OPEN SPACE ELEMENT

4.1 INTRODUCTION

Overview of Arcata's Open Space Resources. Arcata's open spaces take many forms and serve a variety of functions. Open space areas represent a significant and desirable component of the community's character and maintain natural, recreational, and visual resources for future community use and enjoyment. Open space is valuable for both passive and active uses. Designating or otherwise protecting lands as open space provides for: protection of natural habitats and species; managed production of natural resources such as agricultural and forest products; recreational uses; coastal access; scenic, aesthetic resources; and avoidance of development on such areas as steep slopes, faults, and flood zones that are potentially hazardous to the community. Open space is also valuable for preserving scenic views and other aesthetic considerations. The overall system is also enhanced when open space lands are linked by natural biological corridors, greenways, easements, and other types of connections. Open space categories are described in more detail below, and mapped on Figure OS-a located in the map pocket at the end of this chapter.

Open Space for the maintenance and enhancement of natural resources protects plant and animal habitat, especially in areas where rare, endangered, or threatened species exist. Arcata's creek watersheds and watercourses, McDaniel, Gannon, Butcher and Mad River sloughs, Arcata and Aldergrove Marshes, wetlands, baylands and tidelands, and ecological and scientific study areas, may also be included in this category.

Open space for the managed production of resources includes forest lands on the west slopes of Fickle Hill, agricultural lands in the Arcata Bottom and Bayside areas, aquaculture areas in Arcata Bay, and the aggregate deposits along the Mad River. These areas are important for their production of food, wood, and mineral products, as well as for maintaining water quality and other ecological functions.

Open space for outdoor recreation includes City parks and ballfields, such as Redwood Park and the Community Center; cultural and special use areas such as the Arcata Ball field, Skate park, and Plaza; neighborhood parks such as Sunny Brae and Stewart Parks; and natural areas such as the Arcata Marsh and Shay Park.

Open space for public health and safety includes earthquake fault zones, liquefaction areas, steeply sloped hillsides, and 100-year floodplains.

In many cases, open space can provide multiple benefits. Agricultural lands in the Arcata Bottom and forested lands on the western slopes of Fickle Hill are important for their natural and resource production capabilities. These lands also retain natural drainage systems, sustain natural habitats, enhance the community's viewshed and provide an aesthetic resource. Designating these and other open spaces in the General Plan documents their value to the community. It also allows City decision-makers to identify open space as an important resource when considering proposed changes in community form.

Within the city and surrounding Planning Area, natural resource lands that are part of the open space system include: ocean beach; sand dunes; back-dune woodlands; Arcata Bay; Mad River; Mad River Slough; and buffer strips along the Mad River, and Jacoby, Jolly Giant, Janes, Sunset, Grotzman, Beith, and Campbell Creeks.

The Open Space Element is closely linked with the Resource Conservation and Management, Public Safety, and Parks and Recreation Elements of the General Plan. These linked elements contain policies for the protection, management, enjoyment, and access to and appropriate use of identified open space areas. The Open Space Element identifies natural and productive resource areas, parks, coastal access, outdoor recreation, and hazard areas that should be considered for their open space values.

General Plan Parks and Recreation Element Goals:

- To provide a wide spectrum of recreational opportunities for Arcata residents of all ages.
- To provide all residents with a wide assortment of parks and related facilities.
- To promote sharing of facilities and programs with other entities.
- To emphasize fiscal efficiency in the provision of parks and recreation programs.
- To provide aesthetically pleasing parks and recreational facilities which are compatible with their environment.
- To bring park and recreation facilities into compliance with changing federal and state laws, and encourage user safety.

Guiding Principles and Goals.

A. Protect open space lands with native biotic resources as a natural legacy for future generations.
B. Protect and manage public trust lands to sustain plant and animal species and ecosystem health.
C. Recognize that the value of natural resources lands of all sizes and shapes are significantly enhanced when linked together in an open space system.
D. Designate as open space, resource lands capable of producing agricultural, forest, mineral, and aquaculture products; and manage those lands for sustained production as well as habitat, hydrological, mineral, recreational, and aesthetic values.
E. Preserve sufficient lands, for both active and passive recreational activities, and

coastal access to serve the present and future needs of the community.

F. Protect lands that, due to instability or seismic risks, pose potential risk to human health and well-being.

G. Provide additional entryways to the Community Forest to promote greater accessibility from Arcata's adjacent neighborhoods.

