highway 1 repair project.

- 9) Perform post-construction activities, such as revegetation monitoring and reporting and implementing mitigation commitments until required performance standards are met. It is noted that programmatic and advanced mitigation planning is being developed and should be considered as a potential fit for project needs.

For additional information on Major Damage or Director's Order Projects refer to the Division of Maintenance Website.⁹

4.1.2 Federal Funding

EO and permanent restoration projects are eligible for federal funding reimbursement when there is a declared disaster. Projects are eligible for reimbursement for two federal fiscal years after the triggering event. The funding source is first-come/first-served. Projects developed quickly are more likely to receive federal transportation dollars. Projects that are not able to meet the time constraints of the federal program are likely to be funded from the State Highway Operations and Protection Program account under the Major Damage Restoration category. The greater percentage of federal dollars captured to fund the Major Damage Restoration category frees up the State Highway Operations and Protection Program state-only funding for other programming categories, such as the Stormwater Mitigation Program or the Roadside Protection and Restoration Program.

⁹ See <http://onramp.dot.ca.gov/hq/maint/orway/ha23>.

Chapter 5 Design Guidelines

The design guidelines herein apply to permanent restoration projects on Highway 1 in Sonoma County. The intent is to improve consistency in design and aesthetic considerations for these projects. Projects should minimize change from current conditions, stay within the existing right-of-way, and be visually compatible with the surrounding environment to protect the rural character of Highway 1 while maintaining safety and functionality of all design elements. Projects should also meet the needs of all roadway users in a multimodal context. Chapter 80 of the HDM calls for a balanced solution to transportation problems. The HDM Topic 109, Scenic Values in Planning and Design (see Appendix C), states that the location of the highway, its alignment and profile, the roadway cross section, and other features should all be in harmony with the setting. These guidelines provide additional factors to be considered in achieving that goal. In particular, they provide greater specificity to assist in achieving successful context sensitive designs through appropriate HDM exceptions. All staff involved in the design of a damage repair project on Sonoma Highway 1 should review this chapter.

Consultation with Sonoma County and the CCC is encouraged for projects requiring coastal development permits, as is early notification to other applicable permitting agencies. Projects within, adjacent to, or visible from State Parks lands, especially public viewing areas, should include early coordination with State Parks to obtain their input and recommendations. This consultation should include all design elements. The project development team should meet early with the Environmental generalist for coordination with partners.

5.1 Overview of Recommendations

Per DIB 79-03, major repair projects can restore the highway to the condition that existed prior to the damage; however, consideration of appropriate highway improvements is part of the project development process. Restoration projects that necessitate physical changes to the roadside environment involving a structure—such as retaining walls, bridges, or viaducts—shall, in accordance with the HDM, strive to maintain the existing character of roadway and minimize the roadway geometric features to achieve appropriate, context-sensitive design standards consistent with resource preservation. These design features include width, horizontal and vertical alignment, superelevation, and stopping sight distance. The exact features that constitute final design should be based on a sound engineering analysis that considers

the context of the specific project location and the avoidance of adverse impacts. Projects that are considered replacement facilities are expected to bring the roadway geometric features to minimum design standards. However, as indicated in HDM Topics 81 and 109, designers are required to consider potential impacts on sensitive resources and scenic values. Projects with the potential to result in adverse impacts to coastal resources should be reevaluated to consider nonstandard design options to avoid or reduce such impacts. Note that there is value in staying within the existing right-of-way and road bench width, retaining an existing curvature that has a more natural fit to the landscape, and in limiting driving speeds, as these are important to the user's experience and part of the character of the roadway. Careful attention should also be given to designing projects to be consistent with the Sonoma County LCP and Coastal Act policies for all projects along Highway 1. Similarly, projects in or adjacent to State Parks lands, or that may affect the scenic qualities of State Parks lands, should be consistent with park plans and management policies.

To achieve these objectives, designers may have to accept current nonstandard features or even deviate from design standards. For example, it may not be possible to accommodate very large trucks. Most of Highway 1 in Sonoma County is designated a California Legal Kingpin-to-Rear-Axle (KPRA) Advisory Route with a KPRA distance of 30 feet. Repair projects are not intended to increase this KPRA number. Maintaining the current roadway curvature and features should accommodate the KPRA-30 vehicle even though curve radii, superelevations, or widths may not be standard. Accommodating longer KPRA vehicles by designing to standard may be possible, but it should not be at the expense of the scenic environment.

Projects that would typically be required to bring the Highway 1 facility up to current design standards shall have an approved Design Standard Decision Document (DSDD) when they need to deviate from HDM standards. These Guidelines can be cited as ancillary documentation in these DSDDs; however, the approval for these DSDDs is reliant on impacts to specific resources on a project-by-project basis.

For repair projects, the PDT should be aware that there are usually many interested stakeholders who need to be involved in the project development process, consistent with the Context-Sensitive Solutions policy.

The PDT also should note that there are many good reasons to seek out a narrower roadway section. These include avoiding impacts to archaeological resources, sensitive or listed biological resources, and visual resources, as well as topographical

and right-of-way constraints, conflicts with context sensitivity and regulatory policy, and excessive costs. Projects are to be designed to accommodate all roadway users. Surrounding land uses, existing and planned pedestrian and bicycle facilities, bicycle and pedestrian plans, and input from stakeholders and agency partners all need to be considered when determining multimodal needs. If there is an identified need to accommodate pedestrian travel on a replacement facility, planning and development for the facility needs to be coordinated with input from various stakeholders and agency partners. Section 5.3 includes considerations for pedestrian and bicycle accommodations.

Table 5-1 summarizes Highway 1 design recommendations. These recommendations are further discussed in the subsequent sections. DSDDs are expected to document the application of most of the recommendations.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
Roadway Geometrics 	The character of the existing horizontal and vertical alignment should be generally maintained. Curve flattening should be made only when there is an accident history at the location. Design speed should be commensurate: 25 to 40 miles per hour (mph) is acceptable in rural mountainous, rolling, or flat areas and 25 mph or less is acceptable in developed areas.	Where alterations may be warranted, primarily because of a demonstrated crash history, any new alignment should avoid and mitigate resource impacts, be carefully fitted and blended in with the existing topography, and designed to meet the needs of all roadway users. Repair projects should consider alternatives that provide for staying within the existing roadway bench and right-of-way. Avoid encroaching into State Parks lands.
Lane Width 	Meeting the safety and mobility needs of all roadway users while preserving the existing, scenic two-lane character of Highway 1 is the primary goal; less than 12-foot lane widths may be considered.	HDM Index 301.1 calls for a 12-foot-wide lane. Narrower than 12-foot lanes should be considered if negative project impacts can be reduced, the design vehicle can be accommodated, the character of the roadway can be preserved, sight distance is adequate, and the needs of all roadway users are met. Lane width in towns can be 11 feet. See Section 5.2.6.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
Shoulder Width – Rural Locations 	Considerations include avoiding negative project impacts that would be significant under applicable resource protection policies and accommodating cyclists according to project-specific topography and context. Recommendation is for 4-foot shoulders unless justified otherwise.	- DIB 79-03 requires either a 4-foot shoulder or 8-foot shoulder depending on the average daily traffic (ADT) of the roadway segment; 4-foot shoulders promote the rural character of the roadway, provide space for multimodal users, and reduce visual impacts caused by the full geometric cross section. Evaluate whether resource constraints would allow 6-foot shoulders for areas identified as Class II facilities in the Sonoma Countywide Bicycle and Pedestrian Master Plan (see Section 5.3.1).
Shoulder Width – Towns 	A 5-foot shoulder width should be used where no parking exists; 13-foot shoulder width should be used where parking exists.	The 5- or 13-foot shoulder width can be provided in towns to accommodate bicyclists. Pedestrians should be accommodated on sidewalks or paths. Seek out stakeholder involvement when working in towns to ensure consistency with Sonoma County LCP and town plans.
Shoulder Width – Bridges 	A 4-foot shoulder should be the minimum considered on structures when an alternative bicycle path is available. A 6-foot shoulder width is preferred adjacent to bridge rails and retaining walls and when required by geometric conditions.	Using a 6-foot shoulder allows bicyclists the full use of the shoulder for riding; 4-foot-wide shoulders tend to push bicyclists closer to or over the edge line into the travel way. If there is an identified need to provide connections/access for pedestrian travel on a bridge replacement, such as a gap on a parallel trail, a sidewalk may be considered in addition to shoulders and in coordination with stakeholders and agency partners.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
Parking, Pullouts, Unpaved Shoulders, and Turnouts 	No net loss of parking, pullouts, or turnouts. Non-pavement treatments should be used where feasible. Other roadway uses or development of the area beyond the shoulder should be minimized and fit in with the natural environment.	Any pullouts removed should be replaced so as to provide equivalent or better service. Any opportunities to add parking, pullouts, or turnouts should be considered, especially where there is an identified need (such as coastal access points) and where consistent with the Sonoma County LCP.
Bridge Barriers and Railing 	Bridge railings should be see-through type, to allow maximum views and consider all multimodal users. Ensure that the railing height and rail opening widths meet current minimum design standards for both bicyclists and pedestrians where appropriate.	See-through types of railings are used to allow viewers visual access to the unique scenic qualities of the crossing. Bicycle and pedestrian railings added to a bridge rail can be highly visible and special attention should be given to the aesthetics of these railings.
Railing 	Midwest guardrail (MGS) is the preferred railing type where railing is required. Wood posts and matte finish on railing should be used where feasible. White Barrier Markers on top of the MGS should be used in lieu of Delineators (Type F White).	MGS is a consistent and familiar feature along the Highway 1 corridor. It provides transparency, context sensitivity, and is cost effective. Continuity in railing type is important to avoid visual intrusion caused by dissimilar roadside features.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
End Treatments 	Where practical, see-through concrete barriers and railings should be terminated with a buried end-section. If not feasible, an in-line end-section should be used.	Buried end-sections and in-line end-sections, as opposed to flared end sections minimize visual impacts. Design solutions that avoid the need for crash cushions that would cause visual intrusion are encouraged.
Vegetation Control Under MGS 	No vegetation control treatment is required under MGS.	Typical soil coverage for erosion control will be needed.
Non-safety Fencing 	Where fencing is required, it should be wire or timber with timber posts. Other fence types should be installed where they are more typical and appropriate for the adjacent land use.	Wire and timber are common features along Highway 1 and in rural and agricultural settings. Chain-link fence should be avoided. Before replacing a stand-alone fence, consider its purpose and need and alternatives. In general, do not add non-safety fencing unless it serves to promote, and is consistent with policies of, the Sonoma County LCP.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
Slope Stabilization 	Nonstructural options should be considered first, then, where not feasible, other options that can be revegetated with native plants are preferred. Ensure that any pedestrian needs/uses are factored into the final design.	Nonstructural options are less visually disruptive than retaining walls. Solutions that can be vegetated with locally appropriate native palette of plants to blend in with the surrounding environment are preferred. See Section 5.6. It is important to evaluate the impact on existing and planned pedestrian access (e.g. public trail or pathway).
Retaining Wall – Timber Lagging Walls 	Timber lagging is typically used for retaining walls required below the roadway.	Timber lagging is visually appropriate for both rural and marine settings. Coat the exposed concrete and metal features to blend into the setting and reduce glare. Dark-brown paint (Federal Standard 595 Color #30051) should be used. Stain should also be dark brown. Wall aesthetic uniformity is important to minimize cumulative visual impacts caused by inconsistency.
Buried Walls 	Retaining walls should be buried, if feasible, and the resulting slope revegetated with appropriate native plants.	Resulting slope should be evaluated to determine whether guardrail is required per Chapter 7 of the <i>Traffic Manual</i>. If guardrail is not required at the time of the project, adequate unpaved area should be provided between the edge of pavement and the retaining wall to accommodate future installation of guardrail if warranted. Communicate with Traffic Safety for these issues. Any choice between uphill or downhill retaining wall structures should favor that with the least environmental and scenic impact.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
Fall Protection Cable Railing 	Mobile fall protection should be considered and used whenever feasible.	A design exception will need to be processed.
Retaining Wall – Carved and Stained Rock Walls 	Soil nail walls with shotcrete are typically used for walls above the roadway. Stain and carve shotcrete to mimic local natural rock outcroppings. Eliminate paved ditch and maintenance railing wherever feasible. Stain all appurtenances to match the wall.	Carved rock walls blend into the natural environment. Staining of the concrete and metal features blend them into the setting and reduce glare. Wall aesthetic uniformity is important to minimize cumulative visual impacts. Attention to aesthetic detail on these walls goes beyond color and texture. Vertical alignment should be adjusted to resemble natural rock formations. The wall face should have a batter to mimic a natural slope aspect. See Section 5.6.2.
Post-construction Grading 	The graded bench in front of the wall should be evaluated for post-construction long-term uses. The priority is to bury the wall to reduce visual impacts. Slope rounding techniques should be used to help blend the disturbed areas into the natural landforms.	This area should be discussed with local partners to determine if the location may be in future plans for the California Coastal Trail and if it makes sense to leave the bench to facilitate long term plans.

Table 5-1 Design Recommendations

Design Element	Recommendation	Comments
Drainage Features 	Drainage pipes should be hidden from view where feasible. Pipes that cannot be hidden should be colored with earth-tone coating to conceal them. Concrete drainage features should be colored to match adjacent earth tones. Drainage rock used as dissipaters should be colored earth tone to reduce visual impacts. Inlets should be sited outside of where bicyclists are most likely to ride, if feasible, and shall use bicycle-proof grates.	Drainage features should be camouflaged to the extent feasible. Drainage features can be highly reflective and visually intrusive if left uncovered or uncolored. Where appropriate, drainage ditches should be designed in conjunction with the shoulder to reduce the amount of pavement and widening needed.
Rumble Strips 	Rumble strips, if warranted, should only be placed in the centerline to reduce vehicle crossovers.	Shoulder and edge line rumble strips can create control issues for bicyclists.