4.2 POLICIES

POLICY OS-1 OVERALL OPEN SPACE SYSTEM

The Open Space Element includes the following policies:

OS-1 Overall Open Space System
OS-2 Natural resource Protection and Enhancement
OS-3 Open Space for Managed Production of Resources
OS-4 Open Space for Outdoor Recreation/Coastal Access
OS-5 Open Space in Health and Safety Hazard Areas

Objective. Designate, maintain, and enhance the quality, and increase the amount of permanently protected open space in the Arcata Planning Area, including: natural resource areas; resource production areas; outdoor recreation areas; and areas subject to health and safety hazards. These areas are to be protected, linked together in a network wherever practical for accessibility, managed for resource production, and maintained for enjoyment by City residents and visitors.

OS-1a **Designation of open space lands with native biotic resources and ecosystems.** The native biotic resources of the forested western slopes of Fickle Hill, river and creek riparian zones, the Arcata and Aldergrove Marshes, and Arcata Bay tidelands and sloughs are unique ecosystems that have important habitat values in addition to their other open space values. These areas as designated on Map OS-a shall be protected as open space for their resource values.

OS-1b **Open Space Plan Map.** The areas designated as open space are shown on Figure OS-a. Generally, these lands are designated as A-E, NR, or PF on the land use map. Other lands, where identified open space resources have been preserved through easements or other means, are also subject to this element's policies.

OS-1c **Relationship to Resource Conservation and Management and Public Safety Elements.** This element identifies hazard areas that shall be maintained as open space for the benefit of the community. The policies of this element and policies found in the Public Safety Element provide common direction for the designation and avoidance of hazard areas. The natural open space features of these areas, such as vegetation, shall be retained, except where they contribute to instability or increase hazards.

OS-1d **Linkages between open space areas.** Linkage of open space lands, especially along biological corridors and greenways, is important for animal migration, non-motorized vehicle transportation, and community recreation, and shall be encouraged. Trails along levees or adjacent to railroad tracks and street rights-of-way can serve as links to parks, open space, and natural areas. Easements shall also be considered as a lower cost alternative to preserving links between open space.

OS-1e **Appropriate uses and development limitations within open space lands.** Certain open space areas contain wetlands and other critical habitat, and must be preserved in a natural condition and enhanced. Other areas can accommodate managed activities such as mining and timber harvesting, subject to sustainable yield policies RC-6 and RC-8 in the Resource Conservation & Management Element, while other areas shall be designated for interpretive and recreational use. Each designated open space area of the City shall be evaluated by the appropriate City advisory board (e.g., Creeks & Wetlands Committee) to determine the resources present, the acceptable level of use, and appropriate preservation. The management of, and development in, open space areas are subject to applicable policies of the Resource Conservation and Management and Land Use Elements.

OS-1f **Designation of lands with scenic, aesthetic, historic, and cultural value.** The City has scenic routes, including State Route 101 and Samoa Boulevard; vistas, including the forested slopes of Fickle Hill and the Arcata Bottoms; and areas of historic and cultural value, such as the Plaza. The open and natural characteristics of these areas shall be maintained. Policies for retaining scenic vistas and landscape features are included in the Community Design Element of the General Plan.

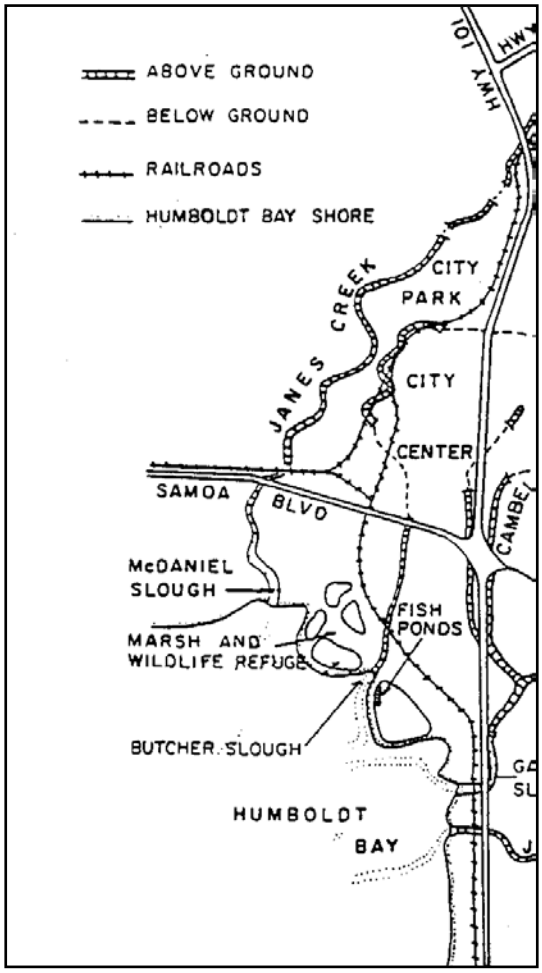
OS-1g **Public and private ownership and management of open space.** Open space resource areas are owned and managed by the City, state agencies, land trusts, corporations, and private individuals. The City shall set the standard for responsible resource land stewardship through its management of the Community