5.2 Roadway

5.2.1 Design Speeds

The HDM defines design speed as “a speed selected to establish specific minimum geometric design elements for a particular section of highway.” These design elements include vertical and horizontal alignment and sight distance. Although Table 101.2 in the HDM defines the standard design speed for conventional highways in rural, flat terrain as 55 to 70 miles per hour (mph), in rolling terrain as 50 to 60 mph, and in mountainous terrain as 40 to 50 mph, several additional factors must be considered in the final selection of an appropriate design speed.

Many factors influence the choice of design speed, including the terrain, environmental impacts, type and anticipated volume of traffic, functional classification of the highway, and whether the area is rural or urban. Scenic values are also a consideration in the selection of a design speed.

In addition, the selected design speed should be consistent with the speeds that are likely to be expected on a given highway facility. Drivers adjust their speed based on their perception of the physical limitations of the highway and its traffic. Where a reason for limiting speed is obvious to approaching drivers, they are more apt to accept a lower design speed than where there is no apparent reason for it.

As outlined in Topic 81 of the HDM, it is not always feasible or appropriate—either from a physical or an environmental standpoint—to bring the roadway up to HDM standards; therefore, technical reductions in design speeds are required. For Highway 1 in Sonoma County, the design speeds listed in HDM Table 101.2 are often significantly above the posted speed limits or above what a driver will achieve or expect to achieve and therefore need to be lowered. Designers should aim to retain the natural curvature of Highway 1 as this will protect the character of the highway, calm traffic, enhance the recreational experience, and minimize impacts to adjacent coastal resources. Design improvements along Highway 1 that will protect the existing character and sensitive resources should be considered through all practical means, including lower design speeds.

As noted, HDM design speeds can be adjusted to be lower, especially where there are tight curves. A design speed of 25 to 40 mph may be acceptable in rural mountainous, rolling, or flat areas, and 25 mph (or less) is generally acceptable in developed town areas. The chosen design speeds for a project should generally reflect current safe and appropriate speeds for the existing highway geometry.

5.2.2 Posted Speeds

Posted speed limits, or speed zones, are set based on the 85th percentile speed of free-flowing traffic. This posted speed may be reduced where an engineering study indicates the need for a reduction in speed based on collision records, roadside development, and other conditions not readily apparent to the driver. The District Traffic Safety Engineer should be consulted for assistance with this procedure. Reference the *California Manual for Setting Speed Limits* (Caltrans 2014a) for the setting process and other details.

Advisory speeds are used to advise motorists of changes in conditions, including roadway horizontal alignment and sight distance. These are determined based on site conditions and are below the posted speed limit.

Appendix A shows speed zones along Highway 1 but does not include advisory speeds. There are several different speed zones, dependent on the roadway conditions

and location. While the predominant posted speed may be 55 mph, the advisory speed or speed zone is lower where the sight distance is restricted by steep grades or tight horizontal curves. In these areas, design exceptions are often required due to the limited right-of-way and restrictive existing conditions. Some segments may not have been subject to a speed study and are therefore shown as being the default 55 mph. As part of a repair project, especially on a curved section of Highway 1, performing a speed study and posting or adjusting an advisory speed sign, should be considered.

5.2.3 Landscape Segments and Speeds

Sonoma County can be categorized into segments based on similar landscape unit types, which are listed below. Appendix A describes the landscape units in greater detail, as well as the existing posted and advisory speeds for each segment. This appendix also highlights the areas adjacent to State Parks lands.

Towns: Several sections of Highway 1 in Sonoma County pass through small rural towns with driveways that serve commercial and residential areas. These sections have a higher percentage of bicycle and pedestrian traffic. These sections typically have posted speeds of 25 to 35 mph and relatively level grades (less than four percent).

In these sections, lower design speeds may be appropriate to provide for the needs of both non-motorized and motorized modes of transportation. Wider pavement sections with appropriate striping should be considered to accommodate bicyclists and pedestrians, with a minimum of 5-foot-wide shoulders where parking is not present and 13-foot-wide shoulders where parking is allowed.

Coastal Bluff, Marine Terrace, Coastal Canyon, Estuary, and Bay Front: These landscape units typically are characterized by winding roadways with steep hillsides along Highway 1. Speed zones and advisory speeds in these sections vary, with some areas 35 mph or less, because the roadway geometrics require motorists to travel more slowly to navigate the existing curves and grades. Right-of-way typically is limited in these sections.

Forested: There are sections along Highway 1 with eucalyptus, cypress, oak, and pine groves. The roadway in these sections is typically winding with rolling grades up to 7 percent or more. Speed zones are typically 35 to 55 mph, with existing advisory speed locations due to the existing horizontal and vertical curve alignment. Travel lane and shoulder width requirements may change or reduce in size while still

accommodating the needs of the traveling public in these sections. Right-of-way may be limited in these areas.

Agricultural/Pasture: Typically, the agricultural sections have level grades, with grasslands and open farmlands. Speed zones for these sections are typically 30 to 55 mph, with some advisory speed locations at horizontal curves with limited sight distance. Sonoma County LCP policies on maintaining economic, environmental, and social value of agricultural lands should be taken into account when designing highway projects. A narrower cross section may or may not be appropriate in these areas, but all potential resource impacts should be evaluated to assist in that determination.

5.2.4 Horizontal and Vertical Alignment

Along with user expectations, the existing horizontal and vertical alignments of Highway 1 are key factors defining its distinctive character. This character is defined in the context of Highway 1 segments noted previously. Meeting the expectations of all roadway users is a basic design concept to strive for in all cases; therefore, comprehensive improvements that significantly alter the character of Highway 1 from that in the adjacent environment, and thus, change the users' expectations and recreational experience, are not normally justified, warranted, or desirable. Minor adjustments to the roadway alignment, which could, for example, remove a broken back curve or provide the necessary superelevation transitions between reversing curves, can often be included on a case-by-case basis. In general, however, realignment of curves should only be considered when there is a demonstrated crash history. Impacts to coastal resources and bicyclists should also be a part of this consideration. The decision to include or not include any roadway improvement needs to factor in the existing alignment and other basic geometric features such as width, sight distance, or the presence/absence of a turn lane; the context of the facility; the crash history of the area; the possible need for traffic calming features; and the crash potential, both before and after the proposed improvements. In cases where overriding issues call for a realignment, the alignment should be carefully fitted and blended in with the topography in such a manner as to not only address safety concerns, but also to fit the character of Highway 1 in light of the surrounding landscape and sensitive resources.

5.2.5 Sight Distance, Superelevation, and Horizontal and Vertical Curves

Commensurate with the chosen design speed, the alignment should provide stopping sight distance. This basic design standard should be strived for in all circumstances.

An alignment that provides a high degree of drivability is attained when the horizontal alignment and superelevation are consistent with the design speed, and there is sufficient tangent length to attain the superelevation runoff shown in Topic 202 of the HDM. For low-speed facilities, the superelevation rates shown in Table 202.2 can be reduced without sacrificing safety or drivability. The American Association of State Highway and Transportation Officials (AASHTO) publication *A Policy of Geometric Design of Highways and Streets* (AASHTO 2011) provides guidance on superelevation and speed and may provide additional insights for achieving acceptable project design.

The guidelines for vertical curves in Topic 204.4 of the HDM provide for highway geometry commensurate with the design speed. In addition, vertical curves that restrict sight distance below standard should be considered for upgrading.

Consideration of whether to modify curvature based on a demonstrated crash history should also include an evaluation of whether there is any indication that the existing roadway geometry or other factors actually contributed to the cause of the crashes. The results of this evaluation must factor into any decision about whether the roadway alignment actually needs to be changed. Lower design speeds should be evaluated as a means to calm traffic and as an alternate to changing a current alignment. Beyond this, any further consideration of any roadway adjustment should only be made to the extent that it is necessary for the design vehicle to stay within the lane, and keeping in balance the potential benefits with the potential adverse impacts given the context of the facility.

5.2.6 Travel Lanes and Shoulders

The HDM standard roadway section for a new two-lane undivided roadway is two 12-foot-wide lanes and two 8-foot-wide shoulders. However, for resurfacing, restoration, and rehabilitation projects (also known as 3R), geometric standards for paved shoulder widths per DIB 79-03 vary depending on traffic volumes and the width of existing shoulders. As the average daily traffic (ADT) for Highway 1 varies from 1,250 to 17,400 vehicles, per DIB 79-03, all segments of Highway 1 in Sonoma County require either 4-foot-wide (ADT of 1,001 to 3,000) or 8-foot-wide (ADT

more than 3,001) shoulders. However, site-specific conditions may warrant further modification of these widths through design exceptions.

Due to the highly scenic and sensitive environment as well as the existing narrow (often 22-foot-wide) roadbed, a 40-foot roadway may not be sensitive to Highway 1 through Sonoma County. For the majority of Sonoma Highway 1, travel lane widths should be 12 feet with a recommendation of 4-foot shoulders or 6-foot shoulders in high truck traffic areas (see Traffic Census Program website, Truck Traffic counts; <http://www.dot.ca.gov/trafficops/census/>) and where Class II bicycle lanes are proposed in the Sonoma Countywide Bicycle and Pedestrian Master Plan from the Marin County line to Meyer's Grade Road and from Kruse Ranch Road to the Mendocino County line (see Section 5.3.1).

Encroaching onto or impacts to sensitive resources within or adjacent to State Parks lands may warrant narrowing the roadway cross section. Discussions should include the State Parks land manager and factor in design vehicle requirements, safety concerns, non-motorized users and other site relevant items. Additional adjustments to lane widths may be needed in tight curves, to address site distance constraints, or by narrowing the roadway width to avoid significant impacts.

Consideration of wider shoulders (greater than 4 feet) may be preferred where vertical elements such as Midwest Guardrail (MGS) or bridge rail are proposed for extended lengths as these elements limit the ability for bicyclists to use the full shoulder width. Wider shoulders may be necessary if there is a history of vehicles stopping for scenic purposes. Narrower shoulders (less than 4 feet) may be acceptable in some downhill sections where bicycle traffic can reasonably use the full lane width, or where wider shoulders would individually or cumulatively adversely affect sensitive or scenic resources, or to avoid development outside of the right-of-way without compromising the safety and mobility needs of bicyclists.

Highway 1 also serves as the main street for many towns. Often, a wider roadway section may be the most appropriate and user-friendly solution when they include parallel parking, bike lanes, and sidewalks. These sections have a higher percentage of bicycle and pedestrian traffic and should be given special consideration. In these sections, a 5-foot-wide shoulder without parking and 13-foot-wide shoulder with parking is recommended to accommodate bicycles. A separate pedestrian way should be provided. Perpendicular and diagonal parking are highly discouraged. Given the various conditions currently existing in towns (e.g., presence of curbs, parallel

parking, no parking, informal off-road parking, sidewalks, etc.), a site-specific solution should be derived based on coordination with local officials and in conformance with the Sonoma County LCP and applicable town plan. Also see DIB 82-06 (Caltrans 2017) for Americans with Disabilities Act requirements and accommodations.

The location of shoulder-width reductions or tapers back to the existing shoulder width should consider the visibility of bicyclists to motorized traffic. Shoulders on flat or ascending grades should have width reductions where sight distance is not significantly restricted by crest vertical or horizontal curves. This allows bicyclists to transition from the shoulder to the lane in full view of motorized traffic. This provision is less of a concern in downgrades where bicyclists are expected to use the full lane width.

5.3 Bicycle and Pedestrian Facilities

Bicyclists and pedestrians are frequent users of Highway 1, but off-road separated facilities or standard bicycle lanes are not feasible within the existing right-of-way for stretches of Highway 1. All options for accommodating cyclists and pedestrians should be considered in a context-sensitive manner, with an eye toward including cycling improvements where the needs and opportunities are the greatest, especially considering the Three Feet for Safety Act, while at the same time not detracting from the rural scenic characteristics of Highway 1 or causing other negative impacts to sensitive resources within the State Parks lands or the coastal zone. Bicyclist-appropriate railings, at the minimum allowable height, should be considered on barriers, walls, and bridges.

In some locations, it may be appropriate to increase the paved shoulder width, such as where limited line of sight is present, uphill segments where bicyclists ride at relatively slower speeds than motorists, or where vertical elements such as MGS or bridge rail are proposed for extended lengths as these elements limit the ability of bicyclists to use the full width of the shoulder. Shoulders wider or narrower than 4 feet in a rural environment should also consider the actual or expected volume of bicycle and pedestrian traffic, taking into account site-specific topography and particular user needs from a corridor perspective.

Pedestrians and bicyclists should be accommodated in all projects. Dedicated pedestrian facilities should be incorporated into projects on a case-by-case basis where there is an identified need and in coordination with local stakeholders.

5.3.1 Sonoma Countywide Bicycle and Pedestrian Master Plan

Sonoma County Transportation Authority updated the Bicycle and Pedestrian Master Plan (Master Plan) in 2014. The Master Plan proposes Class II bicycle lanes from the Marin County line to Meyer's Grade Road (north of Jenner) and from Kruse Ranch Road (near Salt Point State Park) to the Mendocino County line. The segment between Meyer's Grade Road and Kruse Ranch Road is proposed as a Class III bicycle route. Caltrans projects should accommodate the Master Plan by incorporating 6-foot-wide shoulders in Highway 1 repair projects where Class II bicycle lanes are proposed and 4-foot wide shoulders where a Class III bike route is proposed in the Master Plan (Sonoma County Transportation Authority 2014).

5.3.2 Bicycle and Pedestrian Crossings

Repair projects should consider the need for safe crossings, such as where a trail crosses Highway 1. Where a need is identified to channelize pedestrians to cross the highway at a defined location, the Office of Traffic Safety evaluates the need to mark an uncontrolled crossing on a case-by-case basis. At uncontrolled crossings, elements such as signage, high-visibility crosswalks, or other traffic control devices should be considered and incorporated into the project design as appropriate.

5.3.3 California Coastal Trail

Caltrans is supportive of the CCT, and designers should consider the alignment of the CCT when designing damage repair solutions. Repair projects should be designed such that they address any trail considerations that may fall within a project limit and to not preclude future development of the trail. Information on the alignment of the CCT is available on CCC's web site.¹⁰ Contributing to links in the CCT within a project's limits is a potential strategy for mitigating unavoidable project impacts to public coastal access and should be considered for feasibility.

5.3.4 Parking, Pullouts, and Turnouts

Vehicles frequently park or pull off the travel way and onto the shoulders of Highway 1 and may become pedestrians to observe the scenic vistas or access the coast. It is important to consider surface treatment, safety, and the potential to block bicycle and/or pedestrian access when considering accommodating parking or pullouts on the shoulder. Consider sight distance and other safety issues when creating new parking and pullout locations. Any new pullouts or parking areas should be consistent with the Sonoma County LCP. Consultation with State Parks is

¹⁰ See <http://www.coastal.ca.gov/access/ctrail-access.html>.

necessary regarding the addition, retention, or removal of any parking, pullout, or turnouts when within its jurisdiction.

Bicycle pullouts may also be considered on uphill locations or at the top of an ascending grade when 4-foot or wider shoulders are not present to allow bicyclists to rest or let other users pass safely. Scoping of bicycle pullout locations should be considered on a case-by-case basis, based on engineering judgment so as not to encourage risky behavior. Additional treatments should be considered, with stakeholder and agency partner input, where pullouts are intended as bicycle refuge, to encourage safe passing of cyclists at ingress/egress points and to discourage vehicular parking if not in proximity to a trailhead or other public access points.

Existing pullouts should be preserved when feasible. If projects warrant the removal of an existing pullout, it should be replaced in an appropriate location so there is no net reduction in the number of pullouts.

5.4 Bridges

Bridge width, the design of the bridge, and selection of the barrier and railing type for the structure should be such that they complement the existing surroundings. Stakeholder involvement should be part of any bridge replacement project. Bridge recommendations are not included in these Guidelines and should be developed as part of project-specific development process.

BRIDGE BARRIERS AND RAILING

Each bridge is unique and, as such, the bridge type and associated railing should be determined on a case-by-case basis. Bridge type, in addition to structural requirements, should also consider pedestrian and bicycle access, view opportunities from the structure, and bridge visibility from the surrounding area. The railing type should consider the safety of motorists, bicyclists, and pedestrians, while also being visually compatible with the surrounding landscape. Guidance is provided in *Bridge Rails and Barriers: A Reference Guide for Transportation Projects in the Coastal Zone* (see Reference Section) or the most current Caltrans guidance. The next section addresses barriers and railing options, along with some benefits and disadvantages to consider when selecting a railing.

5.5 Guardrail, Railing, End Treatment, and Fences

Roadside safety devices, such as guardrail and metal or concrete railing, are common features along the Highway 1 corridor. Following is a brief description of railing considerations along the Highway 1 corridor.

Fencing is also a common feature within the Highway 1 corridor along many of the agricultural and recreational areas. Depending on the location, fencing may be privately or publicly installed and maintained.

5.5.1 Railing

Caltrans is committed to using railings that minimize visual impacts along the coast. There are several types of Caltrans standard railings that can be considered for use along Highway 1. Caltrans is in the process of approving MASH tested barriers for use on the state highway system. Designers should refer to the *Bridge Rails and Barriers: A Reference Guide for Transportation Projects in the Coastal Zone* (see Reference Section), as a reference for the types of barriers that are acceptable.

Designers should carefully consider the safety of all users and the compatibility with the surrounding environment when selecting a railing type. Designers should ensure that the railing height and rail opening widths meet current standards for both bicyclists and pedestrians where appropriate. Consult the District Landscape Architect to ensure visual compatibility with the corridor.

Midwest Guardrail: MGS with wooden posts is the predominant railing type currently seen along Highway 1 in Sonoma County. It is considered the best railing option for several reasons, including compatibility with existing roadway features, good transparency, context sensitivity, cost effectiveness, its current inclusion in the Standard Plans, and the fact that Maintenance has the materials for repair readily available. Where site conditions allow, wood posts should be used. No under guardrail treatment is required. The guardrail should have a matte finish applied to the final coating to reduce glare. White Barrier Markers on top of the MGS should be used in lieu of Delineators (Type F White). Other approved guardrails may be considered for aesthetic reasons or unavoidable project limitations. Consult the District Landscape Architect to ensure visual compatibility with the corridor.

5.5.2 End Treatments

End treatments for railing and concrete barriers are also important elements. The designer should select the appropriate approved end treatments for the railing and

concrete barriers based on several factors, including the design speed and geometrics of the roadway, maintenance considerations, availability of replacement parts, safety for all users, and consistency along the Highway 1 corridor. Where feasible, railings and barriers should be terminated with end sections buried in an adjacent slope or an earthen berm. The height of berms used for buried end sections must be sufficient for standard installations. If burying end sections is not feasible, inline end treatments should be considered. Large flared end terminals and alternative end treatments such as barrels or crash cushions should be avoided, as they cause visual impacts.

5.5.3 Fencing

Right-of-way fencing is an uncommon feature on Highway 1, but may be found along many of the agricultural and recreational areas. The vast majority of fencing along the highway is privately owned. Caltrans will construct private fencing only as a right-of-way consideration to mitigate damages (i.e., to replace existing fencing damaged or altered by a Caltrans construction project).

Fencing may be state owned. If so, consider its purpose and whether it needs to be replaced or if there are alternative means for meeting that purpose. Avoid non-safety fencing unless it serves to promote and is consistent with policies of the Sonoma County LCP. The fencing type should be consistent throughout the Highway 1 corridor and should be functional. Chain-link fencing should be avoided, unless required for specific security purposes and only if options that are more compatible are not available. Depending on location and context, desirable fence types include the following:

- Wire (barbed or smooth) on timber or steel posts
- Stretched cable on timber posts
- Timber post and rail (single or multiple rails)
- Timber post and split rail (applicable to forested settings)
- Timber post and pickets
- Hybrid designs combining a variety of the above elements other types of fences typical to the specific location (e.g., picket fences in towns or corral fencing in ranch areas) that are consistent with Sonoma County LCP provisions or town

plans (see Design Guidelines, No. 25 Coastal Zone Design Guidelines, Fences, page 178, Sonoma County LCP, 2001¹¹).

Newly installed steel fencing should be colored to better blend in with the surrounding environmental setting and rural character.

Fencing should not create a visual barrier to the scenic landscape nor should it create a barrier to wildlife. Consult with the adjacent public land manager to determine appropriate treatment.

The previously listed points are applicable whether the fence is private or a Caltrans fence. See Topic 701 of the HDM for an in-depth discussion of the various types of fences Caltrans constructs.

5.6 Slope Stabilization

Due to the extreme terrain and frequent landslides along the Highway 1 corridor, structural and nonstructural slope stabilization systems are often necessary.

Nonstructural options should be used over structural systems where feasible. The location and type selection of slope stabilization should consider and minimize impacts to existing and planned public access.

5.6.1 Nonstructural Slope Stability Recommendations

Nonstructural slope stability solutions are generally more cost effective and less visually disruptive than structural solutions. Nonstructural systems that can be revegetated are encouraged because these systems have the potential to blend more fully into the surrounding landscape when mature. Slope stabilization products such as rock bolts and metal mesh can be colored to blend into the environment. Contact Landscape Architecture to determine if the metal features of the rock stabilization products need to be colored to blend into the environment. The most appropriate nonstructural solution for a specific site should be determined by the geotechnical engineer and geologist. Refer to section 5.8 for a discussion on landscape and erosion control. Some examples of nonstructural solutions include, but are not limited to, the following:

- Slope reconstruction
- Rock slope protection
- Geosynthetic stabilized embankments

¹¹ <https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Local-Coastal-Plan/Current/>

- Embankment confinement systems
- Rock drapery or anchored mesh
- Rock bolting

5.6.2 Retaining Walls

A wide variety of retaining wall options are available to engineers in the event that a structural wall is the most appropriate alternative to stabilizing a slope. In general, retaining walls can be categorized into two broad categories—cut-slope walls (which are typically found in the upslope section of the roadway) and fill walls (which are typically found in the downslope section of the roadway). The geotechnical engineer, the structural engineer, and the geologist will determine the most appropriate retaining wall type, height, and length for a specific site. Safe maintenance access must be considered in the design and layout of retaining walls.

From a visual standpoint, the final appearance of the wall surface, wall height, length, and top elevation have a visual impact and should be consistent with the surrounding context. The District Landscape Architect should be consulted.

TIMBER LAGGING WALLS

The primary preference for the appearance of retaining walls consists of a timber lagging aesthetic treatment.

The H-piles and timber lagging should be painted a dark brown with a matte finish. The walers (if necessary for tieback anchors) should be stained a dark brown to match. Federal Standard 595 Color #30051, dark brown, is the preferred color choice.

Burying the walls is recommended to minimize visual impacts.

Where concrete barriers are incorporated into the retaining walls and the wall is exposed, the barrier should be stained to match the color of the wall.

In some locations, another treatment may be preferred. Consult with the District Landscape Architect to determine appropriate treatment.

CARVED AND STAINED ROCK WALLS

The secondary aesthetic preference consists of a carved rock aesthetic treatment that is stained to match the surrounding rock formations. This treatment is similar to the finish found on most soil nail walls along the coast, although this appearance can be achieved on other wall types as well. In some locations, stained concrete may be preferred over carved and stained rock walls.

Where concrete barriers are incorporated into the retaining walls, the barrier should be stained to match the color of the wall.

Walls should be discussed with the District Landscape Architect to ensure that the aesthetic treatment selected is acceptable from a visual standpoint.

FALL PROTECTION

Fall protection is required at the top of all retaining walls greater than 30 inches in height. Due to the visual impacts, the use of standard cable railing should be avoided. Consult with Maintenance on the need to access the top of a wall and, if so, would mobile fall protection (i.e. safety cable attached to a Maintenance vehicle) or a safety cable provide the required fall protection. If so, do not install cable railing. If fall protection is required on an uphill wall, cable railing should be colored to blend in with the environment. Chain-link railing should be avoided as fall protection in favor of one of the previously listed solutions.

For cases where new safety cable or railing would be visible from the roadway and would negatively affect the scenic character of Highway 1 must be installed, existing safety cables, railings or roadside appurtenances within the project limits should be evaluated for removal to keep visual clutter to a minimum.

SLEEPER SLABS

Sleeper slabs, if used for the installation of barrier railings at retaining walls, should be treated to match the remainder of the roadway. The sleeper slabs may be lowered and overlaid with a thin layer of asphalt concrete pavement or may be colored to blend in with the surrounding roadway surface.

DRAINAGE DITCHES BEHIND WALLS

Concrete drainage ditches that are located behind retaining walls should be stained or treated to blend into the surrounding landscape.

5.7 Roadside Features

5.7.1 Drainage

The safety, functionality, and aesthetics of drainage systems should be carefully reviewed and considered. This section discusses the aesthetic treatments that should be considered when installing drainage systems. Slope protection or concrete should be treated to blend with the surrounding landscape. Design drainage to avoid erosion and sedimentation, or contributing to destabilization of slopes. Existing drainage features will be evaluated at storm damage repair sites. Where feasible, incorporate

improvements into the new roadway facility to avoid further erosion and sedimentation

5.7.2 Headwalls and Wingwalls

Typically, aesthetic treatments are not required but due to the highly scenic nature of Highway 1, aesthetic treatments should be considered to ensure that headwalls and wingwalls blend into the existing landscape. Such treatments may include stained or integrally colored concrete to match the surrounding landscape.

5.7.3 Pipes and, Inlets

To the greatest extent possible, these drainage facilities should be buried or hidden from view. Exposed pipes and end sections extending from walls or hillsides, including galvanized pipes, should be treated to blend in to the adjacent landscape. The preferred color is Federal Standard 595 Color #30051, dark brown, with a matte finish to reduce glare.

Drainage inlets should be sited outside of where bicyclists are most likely to ride; inlets placed within the roadway must use bicycle-proof grates.

5.7.4 Outfalls

New pipes and culverts should discharge at established drainage outfalls.

Drainage outfalls that can be revegetated are preferred and should be used when site conditions allow. Revegetation considerations are discussed in the Landscaping and Revegetation section below.

5.7.5 Ditches

The ditches should be designed to blend into the surrounding landscape. Concrete and metal facilities should be treated to match the surrounding terrain. Where appropriate, drainage ditches should be designed in conjunction with the shoulder to reduce the amount of pavement and widening needed, following the guidelines in Chapter 830 of the HDM.

5.8 Landscaping and Revegetation

5.8.1 Revegetation and Erosion Control

Native plant communities contribute to the scenic nature of Highway 1. The objective for revegetation for all areas disturbed by roadside repairs, including construction access and staging areas, is to reestablish native vegetation that integrates and matches adjacent intact native plant communities without introducing nonnative

species into weed-free native communities. Designers should specify seed and plant material from local sources whenever feasible. Consult with the Project Biologist and Erosion Control Specialist for recommendations on appropriate plant material. Designers should look for opportunities to cover features such as rock slope protection and drainage pipes with weed-free soil and locally appropriate plant material to achieve revegetation objectives. Because inadvertent application of soil that contains high-priority weed species propagules can create a large maintenance issue, it is essential that all soil sources be examined by an individual familiar with high-priority weed species prior to application to avoid accidental introduction.

Where the project is adjacent to or on State Parks lands, Caltrans will enter into a planting agreement with State Parks. Contact the District Landscape Architect and project generalist to initiate the process early in project development. The agreement shall cover work on areas disturbed within the State right-of-way and on State Parks lands. The scope of work for revegetation, weed management, and erosion control plans will generally include (1) collection of local seed and propagation of local plant material, (2) planting installation and plant establishment on State right-of-ways and State Parks land for up to 5 years, and (3) exotic weed management. Consult Caltrans Erosion Control Unit for project-specific best management practices and erosion control plans and special provisions.

For projects located in areas outside of State Parks, the PDT team is encouraged to look for partnership opportunities for plant establishment and long-term weed abatement.

5.8.2 Invasive and Exotic Vegetation Control

The first line of defense—and the most cost-effective long-term strategy against invasive weeds—is preventing them from becoming established. Prevention and exclusion of noxious weed species are the most practical and economical means of weed management. This is accomplished by ensuring that seed or reproductive plant parts of new weed species are prevented from being intentionally or unintentionally introduced to an area. Best management practices for invasive exotic weed prevention are already incorporated into standard special provisions and include preventative measures, such as equipment washing and seed testing.

Outbreaks of invasive weeds should be controlled during the plant establishment period if applicable. Nonstandard special provisions requiring the contractor to

perform more aggressive management practices may be needed to control invasive weeds during the plant establishment period.

When working within or adjacent to State Parks lands, the PDT should make early contact with the agency to develop vegetation control plans that are in concert with resource management programs that may involve a multi-year process of seed gathering and propagation. Partnering with these agencies to perform plant establishment and/or long-term maintenance activities is also recommended. Control of exotic vegetation should be covered in the agreement discussed in Revegetation and Erosion Control above.

5.8.3 Signage

Signage guidelines should follow the fundamental principle that “less is more” with regard to Highway 1. Only signs that are necessary for the safety of the traveling public and those that convey essential information to the traveler, including way finding and directional signs, should be installed. The design and placement of signage should be in accordance with the latest edition of the *California Manual of Uniform Traffic Control Devices* (Caltrans 2014b). Signs should be combined onto existing posts where feasible. Signs for the California Coastal Trail should be provided where applicable.

5.8.4 Delineators

The use of Type E delineators can impair the scenic value of the highway. Consider eliminating or not using these where possible. In areas with MGS present, use white Concrete Barrier Markers mounted on top of the posts in lieu of the Type E delineator. Use 6-inch wide high visibility stripe instead of delineators where MGS is absent.

5.9 Miscellaneous

5.9.1 Fish Passage and Wildlife Accommodations

Repair projects will include, where appropriate, safe crossings for terrestrial and aquatic wildlife and other accommodations to promote biodiversity and avoid or mitigate harm to individual animals, the fragmentation of plant and animal habitats, and the disruption of natural systems. Repair projects should consider wildlife crossings and guidance provided in the Wildlife Crossings Guidance Manual (Caltrans 2009). For more details on fish passage, see Section 3.2.7.6. Designers should contact the District Biologist.

5.9.2 Construction/Maintenance Access Roads

Construction access roads shall be chosen to disturb the least amount of area and be as unobtrusive as possible. Construction access roads or benches that are built to facilitate construction activities should be re-graded using slope rounding techniques and revegetated to match the existing terrain once construction is complete (see also Section 5.8). If the construction roads are needed for future maintenance access, they should be minimized in width and length and seeded with erosion control. Local partners should be consulted to determine if the maintenance access road has potential for incorporation into the California Coastal Trail.

5.9.3 Scenic Highway Status

The HDM defines a scenic highway as a “state or county highway, in total or in part, that is recognized for its scenic value, protected by a locally adopted corridor protection program, and has been officially designated by Caltrans.” Highway 1 within Sonoma County is currently eligible for scenic highway status and, if status is awarded, specific requirements will be triggered, including special signage along Highway 1.

Minimize repair project impacts, individually and cumulatively, to the characteristics that make these segments eligible for Scenic Highway status.

Chapter 6 References

- American Association of State Highway and Transportation Officials (AASHTO). 2011. *A Policy of Geometric Design of Highways and Streets*, 6th Edition. Available at https://bookstore.transportation.org/collection_detail.aspx?ID=110.
- California Department of Parks and Recreation (State Parks). 2010. *Department Operations Manual*.
- California Department of Transportation (Caltrans). 2001. *Context Sensitive Solutions*. Director's Policy 22. Available at <http://www.dot.ca.gov/hq/transprog/ocip/te/dp-22.pdf>. November 29.
- California Department of Transportation (Caltrans). 2007a. *Fish Passage Design for Road Crossings: An Engineering Document Providing Fish Passage Design Guidance for Caltrans Projects*. Available at <http://www.dot.ca.gov/hq/oppd/fishPassage/index.htm>. May 7.
- California Department of Transportation (Caltrans). 2007b. *Design Guidance and Standards for Roadway Rehabilitation Projects*. Design Information Bulletin 79-03. Available at <http://www.dot.ca.gov/hq/oppd/dib/dib79-03.pdf>. November 19.
- California Department of Transportation (Caltrans). 2008. *Complete Streets - Integrating the Transportation System*. Deputy Directive 64. Available at http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets_files/dd_64_r1_signed.pdf. October.
- California Department of Transportation (Caltrans). 2009. *Wildlife Crossings Guidance Manual*. Available at http://www.wildlifecrossing.net/california/files/xing/CA_Wildlife%20Crossings%20Guidance_Manual.pdf. March 2009.
- California Department of Transportation (Caltrans). 2012. *Climate Change*. Director's Policy 30. Available at http://www.dot.ca.gov/hq/oppd/rescons/guidelines/DP-30_Climate-Change.pdf. June 22.

California Department of Transportation (Caltrans). 2013a. *Main Street, California A Guide for Improving Community and Transportation Vitality*. Third Edition. Available at http://www.dot.ca.gov/hq/LandArch/mainstreet/main_street_3rd_edition.pdf. November.

California Department of Transportation (Caltrans). 2017. *Pedestrian Accessibility Guidelines for Highway Projects*. Design Information Bulletin 82-06. Available at <http://www.dot.ca.gov/hq/oppd/dib/dib82-06.pdf>.

California Department of Transportation (Caltrans). 2014a. *California Manual for Setting Speed Limits*. Available at <http://www.dot.ca.gov/trafficops/camutcd/docs/california-manual-for-setting-speed-limits.pdf>. May 9.

California Department of Transportation (Caltrans). 2014b. *California Manual of Uniform Traffic Control Devices*. Available at <http://www.dot.ca.gov/trafficops/camutcd/>.

California Department of Transportation (Caltrans). 2016. *Highway Design Manual*. 6th Edition. Available at <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

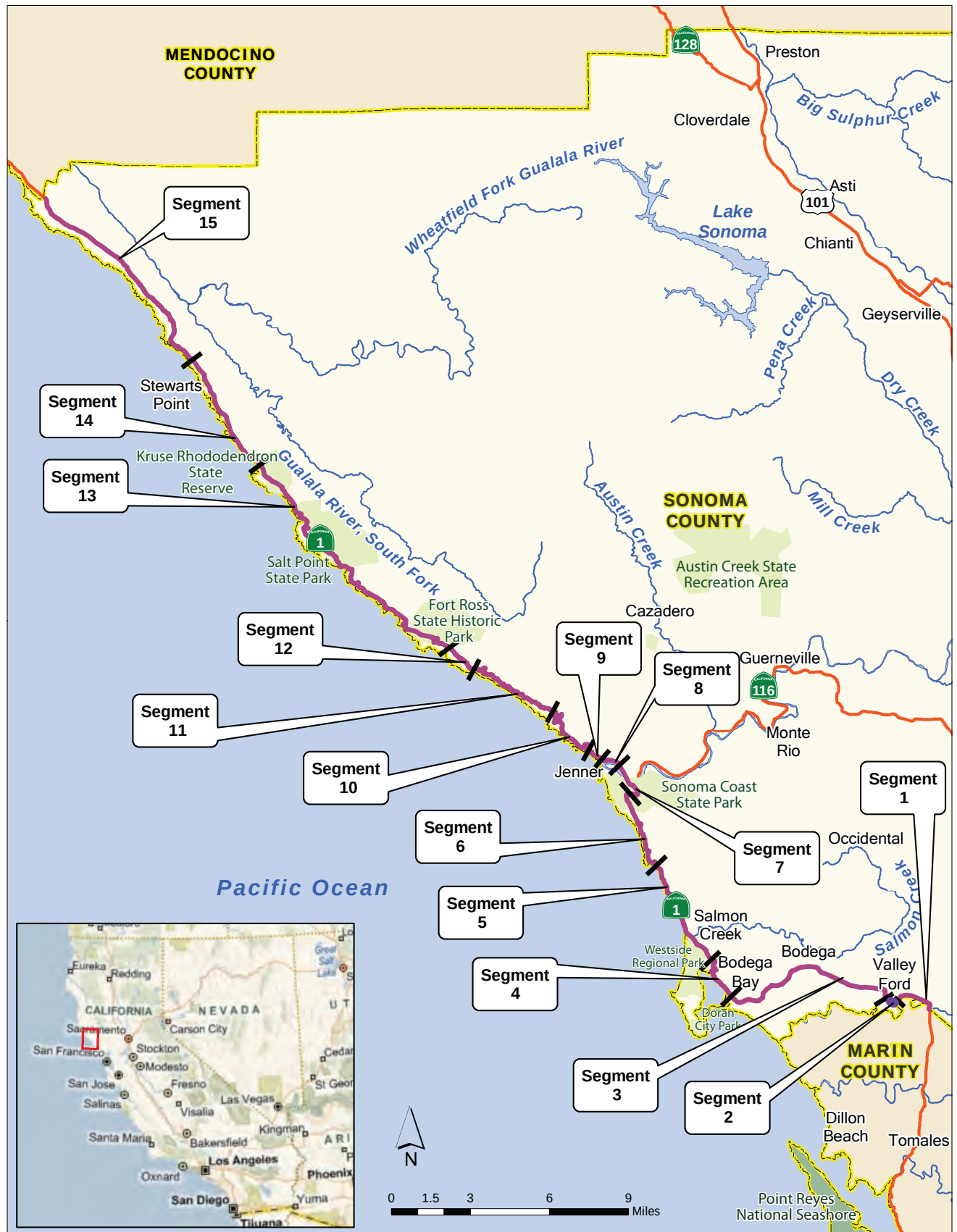
California Department of Transportation (Caltrans). Undated. *Project Development Procedures Manual*. Available at <http://www.dot.ca.gov/hq/oppd/pdpm/pdpmn.htm>.

California Department of Transportation (Caltrans). Undated. *Bridge Rails and Barriers: A Reference Guide for Transportation Projects in the Coastal Zone*. Available at http://www.dot.ca.gov/hq/LandArch/16_la_design/aesthetics/barriers/pdf/Caltrans_Bridge_Rails_and_Barriers.pdf

Sonoma County. 2001. *Local Coastal Plan*. Adopted in 1981 and amended in 2001. Available at <https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Local-Coastal-Plan/Current/>.

Sonoma County Transportation Authority. 2014. *SCTA Countywide Bicycle and Pedestrian Master Plan*. Adopted 2008 and updated 2014. Available at https://scta.ca.gov/wp-content/uploads/2016/07/BikePedPlanUpdate2014_final.pdf.

Appendix A Landscape Units and Existing Conditions



Source: Caltrans

LEGEND

- Federal Parks
- State Parks
- Highway 1 Landscape Units

LOCATION MAP SONOMA COUNTY LANDSCAPE UNITS

Exhibit 2

LCP-2-SON-23-0058-2

Page 670 of 708

Structures - Sonoma County

City	Segment	Landscape Character and Road use	Segment Location (PM)	2014 Traffic Volumes (AADT)										Existing				RRR Standard		Speed Zone (Posted)
					Location (PM)	Bridge Number	Year Built	Name	Bridge Type	Railing	Sufficiency Rating	Work Recommendation	BIR Date	Clear Width	Lane Width	Shldr Width	Ped Facility	Lane Width	Shldr Width	
	1	AP	0.00-1.75	4400	0.3	20-186	1960	Pogolimi Creek	2X box Culvert	None	69.2	install str mkr	10/30/08	30	12	3		12	8	35
Valley Ford	2	T	1.75-2.05	4400																
	3	AP	2.05-9.40	6400 6300	9.16	20-189	1956	Cheney Gulch	2X box Culvert	MBGR	71.2	trim heavy brush	10/30/08	32	12	4		12	8	45
Bodega Bay	4	T	9.40-11.50	4700																
	5	CB	11.50-16.00	4000	12.49	20-191	1983	Salmon Creek	RC slab	Type 25 Mod	87.9	patch spalls, methacrylate deck rem loose conc, clean exposed rebar, patc soffit	10/30/08	40	12	8	Y	12	8	55 **
					15.3	20-198	1956	Scotty Creek	4X box culvert	None	70.7		10/30/08	20	10	0		12	8	55 **
	6	MT	16.00-19.50	3125																
	7	E	19.50-21.15	2800	19.72	20-195	1984	Russian River	RC Bridge	Type 25 Mod	87.8	rplic type b compression joint seal	10/30/08	36	12	6	Y	12	8	55 **
Jenner	8	T	21.15-22.00	2800																
	9	CB	22.00-22.60	1900																
	10	MT	22.60-26.30	1900	24.5	20-070	1940	Russian Gulch	RC deck slab	timber	68.1	rem veg and debris in chnl	10/30/08	26	12	1		12	8	55 **
	11	CB	26.30-30.60	1900																
	12	MT	30.60-31.95	1900																
Stillwater Cove (37)/ Salt Point (38.1)/ Stewarts Point (39.64)	13	CB/MT/F	31.95-44.80	1900																
	14	MT/F	44.80-49.76	1600																
Sea Ranch Lodge (50.5)/ Pebble Beach (52.2)/	15	MT/F	49.76-58.58	2850																
		AP= Agricultural/Pasture																		
		F= Forested																		
		BF= Bay Front																		
		E= Estuary																		
		CB= Coastal Bluff																		
		MT= Marine Terrace																		
		CC= Coastal Canyon																		
		T= Town																		

10/21/2016

Roadway - Sonoma County										
City	Segment	Landscape Character and Road use	Existing Highway	Segment Location (PM)	2014 Traffic Volumes (AADT)	Existing		RRR Standard (DIB 79-03 Table 2)		Speed Zone (Posted)
						Lane Width	Shldr Width	Lane Width	Shldr width	
	1	AP	predominantly level roadway with mainly flat grassy farmlands	0.00-1.75	4400	11	1	12	8	35
Valley Ford	2	T	mostly level roadway with a series of small homes and businesses with driveways; limited parallel and angled parking	1.75-2.05	4400	11	8-10	12	8	30, 35
	3	AP	Mostly level with some rolling terrain; steep hillsides on both sides of highway	2.05-9.40	6300	11	1-4	12	8	45
Bodega Bay	4	T	Level and rolling terrain with a mix of residential, commercial, and recreational uses through the town limits; roadway passes through a winding canyon as it leaves town	9.40-11.50	4700	11	1-8	12	8	25, 35
	5	CB	Rolling terrain with few sharp curves with limited sight distance; surrounding landscape is mostly open hillsides on the east with the ocean to the west	11.50-16.00	4000	10	0-1	12	8	55 **
	6	MT	Mostly rolling with some level terrain;	16.00-19.50	3125	11	0-1	12	8	55 **
	7	E	Mostly level with steep grassy hillsides on the east and Russian River to the west	19.50-21.15	2800	11	0-1	12	4	55 **
Jenner	8	T	Level roadway through town limits mix of commercial and residential with driveways and steep hillsides; there is limited parallel parking in town	21.15-22.00	2800	10	4-8	12	4	25
	9	CB	Rolling terrain with few sharp curves; mostly steep slopes on both sides of highway	22.00-22.60	1900	10	0-1	12	4	55
	10	MT	Mostly mountainous with some rolling terrain and few sharp curves; there are steep slopes that alternate on both sides of highway; in this segment, there are several retaining walls (steel piles with timber lagging) with 4-foot shoulders	22.60-26.30	1900	10	0-1	12	4	55 **
	11	CB	Rolling terrain with sharp curves and steep grassy and rocky hillsides on both sides	26.30-30.60	1900	10	0-1	12	4	55 **
	12	MT	Roadway terrain is rolling with some straight alignment and some sharp cuves; there are grassy hillsides on both sides	30.60-31.95	1900	11	0-1	12	4	25
Fort Ross (32.7)/ Stillwater Cove (37)/ Salt Point (38.1)/ Stewarts Point (39.64)	13	CB/MT/F	Rolling terrain with some straight alignment and few sharp curves; heavily forested; few residential and lodging	31.95-44.80	1900	11	0-1	12	4	55 **
	14	MT/F	Rolling with some straight alignment; native forest on both sides	44.80-49.76	1600	11	0-1	12	4	55 **
Sea Ranch Lodge (50.5)/ Pebble Beach (52.2)/ Stengel Beach	15	MT/F	Rolling with mostly straight alignment; grassy pasturelands and mature tree conopies on both sides; occasional rock outcrop	49.76-58.58	2850	11	0-1	12	4	55 **
		CB= Coastal Bluff								
		MT= Marine Terrace								
		CC= Coastal Canyon								
		T= Town								
		AP= Agricultural/Pasture								
		F= Forested								
		BF= Bay Front								
		E= Estuary								

10/21/2016

Appendix B Coastal Act Repair Maintenance Exclusions

REPAIR, MAINTENANCE AND UTILITY HOOK-UP EXCLUSIONS FROM PERMIT REQUIREMENTS

(Adopted by the California Coastal Commission on September 5, 1978)

NOTE: This guideline applies only to exclusions established in subsections (d) and (f) of section [30610](#). For other exceptions to the permit requirements, see [Section 13250](#) of the Commission Regulations (additions to existing single-family houses), Sections [13200 through 13210](#) (vested rights), Sections [13211-13213](#) (permits granted under the 1972 Coastal Act), Sections [13215-13235](#) (urban land), Sections [13240-13249](#) (categories of development), Sections [13136-13144](#) (emergency permits) and Sections [13145-13154.5](#) (administrative permits).

I. General Provisions.

Section 30610 of the Coastal Act states in part:

...no coastal development permit shall be required pursuant to this chapter for...

(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.

...

(f) The installation, testing, and placement in service or the replacement of any necessary utility connection between an existing service facility and any development approved pursuant to this division; provided, however, that the commission may, where necessary, require reasonable conditions to mitigate any adverse impacts on coastal resources, including scenic resources.**

This guideline is intended to detail the types of development activities the Commission considers repair, maintenance or utility hook-ups related to the on-going work of various types of public and private agencies. Such lists obviously cannot be exhaustive and the exclusions also apply to activities comparable to those listed. Where a proposed activity is not included in this guideline, the Regional Commission Executive Director, after consultation with the State Commission Executive Director, if necessary, will determine whether a permit is required.

The standards for these exclusions are stated in [Section 30610](#) of the Coastal Act: they do not relate to the environmental impact of the proposed activity. The repair and maintenance exclusion is intended to allow continuation of existing developments and activities which began before the effective date of the Coastal Act. The utility hook-up exclusion exempts utilities from obtaining permits for work to serve developments because Commission review of such work is included in the review of the development itself.

** Minor changes have been made to the legal citations to the Coastal Act contained in this document to correspond to the current version of the cited Section.

II. Description of Activities Excluded.

The following construction activities comparable to those listed do not require a coastal development permit except as specified below:

A. Roads. No permit is required for repair and maintenance of existing public roads including landscaping, signalization, lighting, signing, resurfacing, installation or expansion of retaining walls, safety barriers and railings and other comparable development within the existing right-of-way as specified below. Maintenance activities are generally those necessary to preserve the highway facility as it was constructed, including: construction of temporary detours, removal of slides and slip cuts, restoration and repair of drainage appurtenances, slope protection devices, installation of minor drainage facilities for preservation of the roadway or adjacent properties, restoration, repair and modifying for public safety bridges and other highway structures, restoring pavement and base to original condition by replacement, resurfacing, or pavement grooving. A permit is required for excavation or disposal of fill outside of the roadway prism. The following maintenance and alteration programs of the State Department of Transportation, or their equivalent conducted by local road departments, which do not result in an addition to or enlargement or expansion of the existing public road facility itself, do not require a permit except as noted: (1) [Flexible Roadbed Program](#); (2) [Rigid Roadbed Program](#); (3) [Roadside Maintenance Program](#); (4) [Roadway Litter and Debris Program](#); (5) [Vegetation Control Program](#); (6) [Pavement Delineation Program](#); (7) [Sign Program](#); (8) [Electrical Program](#); (9) [Traffic Safety Devices Program](#); (10) [Public Service Facility Program](#) except that a permit is required for construction of new facilities; (11) [Landscape Program](#); (12) [Bridge and Pump Maintenance Program](#); (13) [Tubes, Tunnel and Ferry Maintenance Program](#); (14) [Bridge Painting Program](#); (15) [Miscellaneous safety projects](#), provided there is not expansion in the roadway or number of traffic lanes; (16) [Major damage maintenance, repair and restoration](#); (17) [Comparable Minor Alterations](#).

(NOTE: See [Appendix I](#) for more detailed description of activities included in these programs.)

B. Public Utilities.

1. Natural Gas, Chilled Water and Steam Facilities.

a. Service Connections. Install, test and place in service the necessary piping and related components to provide natural gas, chilled water and/or steam service to development either exempted or approved under the Coastal Act, including:

(1) Extend underground gas, chilled water and/or steam mains, except in marshes, streams or rivers, from terminus of existing main piping to proper location in front of customer's property. Break and remove pavement as necessary, open trench or bore, for installation of main piping, install mains and appurtenances, pressure test for leakage, back-fill open cuts, purge air from piping and introduce gas, chilled water and/or steam into newly installed piping. Restore pavement as necessary. Provide for cathodic protection as necessary.

(2) Extend underground gas, chilled water and/or steam service piping from the main locations, except, in marshes, streams or rivers, to the meter location on the customer's property. Construction activities are similar to those in Item (1) above.

(3) Construct and install the meter set assembly, generally above ground, on the customer's property, including installation of associated valves, pressure regulator, meter and necessary piping to connect the gas, chilled water and/or steam service to the customer's piping system.

(4) When necessary, install gas, chilled water and/or steam pressure regulation equipment and related components, to control pressure where the source of the supply is at a higher pressure than the pressure in the district distribution main system. Construction includes necessary excavation, installation of piping, valves, regulators, below ground vaults and related components.

(5) Install necessary cathodic protection facilities for main and service extensions to new and existing customers.

b. Distribution and Transmission Facilities.

(1) Operate, inspect and maintain distribution and transmission mains, services, meter set assemblies and district regulator stations. Conduct leakage surveys, repair leaks, handle emergency or hazardous incidents, maintain supply pressure, inspect and adjust pressure regulators, operate valves, locate and mark facilities to help prevent damage to them and to provide for public safety.

(2) Install, replace, alter, relocate or remove piping and cathodic protection facilities as necessary due to corrosion, interference with other underground or surface construction, franchise requirements, mechanical damage, reinforcement to existing distribution systems to provide for increased usage (provided such usage is to provide service to development either exempted or approved under the Coastal Act). Isolation of piping segments or systems to provide emergency control and the restoration of service to a customer.

c. Production and Storage Facilities. Perform necessary maintenance, replacement, repair, relocation, abandonment and removal work to gas storage facilities, chilled water and/or steam plant facilities, mechanical equipment including prime movers and pumping equipment, chilled water and/or steam production facilities, gas and oil processing facilities, pollution control facilities, cooling towers, electric equipment, controls, gas injection and withdrawal wells, and other miscellaneous plant and pipeline structures. Installation of any required new safety devices and pollution control facilities within existing structures or equipment or where land coverage, height, or bulk of existing structures will not be increased.

d. Miscellaneous. Perform necessary maintenance, repair, replacement, relocation, abandonment and removal work to pipeline roads, rights-of-way, fences and gates, sprinkler systems, landscaping, odorizing stations, telemetry equipment, lighting facilities, mechanical and electrical equipment, cathodic protection facilities and environmental control equipment.

e. Grading and Clearing. Maintenance activities shall not extend to the construction of any new roads to the site of the work. A permit is required for grading an undisturbed area of greater than 500 sq. ft., removal of trees exceeding 12 inches dbh or clearing more than 500

sq. ft. of brush or other vegetation unless the Executive Director of the Regional Commission determines the activity does not involve the removal of major vegetation.

2. Electric Utilities.

a. Generation Stations, Substations, Fuel Handling, Transportation and Storage Facilities and Equivalent Facilities. A coastal permit is not required for repairs, maintenance, and minor alterations which do not increase the capacity of the facility or work required to supply increased demand of existing customer's facilities in order to maintain the existing standard of service. A coastal permit is not required for installation of any required new safety devices and pollution control facilities within existing structures of equipment or where land coverage, height or bulk of existing structures will not be increased.

b. Transmission and Distribution and Communication Facilities. A coastal permit is not required to maintain, replace, or modify existing overhead facilities, including the addition of equipment and wires to existing poles or other structures, right-of-way maintenance, and minor pole and equipment relocations. A coastal permit is not required to install, test and place in service power line extension facilities and supply points specifically required to provide service to development permitted or exempted under the Coastal Act, or work required to supply increased demand of existing customers' facilities in order to maintain the existing standard of service.

A coastal permit is not required to install, test, place in service, maintain, replace, modify or relocate underground facilities or to convert existing overhead facilities to underground facilities provided that work is limited to public road or railroad rights-of-way or public utility easements (P.U.E.).

c. Services. Electrical service and metering facilities may be installed and placed in service to any development permitted or exempted under the Coastal Act. A coastal permit is not required to maintain, replace, or relocate service or metering facilities for developments permitted or exempted under the Coastal Act.

d. Grading, Clearing and Removal of Vegetation. Excluded activities shall not extend to the construction of any new road to the site of the work. In cases involving removal of trees exceeding 12 inches dbh, grading of any undisturbed area of greater than 500 sq. ft. or clearing of more than 500 sq. ft. of brush or other vegetation, the utility shall consult with the Executive Director of the Regional Commission to determine whether the project involves removal of major vegetation such that a permit is required. A coastal permit is not required for removal of minor vegetation for maintenance purposes (tree trimming, etc.) for safety clearances.

e. Definitions.

(1) Line Extension. All facilities for permanent service excluding transformers, services and meters, required to extend electric service from the utility's existing permanent facilities to one or more supply points.

(2) **Service.** A single set of conductors and related facilities required to deliver electric energy from a supply point to the customer's facilities.

(3) **Supply Point.** Any transformer, pole, manhole, pull box or other such facilities at which the utility connects one or more sets of service conductors to the utility's permanent electric facilities.

3. **Telephone.** No permit or conditions are required for the activities of a telephone company that come within the following areas:

- a. Repair and maintenance of existing damaged or faulty poles, wires, cables, terminals, load cases, guys and conduits, including the necessary related facilities, to restore service or prevent service outages.
- b. Placement of existing telephone facilities underground, provided such undergrounding shall be limited to public road or railroad rights-of-way or public utility easements (P.U.E.) and provided there is no removal of major vegetation and the site is restored as close as reasonably possible to its original condition.
- c. Placement of additional aerial facilities on existing poles.
- d. Removal of existing poles and facilities thereon, where new, replacing facilities have been placed underground.
- e. Performance of work in connection with or placement of facilities to expand service to existing customers or to serve new customers, including placement of underground service connections or aerial service connections from existing poles with any necessary clearance poles.
- f. Removal of minor vegetation for maintenance purposes (tree trimming, etc.).
- g. Maintenance activities shall not extend to the construction of any new roads to the site of the work. A permit is required for grading an undisturbed area of greater than 500 sq. ft., removal of trees exceeding 12 inches dbh or clearing more than 500 sq. ft. of brush or other vegetation unless the Executive Director of the Regional Commission determines the activity does not involve the removal of major vegetation.

4. **Others. including Water, Sewer, Flood Control, City and County Public Works, Cable TV.** No permit is required for repair or maintenance of existing facilities that do not alter the service capacity, installation of new or increased service to development permitted or exempted under the Coastal Act, placement of additional facilities on existing poles, or placement of existing facilities underground, provided such undergrounding shall be limited to public road or railroad rights-of-way or public utility easements (P.U.E.) and provided there is no removal of major vegetation and the site is restored as close as reasonably possible to its original condition. A permit is required for installation of service to vacant parcels or installation of capacity beyond that needed to serve developments permitted or exempted under the Coastal Act.

Maintenance activities shall not extend to the construction of any new roads to the site of the work. A permit is required for grading an undisturbed area of greater than 500 sq. ft., removal

of trees exceeding 12 inches dbh or clearing more than 500 sq. ft. of brush or other vegetation unless the Executive Director of the Regional Commission determines the activity does not involve the removal of major vegetation. No permit is required for removal of minor vegetation (e.g., tree trimming) where it interferes with service pipes or lines.

C. Parks. No permit is required for routine maintenance of existing public parks including repair or modification of existing public facilities where the level or type of public use or the size of structures will not be altered.

D. Industrial Facilities. No permit is required for routine repair, maintenance and minor alterations to existing facilities, necessary for on-going production that do not expand the area or operation of the existing plant. No permit is required for minor modifications of existing structures required by governmental safety and environmental regulations, where necessary to maintain existing production capacity, where located within existing structures, and where height or bulk of existing structures will not be altered.

E. Other Structures. For routine repair and maintenance of existing structures or facilities not specifically enumerated above, no permit is required provided that the level or type of use or size of the structure is not altered. (NOTE: See Section [13250](#) of the Commission Regulations for exclusions or additions to existing single-family houses.)

F. Dredging and Beach Alteration. (NOTE: Maintenance dredging of navigation channels is exempted by Section 30610 (b). Other dredging and sand movement projects, where part of an established program may be exempt from the permit requirements of the Coastal Act by reason of vested rights, where such rights have been reviewed and acknowledged by the Regional Commission. Contact the Regional Commission office for information and application forms.)

APPENDIX I

Detailed description of activities included in road maintenance programs for which no coastal development permit is required.

1. **Flexible Roadbed Program.** This program covers the restoration and repair of both surface and base within the previously paved portion of the roadway. This includes previously paved asphalt concrete shoulders two feet or greater in width where the shoulder is designated by traffic marking, pavement delineation or traffic use. Paved shoulders less than two feet in width will be considered as included in the traveled way lanes.
2. **Roadbed, Rigid.** The Rigid Roadbed Program covers the restoration and repair of both surface and base within that paved portion of the roadway used for the movement of vehicles. This includes asphaltic concrete or oiled shoulders two feet or greater in width. Paved shoulders less than two feet in width will be considered as included in the traveled way lanes. This program does not include roadbed widening projects.
3. **Roadside Maintenance Program.** This program includes the repair, replacement, and cleaning of ditches, culverts, underdrains, horizontal drains and miscellaneous headwalls and debris racks. Also included are fence repairs, roadside section restoration (e.g., drift removal, bench cleaning, slide removal, and fill slope replacement). In addition, repairs or replacement of retaining walls, installation of slope protection devices, minor drainage facilities, sidewalks and curbs, bins, cattle guards and other such structures where there is no increase in size (or adding to what exists) is included in this program. This program shall not include seawalls or other shoreline protective works, activities subject to review under Section 1601 of the Fish and Game Code, or excavation or disposal of fill outside of the roadway prism.
4. **Roadway Litter and Debris Program.** This program includes all work concerning roadbed and roadside cleanup operations to insure that the highway presents a neat, clean and attractive appearance.
5. **Vegetation Control Program.** Vegetation control refers to the maintenance treatment of all vegetative material growing native within the highway rights-of-way. Included is cutting and trimming by hand and mechanical means.
6. **Pavement Delineation Program.** The pavement delineation program involves all work necessary to place and maintain distinctive roadway markings on the traveled way. This includes layout, removal of old stripe, painting of new or existing stripe including striping for bike lanes, installation and/or removal of raised pavement markers including cleaning of such markers and the use of thermoplastic, tape or raised bars for pavement markings. Changing of striping for more lanes is not included in this program.
7. **Sign Program.** The sign program includes all work performed on existing signs for the purpose of warning, regulating or guiding traffic including bicycle traffic using bike lanes. The work consists of manufacture, assembly and installation of new signs to replace existing signs and the repair, cleaning and painting of signs.

8. **Electrical Program.** This program includes all work performed on in-place highway electrical facilities used to control traffic with signal systems, provide safety and sign lighting, illuminate maintenance building and grounds, generate standby power, operate bridges, pumps and automatic watering systems. Certain navigational lighting installed on bridges and bridge fenders or piling are included in this program.
9. **Traffic Safety Devices Program.** Work performed under this program includes replacement of guide posts, markers, skid resistant grooves, and also replacement, cleaning and/or painting of guard rails. The repair of median barrier cable chain link fence and portland cement concrete walls; the repair and maintenance of energy dissipators such as water type bumpers, sand traps or other devices installed for the purpose of absorbing vehicle energy are included in this program.
10. **Public Service Facility Program.** Public Service Facilities consist of roadside rests, vista points, map stops, historical monuments, roadside fountain areas and vehicle inspection stops. Work to be performed under this program consists of a wide variety of custodial maintenance in connection with existing restrooms, fountains and picnic areas.
11. **Landscape Program.** This program refers to the treatment, maintenance and replacement of all vegetative material planted within the State Highway right-of-way. Work includes watering, fertilizing, plant replacement, weed control by hand and mechanical means and tree trimming.
12. **Bridge and Pump Maintenance Program.** The Bridge and Pump Maintenance Program includes work performed on all structures which provide for passage of highway traffic over, through or under obstacles and/or qualify for bridge numbers as assigned by the Division of Structures.
13. **Tubes, Tunnel and Ferry Maintenance Program.** The Tubes, Tunnel and Ferry Maintenance Program includes maintenance and repair of tunnels, tubes, ferries and docks or slips. Tunnel or tube maintenance includes washing, cleaning, tile repair and the maintenance of electro-mechanical equipment. Tunnel structural repairs will be performed under this program when covered by approved Division of Structures reports of work needed.
14. **Bridge Painting Program.** This program involves bridge maintenance painting performed in conformance with the requirements of air pollution control and water quality control agencies having jurisdiction.
15. **Miscellaneous Safety Projects.** Elimination of hazards within the operating areas or the operating right-of-way or projects modifying existing features such as curbs, dikes, headwalls, slopes, ditches, drop inlets, signals and lighting, etc., within the right-of-way to improve roadside safety.
16. **Major Damage Maintenance, Repair and Restoration.** Provides temporary road openings and related maintenance and returns highway facilities to serviceable states as rapidly as possible following major damage from storms; earthquakes; tidal waves; ship, train or vehicle collisions; gasoline truck fires; aircraft crashes, and all other kinds of physical violence. (NOTE: These items may be developments rather than repair or maintenance activities, but would be subject to the emergency permit provisions of the Coastal Act. Inquiries should be

directed to the Regional Commission staff if at all possible prior to commencement of construction.)

17. **Miscellaneous Alterations.**

- a. Installation, modification or removal of regulatory, warning or informational signs, according to the standards of the State Department of Transportation Uniform Sign Chart.
- b. Traffic channelization - improvements to local service and safety by delineation of traffic routes through the use of curbs, dikes, striping, etc., including turn pockets, where construction is performed by State Department of Transportation Maintenance Department or equivalent activities by local road departments.
- c. Maintenance of existing bicycle facilities.
- d. Modification of traffic control systems and devices including addition of new elements such as signs, signals, controllers, and lighting.
- e. Devices such as glare screen, median barrier, fencing, guard-rail safety barriers, energy attenuators, guide posts, markers, safety cable, ladders, lighting, hoists, paving grooving.
- f. Alteration or widening of existing grade separation structure where the primary function and utility remains unaltered.
- g. Minor operational improvements such as median and side ditch drainage facilities, where not subject to review under Section 1601 of the Fish and Game Code or involving excavation or disposal of fill outside of the roadway prism.
- h. Modification, upgrading, alteration, relocation, or removal of railroad grade crossings, railroad grade crossing protection, and the construction of bus and truck stop lanes at railroad grade crossings.

Appendix C Highway Design Manual Topics

Appendix C Highway Design Manual Topics

Topic 81 – Project Development Overview

Index 81.1 – Philosophy

The project development process seeks to provide a degree of mobility to users of the transportation system that is in balance with other values. In the development of transportation projects, social, economic, and environmental effects must be considered fully along with technical issues so that final decisions are made in the best overall public interest. Attention should be given to such considerations as the following:

- (a) Need to provide transportation for all users (motorists, bicyclists, transit riders, and pedestrians) of the facility and transportation modes.
- (b) Attainment of community goals and objectives
- (c) Needs of low mobility and disadvantaged groups
- (d) Costs of eliminating or minimizing adverse effects on natural resources, environmental values, public services, aesthetic values, and community and individual integrity
- (e) Planning based on realistic financial estimates
- (f) The cost, ease, and safety of maintaining whatever is built

Proper consideration of these items requires that a facility be viewed from the perspectives of the user, the nearby community, and larger statewide interests. For the user, efficient travel and safety are paramount concerns. At the same time, the community often is more concerned about local aesthetic, social, and economic impacts. The general population, however, tends to be interested in how successfully a project functions as part of the overall transportation system and how large a share of available capital resources it consumes. Therefore, individual projects must be selected for construction based on overall system benefits as well as community goals, plans, and values.

Decisions must also emphasize different transportation modes working together effectively.

The goal is to provide a safe, sustainable, integrated and efficient transportation system in a manner that is compatible with, or which enhances, adjacent community values and plans.

More information on flexibility in design and developing projects that enhance livability is available online.¹²

Topic 109 – Scenic Values in Planning and Design

109.1 Basic Precepts

For any highway, having a pleasing appearance is an important consideration. Scenic values must be considered along with safety, utility, economy, and all the other factors considered in planning and design. This is particularly true of the many portions of the State Highway System situated in areas of natural beauty. The location of the highway, its alignment and profile, the cross section design, and other features should be in harmony with the setting.

109.2 Design Speed

The design speed should be carefully chosen, as it is the key element that establishes standards for the horizontal alignment and profile of the highway. These requirements in turn directly influence how well the highway blends into the landscape. Scenic values, particularly in areas of natural scenic beauty must play a part along with the other factors set forth under Index 101.1 in selecting a design speed.

109.3 Aesthetic Factors

Throughout planning and design, consider the following:

- (a) The location of the highway should be such that the new construction will preserve the natural environment and will lead to and unfold scenic positions. In some cases, additional minor grading not required for roadbed alignment may expose an attractive view or hide an unsightly one.
- (b) The general alignment and profile of the highway should fit the character of the area traversed so that unsightly scars of excavation and embankment will be held to a minimum. Curvilinear horizontal alignment should be coordinated with vertical curvature to achieve a pleasing appearance.

¹² Available at <http://www.dot.ca.gov/hq/oppd/design/2014-4-2-Flexibility-in-Design.pdf> and http://www.dot.ca.gov/hq/projdev/pdq/2015_PDQ_Winter.pdf.

- (c) Existing vegetation (e.g., trees, specimen plants and diminishing native species) should be preserved and protected to the maximum extent feasible during the planning, design, and construction of transportation projects. Whenever specimen or mature trees are present, especially in forested areas, a tree survey should be made to provide accurate data on the variety, condition, location, size, and ground elevations of trees affected.
- (d) Appropriate replacement planting should be provided when existing planting is removed. When native or specimen trees are removed, replacement planting should reflect the visual importance of the plantings lost. Where the visual impact of tree removal is substantial, replacement with large transplants or specimen size trees may be appropriate. If not, an appropriate quantity of smaller replacements may be required to ensure eventual survival of an adequate number of plants.

Provisions for watering and establishment of replacement planting should also be considered. The District Landscape Architect should be consulted early in the planning and design process so that appropriate conservation and revegetation measures are incorporated.

- (e) Existing vegetation such as trees or large brush may be selectively thinned or removed to open up scenic vistas or provide a natural looking boundary between forest and cleared areas. Vegetation removal for aesthetic purposes should be undertaken only with the concurrence of the District Landscape Architect.
- (f) Vista points should be provided when views and scenery of outstanding merit occur and feasible sites can be found (see Topic 904 for site selection criteria).
- (g) Whenever feasible, wide medians and independent roadways should be provided on multilane facilities as these features add scenic interest and relieve the monotony of parallel roadways.
- (h) Bridges, tunnels, and walls merit consideration in lieu of prominent excavation and embankment slopes when costs of such alternates are not excessive.
- (i) Slopes should be flattened and rounded whenever practical and vegetation provided so that lines of construction are softened.
- (j) Structures should be located and designed to give the most pleasing appearance.

- (k) Scars from material sites should be avoided. Planting compatible with the surroundings should be undertaken to revegetate such scars when they are unavoidable.
- (l) Drainage appurtenances should be so located that erosion, sumps, and debris collection areas are hidden from view or eliminated when site conditions permit.
- (m) Interchange areas should be graded as flat as reasonable with slope rounding and contouring to provide graceful, natural looking appearance. The appearance can be further enhanced by planting a vegetative cover appropriate to the locality, being careful to maintain driver visibility.
- (n) In locations where graffiti has been excessive, concepts such as limiting accessibility, planting, and surface treatments should be considered to deter graffiti.
- (o) Roadsides should be designed to deter weed growth along the traveled way, and to provide for mechanical litter collection.

**Sonoma County
Local Coastal Plan**

APPENDIX L: COASTAL COMMISSION ADU GUIDELINES



**Local Coastal Program
Permit Sonoma**

2550 Ventura Avenue
Santa Rosa, CA 95403

CALIFORNIA COASTAL COMMISSION

LEGISLATIVE OFFICE
1121 L STREET, SUITE 503
SACRAMENTO, CA 95814
VOICE (916) 445-6067
FAX (916) 324-6832



W7c

March 11, 2020

TO: Coastal Commission and Interested Persons

FROM: Legislative Unit and Legal Division

SUBJECT: **LEGISLATIVE REPORT: 2019 Chaptered Legislation, Housing**

The 2019 California legislative session resulted in five pieces of chaptered legislation (AB 68, AB 587, AB 670, AB 881, SB 13) that made substantive changes to statutes governing residential housing development (the Government Code's Planning and Zoning Law, the Health and Safety Code and the Civil Code). These will affect local governments' review and approval of accessory dwelling units (ADUs) and junior accessory dwelling units (JADUs), both within and outside of the coastal zone. Some of these changes took effect on January 1, 2020, while others will take effect January 1, 2025.

While these changes apply only to local agencies, and do not lessen or supersede the application of the Coastal Act, they will have a material effect on Local Coastal Program (LCP) implementation at the local level, and will, or should be, reflected in future LCP amendments that will come before the Commission.

The 2019 ADU/JADU bills did not change the basic structure of the statute. Local governments still have the discretion whether or not to adopt an ADU/JADU ordinance consistent with the standards in Government Code Section 65852(a). If they don't, the state standards become the direct standard of review. In either case, applications for most ADUs/JADUs are ministerial. Adopting an ordinance gives local governments a modest degree of additional discretion over objective requirements such as height, size, etc., as well as where ADUs will be allowed within the jurisdiction, based on adequacy of water, sewer and public safety.

Overall, the circumstances under which ADUs/JADUs must be allowed by local governments has been expanded, and the 2019 bills were designed, in the aggregate, to facilitate the construction of more units in more circumstances, increase unit size, reduce cost, and decrease processing times. For example, multiple ADUs must now be allowed within portions of existing multifamily dwellings that are not used as livable space, and up to two detached ADUs are allowed on a lot with an existing multifamily dwelling (65852.2 (e)(1)(C) and (D)). In addition, ADUs must be

ministerially approved in both residential and mixed-use zones, if certain requirements are met (65852.2(e)); ADUs cannot be restricted by parcel size; and, pursuant to AB 587 (Friedman), ADUs may be conveyed separately in limited circumstances (Sec. 65852.26).

One significant addition required by AB 881 (Bloom), is that the Department of Housing and Community Development (HCD) now has a new oversight and approval role to ensure local ordinances are consistent with the statute, similar to the Commission's role in reviewing LCPs. Local governments must submit their ordinances to HCD within 60 days of adoption. If a local government adopts an ordinance that HCD deems non-compliant, and a local government does not accept the suggested modifications, HCD may notify the Attorney General's office. (Sec. 65852(h)). Of particular significance to the Coastal Commission, new ADUs cannot be rented for periods of less than 30 days (Sec. 65852 (e)(1)(D)(4)).

Finally, the existing Coastal Act "savings clause" has been renumbered, but remains otherwise unchanged. Section 65852 (l) provides that:

Nothing in this section shall be construed to supersede or in any way alter or lessen the effect or application of the California Coastal Act of 1976 (Division 20 (commencing with Section 30000) of the Public Resources Code), except that the local government shall not be required to hold public hearings for coastal development permit applications for accessory dwelling units.

Some jurisdictions have incorrectly assumed that this language allows local governments to avoid compliance with the statute by merely opting to not amend their certified LCP. The Commission's position has always been and continues to be that this is not the case. Local governments must comply with both the ADU laws and the Coastal Act. While ADUs cannot conflict with Coastal Act Chapter 3 policies, such as those protecting wetlands, habitat, public access, and coastal agriculture, the majority of ADU/JADU applications will not raise any of these issues. Therefore, LCPs should be amended as soon as possible to incorporate and comply with the state standards and procedures in Section 65852.2 in a manner that will not create Chapter 3 conflicts. In the meantime, many ADU/JADU applications will not constitute development, will be exempt from coastal permitting requirements, or may be approved through a waiver of CDP requirements, thereby allowing the streamlining of such applications, consistent with both the new ADU laws and the Coastal Act.

For these reasons, staff has prepared a memo (attached) to all coastal city and county planning directors, updating two earlier 2017 memos and describing the most relevant changes to these statutes, for the purpose of providing guidance and best practices in the coastal zone for processing ADU and JADU applications prior to making conforming amendments to LCPs. This coastal specific memo complements and builds upon the January 10, 2020 memo prepared by HCD and sent to planning departments statewide.

While the Commission's memo enumerates changes to the statutes and reiterates the recommendation to update LCPs accordingly, it does not anticipate nor give legal advice regarding every conceivable question that may arise within specific LCPs or zoning ordinances. Nor does it resolve every internal ambiguity within Sections 65852.2

and 65852.22. As occasionally happens when multiple bills amending the same statute get signed into law simultaneously, some sections are vague, have inconsistent terminology, or appear contradictory. These sections will require subsequent legislative action to fully resolve.

In the meantime, local governments and the Commission will have to consider any proposed LCP amendments, coastal development permits or appeals that involve conflicting statutory directives on a case-by-case basis, with the goal of maximum compliance with the Government Code to achieve its objectives in a manner that protects coastal resources.

Staff has identified the following sections that would benefit from further statutory clarity:

Zone v. Use:

Section 65852.2(a) refers to preparing ADU ordinances for “areas zoned to allow single family or multifamily dwelling residential use.” Section 65852.2(e) refers to ministerial approval of ADU applications “within a residential or mixed-use zone”. The difference between zone vs. use is significant, particularly for agricultural lands with single family dwellings. Single family dwelling units are “allowed” under multiple types of zoning, including agricultural zones. One way to harmonize these two sections is to assume that while local governments may prepare an ordinance to provide for the creation of ADUs in any zoning type that allows for residential use, it must provide for *ministerial* approval in areas under residential or mixed-use zoning designations. Other areas could presumably require discretionary approval, or disallow ADUs for reasons stated in (a)(1)(A).

“May require” (§ 65852.2(a)(6)) vs. “shall require” (§ 65852.2(e)(4)) rental terms longer than 30 days:

Section 65852.2(a) applies where a local govt adopts an ADU ordinance. As previously noted, if they adopt an ordinance, they must follow the rest of Section 65852.2(a).

The language of 65852.2(a)(6) establishes the maximum standards that local agencies shall use to evaluate a proposed ADU on a lot that includes a proposed or existing single family dwelling, and provides that no additional standards may be imposed, except that the local govt “may require” that such a property be used for rentals of longer than 30 days (existing law). In other words, the law previously provided that local governments had the discretion to determine by ordinance whether or not to prohibit ADUs from being used as short-term rentals.

However, as amended by AB 881, newly enacted Section 65852.2(e)(4) provides as a condition of the ministerial granting of ADU applications, that a local govt “shall require” that rental of such ADUs be for longer than 30 days.

Absent further legislative clarification, this raises the question of how to harmonize “shall” with “may.” Given that the Legislature has continued to pass ADU legislation as

one way to respond to California's urgent housing shortage, the intent of this recent amendment seems to be aimed at making more affordable housing units available as rental stock by prohibiting their use as vacation rentals. However, by failing to amend (a)(6), this creates an apparent internal inconsistency. A local government may or may not prohibit ADUs as short-term rentals by ordinance at their discretion. But whether they adopt such an ordinance or not, Sec. 65852.2 seemingly prohibits the rental of ADUs for less than 30 days.

800 square feet vs. 850 square feet discrepancy:

WITH AN ORDINANCE

Section 65852.2(a)(1)(B)(i) states that if a local government is going to adopt an ADU ordinance, the ordinance shall impose standards including height and maximum size. One size restriction is that if there is an existing primary dwelling, an ADU cannot be greater than 50% of the primary dwelling's square footage. (Section 65852.2(a)(1)(D)(iv).) For a detached ADU, the maximum size is 1,200 square feet. (Section 65852.2(a)(1)(D)(v).)

WITHOUT AN ORDINANCE/ LOCAL GOVT MINISTERIAL APPROVAL OF ADU BUILDING APPLICATIONS

Section 65852.2(c)(1) states: A local agency may establish minimum and maximum unit size requirements for both attached and detached ADUs, subject to (c)(2).

Section 65852.2(c)(2)(B) says: A local agency shall not establish by ordinance a maximum square footage requirement for either an attached or detached ADU that is less than 850 sq. ft., or 1,000 sq. ft. if the ADU has more than 1 bedroom. In other words, if a local govt sets a maximum square footage, it must be 851 sq. ft. or greater, or 1,001 sq. ft. or greater for ADUs with more than 1 bedroom.

WITH OR WITHOUT ORDINANCE

Section 65852.2(e)(1)(B) states that a local agency shall ministerially approve an application for a building permit within a residential or mixed-use zone to create a detached, new construction ADU on a lot with a proposed or existing single family dwelling. The local agency may impose an 800 sq. ft. total floor area limit. Clearly, (e)(1)(B) conflicts with (c)(2)(B).

SB 330 (Skinner) – Housing Crisis Act of 2019

A sixth bill, **SB 330 (Skinner), enacted the Housing Crisis Act of 2019**, which took effect January 1, 2020. This bill made extensive, detailed findings about the extent and consequences of California's housing crisis, and amended or added several Government Code sections of General Plan law addressing the local application process for housing projects. It streamlined the administrative process, planning and regulatory functions of local agencies, shortened timeframes for review, and made numerous changes to increase housing stock of all types, including emergency shelters, affordable housing and market rate housing throughout California. One of its primary

goals was to add certainty regarding what information applicants are required to provide in a completed application and how local fees will be applied. It did not provide for any CEQA or Coastal Act exemptions.

SB 330 was extremely lengthy, complex and highly specific, and much of it is beyond the scope of this report. Most relevant to the Commission, the Housing Crisis Act prohibits a city or county from approving a housing development project that will require the demolition of occupied or vacant residential dwelling units unless the project will create at least as many residential dwelling units as will be demolished. (Gov. Code § 66300, subd. (d)(1).) It also prohibits the downzoning of land to a less intensive use unless other areas within the jurisdiction are correspondingly upzoned to achieve a no net loss of existing or potential units. (Gov. Code § 66300, subd. (b)(1)(A).) While these prohibitions apply to local agencies, and do not apply to state agencies, the Commission is mindful that local application of these new requirements will be shaping local plans and projects coming to the Commission for review or appeal.

The new Government Code sections 66300, subdivisions (b)(1) and (d)(1) require no net loss of existing units or zoning density as follows:

(b)(1) Notwithstanding any other law except as provided in subdivision (i), with respect to land where housing is an allowable use, an affected county or an affected city shall not enact a development policy, standard, or condition that would have any of the following effects:

(A) Changing the general plan land use designation, specific plan land use designation, or zoning of a parcel or parcels of property to a less intensive use or reducing the intensity of land use within an existing general plan land use designation, specific plan land use designation, or zoning district below what was allowed under the land use designation and zoning ordinances of the affected county or affected city, as applicable, as in effect on January 1, 2018, except as otherwise provided in clause (ii) of subparagraph (B). For purposes of this subparagraph, “less intensive use” includes, but is not limited to, reductions to height, density, or floor area ratio, new or increased open space or lot size requirements, or new or increased setback requirements, minimum frontage requirements, or maximum lot coverage limitations, or anything that would lessen the intensity of housing.

(...)

(d) Notwithstanding any other provision of this section, both of the following shall apply:

(1) An affected city or an affected county shall not approve a housing development project that will require the demolition of residential dwelling units unless the project will create at least as many residential dwelling units as will be demolished.

(2) An affected city or an affected county shall not approve a housing development project that will require the demolition of occupied or vacant protected units, unless all of the following apply:

(A) (i) The project will replace all existing or demolished protected units.

(ii) Any protected units replaced pursuant to this subparagraph shall be considered in determining whether the housing development project satisfies the requirements of Section 65915 or a locally adopted requirement that requires, as a condition of the development of residential rental units, that the project provide a certain percentage of residential rental units affordable to, and occupied by, households with incomes that do not exceed the limits for moderate-income, lower income, very low income, or extremely low income households, as specified in Sections 50079.5, 50093, 50105, and 50106 of the Health and Safety Code.

(iii) Notwithstanding clause (i), in the case of a protected unit that is or was, within the five-year period preceding the application, subject to a form of rent or price control through a local government's valid exercise of its police power, and that is or was occupied by persons or families above lower income, the affected city or affected county may do either of the following:

(I) Require that the replacement units be made available at affordable rent or affordable housing cost to, and occupied by, low-income persons or families. If the replacement units will be rental dwelling units, these units shall be subject to a recorded affordability restriction for at least 55 years.

(II) Require that the units be replaced in compliance with the jurisdiction's rent or price control ordinance, provided that each unit is replaced. Unless otherwise required by the affected city or affected county's rent or price control ordinance, these units shall not be subject to a recorded affordability restriction.

(B) The housing development project will include at least as many residential dwelling units as the greatest number of residential dwelling units that existed on the project site within the last five years.

(C) Any existing residents will be allowed to occupy their units until six months before the start of construction activities with proper notice, subject to Chapter 16 (commencing with Section 7260) of Division 7 of Title 1. (...)

Pursuant to Section 66300, subdivision (d)(4), the new, no net loss standards shall only apply to a housing development project that submits a complete application pursuant to Section 65943 on or after January 1, 2020.

The Housing Crisis Act provides that nothing in the section shall be construed to prohibit an affected county or an affected city from enacting a development policy, standard, or condition necessary to implement or amend a certified local coastal program consistent with the California Coastal Act of 1976. (Gov. Code § 66300, subd. (h)(2). The bill also provides that nothing in this section supersedes, limits, or otherwise modifies the requirements of the California Coastal Act of 1976 (Gov. Code § 65913.10, subd. (c)(2)), or be construed to relieve the local agency from complying with ... the California Coastal Act of 1976 (Gov. Code § 65589.5, subd. (e)).

Some additional changes include the following:

- Prohibits a local agency from holding more than five (5) hearings for a proposed housing project that meets the applicable, objective general plan and zoning standards. A continued hearing shall count as one of the five hearings.
- Requires a local agency to determine whether the site of a proposed housing development is a historic site at the time the application is deemed complete, unless archeological or cultural resources are discovered as a result of site disturbance activities.
- Specifies the components necessary for the submission of a preliminary application, and prohibits the inclusion of any additional components. Relevant to the coastal zone, the list includes the identification of any Environmentally Sensitive Habitat Areas, tsunami run-up zones, and use of the site for public access to the coast.
- Requires local agencies to develop a checklist or form listing all of the required components necessary for a completed application.
- Specifies that a housing development project shall be subject only to the ordinances, policies, and standards adopted and in effect when a preliminary application including all of the required information was submitted, except in specified circumstances.
- Requires a local agency to make specific findings in order to deny or impose a condition on a housing project that reduces density.
- Requires a local agency to inform an applicant for a project of 150 units or fewer in writing within 30 days of a completed application if the proposed project is inconsistent with the applicable plan, policy or ordinance.
- Requires a local agency to inform an applicant for a project of more than 150 units in writing within 60 days of a completed application if the proposed project is inconsistent with the applicable plan, policy or ordinance.
- Provides that a proposed housing project that is inconsistent with the underlying zoning shall not require a zoning change if the project is consistent with the

objective general plan standards and criteria but the zoning for the project site is inconsistent with the general plan.

- Authorizes an applicant, a person who would be eligible to apply for residency in the development or emergency shelter, or a housing organization to bring an action to enforce this section.
- Specifies the timeframes for local agency approval or denial.
- Prohibits a city or county from approving a housing development project that will require the demolition of occupied or vacant residential dwelling units unless the project will create at least as many residential dwelling units as will be demolished.

The full text of [SB 330](#) was included in the [Commission's December 2019 New Laws Memo](#), and is also available online.

###

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885



TO: Planning Directors of Coastal Cities and Counties

FROM: John Ainsworth, Executive Director

RE: Implementation of New Accessory Dwelling Unit Law

DATE: November 20, 2017

On April 18, 2017, we circulated a memo intended to help local governments interpret and implement new state requirements regarding regulation of “accessory dwelling units” (ADUs) in the coastal zone. Following the enactment of AB 2299 (Bloom) and SB 1069 (Wiekowski), changes to Government Code 65852.2 now impose specific requirements on how local governments can and cannot regulate ADUs, with the goal of increasing statewide availability of smaller, more affordable housing units. Our earlier memo was intended to help coastal jurisdictions and members of the public understand how to harmonize the new ADU requirements with LCP and Coastal Act policies. This memo is meant to provide further clarification and reduce confusion about whether and how to amend LCPs in response to these changes.

Although Government Code Section 65852.2(j) states that it does not supersede or lessen the application of the Coastal Act, it would be a mistake for local governments with certified LCPs to interpret this as a signal that they can simply disregard the new law in the coastal zone. The Commission interprets the effect of subdivision (j) as preserving the authority of local governments to protect coastal resources when regulating ADUs in the coastal zone, while also complying with the standards in Section 65852.2 to the greatest extent feasible. In other words, ADU applications that are consistent with the standards in Section 65852.2 should be approved administratively, provided they are also consistent with Chapter 3 of the Coastal Act as implemented in the LCP. Where LCP policies and ordinances are already flexible enough to implement the provisions of Section 65852.2 directly, local governments should do so. Where LCP policies directly conflict with the new provisions or require refinement, those LCPs should be updated to be consistent with the new ADU statute to the greatest extent feasible while still complying with Coastal Act requirements.

Bear in mind that Section 65852.2 still preserves a meaningful level of local control by authorizing local governments to craft policies that address local realities. It allows local governments to designate areas where ADUs are allowed based on criteria such as the adequacy of public services and public safety considerations. It also explicitly allows local governments to adopt ordinances that impose certain standards, including but not limited to standards regarding height, setbacks, lot coverage, zoning density, and maximum floor area. In the coastal zone, local governments can incorporate such standards in LCP policies in order to protect Chapter 3 resources while still streamlining approval of ADUs.

Therefore, the Commission reiterates its previous recommendation that local governments amend their LCPs accordingly, using Section 65852.2 as a blueprint for crafting objective

standards related to design, floor area, parking requirements and processing procedures for ADUs in a manner that protects wetlands, sensitive habitat, public access, scenic views of the coast, productive agricultural soils, and the safety of new ADUs and their occupants. Depending on the individual LCP, such amendments might include:

- Updating the definition of an ADU (variously referred to in existing LCPs as second units, granny units, etc.)
- Implementing an administrative review process for ADUs that includes sufficient safeguards for coastal resources
- Re-evaluating the minimum and maximum ADU floor area and related design standards
- Specifying that ADUs shall not be required to install new or separate utility connections
- For ADUs contained within existing residences or accessory structures, eliminating local connection fees or capacity charges for utilities, water and sewer services.
- Providing for ministerial approval of Junior Accessory Dwelling Units (JADUs)
- Clarifying that no more than one additional parking space per bedroom is required
- Eliminating off-street parking requirements for ADUs located within a ½ mile of public transit, an architecturally significant historic district, an existing primary residence or accessory structure, one block of a car share vehicle, or where on-street parking permits are required but not offered to the occupant of an ADU

This is just a partial list, as specific changes will depend on existing LCP policies as well as unique local resource constraints. See our earlier memo for additional recommendations.

We are currently conducting a survey to identify the number of local governments which have already initiated the amendment process. For those that have not, Commission staff strongly urges those jurisdictions to do so in the very near future.

To expedite the process, the Commission will process ADU-specific LCPAs as minor or de minimis amendments whenever possible. We realize that procedural requirements for public review and participation can be time consuming, and will strive to complete the Commission's review process expeditiously. In the interim, we urge local governments to consider which provisions of Section 65852.2 might be implemented administratively, through existing procedures, definitions, or variances. Because each LCP is distinct and unique to its particular jurisdiction, some are inherently more flexible than others. We strongly suggest applying any existing discretion in a manner that conforms to Section 65852.2 as well as your LCP.

We acknowledge that because of the nature of our state/local partnership the Commission cannot compel local governments to undertake these amendments. The foregoing advice is offered in the spirit of our mutual goals and responsibilities of preserving both Coastal Act objectives and local control of planning and permitting decisions. We are grateful that the Legislature elected to preserve the integrity of the Coastal Act when it passed these bills. We are also mindful that this did not reflect any intent to discourage ADUs in the coastal zone, but rather to ensure that new ADU incentives are implemented in a way that does not harm coastal resources. In order to maintain the Legislature's continued support for this approach, and avoid the imposition of unilateral coastal standards for ADUs in the future, it is essential to demonstrate that these housing policies can and will be responsibly implemented in the coastal zone.

My staff and I remain ready and available to assist in this effort.

CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885



TO: Planning Directors of Coastal Cities and Counties

FROM: John Ainsworth, Executive Director

RE: New Accessory Dwelling Unit Legislation

DATE: April 18, 2017

New State requirements regarding local government regulation of “accessory dwelling units” (ADUs) became effective on January 1, 2017. The Legislature amended Government Code section 65852.2 to modify the requirements that local governments may apply to ADUs, most notably with respect to parking. The Legislature further specified that local ADU ordinances enacted prior to 2017 that do not meet the requirements of the new legislation are null and void. (Gov. Code, § 65852.2, subd. (a)(4).) Significantly, however, the Legislature further directed that the statute shall not be interpreted to “supersede or in any way alter or lessen the effect or application of the California Coastal Act . . . except that the local government shall not be required to hold public hearings for coastal development permit applications for accessory dwelling units.” (Gov. Code, § 65852.2, subd. (j).) The Legislature also enacted Government Code section 65852.22, which establishes streamlined review of “junior” ADUs in jurisdictions that adopt ordinances that meet certain specified criteria. Unlike Government Code section 65852.2, the junior ADU statute does not specifically address or refer to the Coastal Act.

The Coastal Act requires the Coastal Commission to encourage housing opportunities for low and moderate income households and calls for the concentration of development in existing developed areas. (Pub. Resources Code, §§ 30250, subd. (a); 30604, subd. (f).) The creation of new ADUs in existing residential areas is a promising strategy for increasing the supply of lower-cost housing in the coastal zone in a way that avoids significant adverse impacts on coastal resources.

Some local governments have requested guidance from the Coastal Commission regarding how to implement the ADU and junior ADU statutes in light of Coastal Act requirements. This memorandum is intended to provide general guidance for local governments with fully certified local coastal programs (LCPs). The Coastal Commission is generally responsible for Coastal Act review of ADUs in areas that are not subject to fully certified LCPs. Local governments that have questions about specific circumstances not addressed in this memorandum should contact the appropriate district office of the Coastal Commission.

1) Update Local Coastal Programs

The Coastal Commission strongly recommends that local governments amend their LCPs to address the review of coastal development permit (CDP) applications for ADUs in light of the new



legislation. Currently certified provisions of LCPs, including specific LCP ADU sections currently in place, are not superseded by Government Code section 65852.2 and continue to apply to CDP applications for ADUs. Any conflicts between those LCP provisions and the new statutory requirements as they apply to *local permits other than CDPs*, however, may cause confusion that unnecessarily thwarts the Legislature's goal of encouraging ADUs. Government Code section 65852.2 expressly allows local governments to adopt local ordinances that include criteria and standards to address a wide variety of concerns, including potential impacts to coastal resources, and thus the coastal resource context applicable to any particular local government jurisdictional area needs to be addressed in any proposed LCP ADU sections. Coastal Commission staff anticipates that LCP amendments to implement the ADU legislation will reconcile Coastal Act requirements with the ADU statutes, thus allowing accomplishment of the Legislature's goals both with respect to coastal protection and encouragement of ADUs.

When evaluating what specific changes to make to an LCP, consider whether amendments to the land use plan component of the LCP are necessary in order to allow proposed changes to the implementation plan component. LCP amendments that involve purely procedural changes, that do not propose changes in land use, and/or that would have no impact on coastal resources may be eligible for streamlined review as minor or de minimis amendments. (Pub. Resources Code, § 30514, subd. (d); Cal. Code Regs., § 13554.)

2) Review of ADU Applications

- A) **Check CDP History for the Site.** The ADU statutes apply to residentially zoned lots that currently have a legally established single-family dwelling. Determine whether a CDP was previously issued for development of the lot and whether that CDP limits, or requires a CDP or CDP amendment for, changes to the approved development or for future development or uses of the site. In such cases, previous CDP requirements must be understood in relation to the proposed ADU, and they may restrict the proposal. If an ADU application raises questions regarding a Coastal Commission CDP, including if an amendment to a CDP issued by the Coastal Commission may be necessary, instruct the applicant to contact the appropriate district office of the Coastal Commission.
- B) **Determine Whether the Proposed ADU Qualifies As Development.** The Coastal Act's permitting requirements apply to development performed or undertaken in the coastal zone. (Pub. Resources Code, § 30600, subd. (a).) Minor changes to an existing legally established residential structure that do not involve the removal or replacement of major structural components (e.g., roofs, exterior walls, foundations) and that do not change the size or the intensity of use of the structure do not qualify as development with the meaning of the Coastal Act. A junior ADU that complies with the requirements of an ordinance enacted pursuant to Government Code section 65852.22 generally will not constitute development because it will not change the building envelope and because it must contain at least one bedroom that was previously part of the primary residence. Such minor changes do not require a Coastal Act approval such as a CDP or waiver unless specified in a previously issued CDP for existing development on the lot. If questions arise regarding whether a

proposed ADU qualifies as development, please contact the appropriate district office of the Coastal Commission.

C) If the Proposed ADU Qualifies As Development, Determine Whether It Is Exempt.

Improvements such as additions to existing single-family dwellings are generally exempt from Coastal Act permitting requirements except when they involve a risk of adverse environmental effects as specified in the Coastal Commission's regulations. (Pub. Resources Code, § 30610, subd. (a); Cal. Code Regs., tit. 14, § 13250.) Improvements that qualify as exempt development under the Coastal Act and its implementing regulations do not require Coastal Act approval unless required pursuant to a previously issued CDP. (Cal. Code Regs., tit. 14, § 13250, subd. (b)(6).)

An improvement does not qualify as an exempt improvement if the improvement or the existing dwelling is located on a beach, in a wetland, seaward of the mean high tide line, in an environmentally sensitive habitat area, in an area designated as highly scenic in a certified land use plan, or within 50 feet of the edge of a coastal bluff. Improvements that involve significant alteration of land forms as specified in section 13250 of the Commission's regulations also are not exempt. In addition, the expansion or construction of water wells or septic systems are not exempt. Finally, improvements to structures located between the first public road and the sea or within 300 feet of a beach or the mean high tide line are not exempt if they either increase the interior floor area by 10 percent or more or increase the height by more than 10 percent. (Cal. Code Regs., tit. 14, § 13250, subd. (b).)

To qualify as an exempt improvement to a single-family dwelling, an ADU must be contained within or directly attached to the existing single-family structure. "[S]elf-contained residential units," i.e., detached residential units, do not qualify as part of a single-family residential structure and construction of or improvements to them are therefore not exempt development. (Cal. Code Regs., tit. 14, § 13250, subd. (a)(2).) Again, if questions arise regarding CDP exemption requirements, please contact the appropriate district office of the Coastal Commission.

D) If the Proposed ADU Is Not Exempt From CDP Requirements, Determine Whether A CDP Waiver is Appropriate. If a proposed ADU qualifies as an improvement to a single-family dwelling but is not exempt, a local government may waive the requirement for a CDP if the LCP includes a waiver provision and the proposed ADU meets the criteria for a CDP waiver. Such provisions generally allow a waiver if the local government finds that the impact of the ADU on coastal resources or coastal access would be insignificant. (See Cal. Code Regs., tit. 14, § 13250, subd. (c).) In addition, they generally allow a waiver if the proposed ADU is a detached structure and the local government determines that the ADU involves no potential for any adverse effect on coastal resources and that it will be consistent with the Chapter 3 policies of the Coastal Act. (See Pub. Resources Code, § 30624.7.) Some LCPs do not provide for waivers, but may allow similar expedited approval procedures. Those other expedited approval procedures may apply. If an LCP does not include provisions

regarding CDP waivers or other similar expedited approvals, the local government may submit an LCP amendment to authorize those procedures.

- E) **If a Waiver Would Not Be Appropriate, Review CDP Application for Consistency With Certified LCP Requirements.** If a proposed ADU constitutes development, is not exempt, and is not subject to a waiver or similar expedited Coastal Act approval authorized in the certified LCP, it requires a CDP. The CDP must be consistent with the requirements of the certified LCP and, where applicable, the public access and recreation policies of the Coastal Act, except that no local public hearing is required. (Gov. Code, § 65852.2, subd. (j).) Provide the required public notice for any CDP applications for ADUs, and process the CDP application according to LCP requirements. Once a final decision on the CDP application has been taken, send the required final local action notice to the appropriate district office of the Coastal Commission. (Cal. Code Regs., tit. 14, §§ 13565-13573.) If the ADU qualifies as appealable development, a local government action to approve a CDP for the ADU may be appealed to the Coastal Commission. (Pub. Resources Code, § 30603.)