Forest, marshes, parks, and other resource lands, and encourage other public and private entities, entrusted with the ownership and management of similar resource areas, to consider natural resource values to the community in all long term use decisions.

OS-1h **Greenbelts.** Preserving greenbelts of agricultural and other open space lands is an effective method of defining urban development limits. The City shall encourage the County to preserve agricultural designations in the City's Planning Area. The City also supports greenbelt preservation through land and conservation easement acquisition.

These measures will help preserve visual and associative links to nature, and reinforce the distinction between the City and adjacent communities.

OS-1i **Acquisition of open space areas.** There are several privately held land parcels, including forested property on the west slopes of Fickle Hill, which would contribute significantly to the City's open space system. The City shall pursue acquisition of these parcels, from willing sellers, for their open space values. Joint funding for land acquisition will be coordinated with County, regional and state agencies.



POLICY OS-2 NATURAL RESOURCES PROTECTION AND ENHANCEMENT

Objective. Designate, maintain, and enhance natural resource areas, including sensitive habitat areas, necessary to sustain plant and animal life and native biological diversity.

OS-2a **Open space plan map designations for natural resource protection.** Publicly held lands containing creeks, wetlands, other open water, marsh, sensitive habitat, forests, and other important natural resources are designated on the Open Space Map.

OS-2b **Development limitations and management for maintenance of biotic resources and diversity, including aquatic resources and sensitive habitats.** Creeks, marshes, and wetlands are significant components of Arcata's natural open space system. The City shall restore and maintain this system for the benefit of residents, visitors, fish, and wildlife.

The Arcata Bay and tidelands represent an important natural edge and open space feature of the City. Buildings, landform alterations, or access routes in this area shall be of a design and scale that preservers open space and natural characteristics and maintains public views to the Bay.

Local creeks which flow openly through the developed portion of the community shall have biological corridors and greenways established, and shall be maintained as visual assets to any developments which adjoin them.

The natural features of the Mad River corridor, Arcata's creeks and adjacent areas, marshes, and other wetland areas, shall be retained.

Unique vegetation and wildlife areas shall remain in a natural condition. Such areas include sand dunes and backdune woodlands, eel grass area, salt marshes, and special habitats (tern and osprey nesting areas, cormorant rookery, harbor seal area and egret roost). The policies of this element shall also call for protection for habitat of species that become threatened in the future.

POLICY OS-3 OPEN SPACE FOR MANAGED PRODUCTION OF RESOURCES

Objective. Designate and conserve resource areas, including forest and agricultural lands, fisheries and aquaculture, groundwater, and mineral resources, for their sustainable, long-term productive capabilities

OS-3a **Designations for forest, agriculture, fisheries, aquaculture, groundwater, and mineral resource uses and management.** All publicly held lands, and some privately held lands adjacent to the Community Forest and east of Aldergrove Industrial Park, actively managed for production of forest, fisheries, aquaculture and mineral resources are designated as Natural Resource [NR] on the General Plan Land Use Element map. Productive agricultural lands are designated on the Open Space Map.

OS-3b **Development limitations and management for productive resource areas.** The policies of the Resource Conservation and Management Element shall be followed for the development and management of productive resource lands. This includes policies for: Natural Biological Diversity;

Streams Management; Wetlands Management; Baylands and Tidelands; Agricultural and Forest Resources; and Water, Energy, Soils and Mineral Resources. The City shall require that management of open space resources be consistent with these and other applicable General Plan policies.

POLICY OS-4 OPEN SPACE FOR OUTDOOR RECREATION AND COASTAL ACCESS

Objective. Designate and secure public access to a sufficient supply of land and water areas with recreation resource value, including parks, forests, coastal areas, baylands, and stream corridors, to meet the outdoor recreation needs of Arcata residents and visitors.

OS-4a **Designations for park lands and outdoor recreation areas.** All publicly held park lands and outdoor recreation areas are designated as Public Facility [PF] on the General Plan Land Use Element map. The natural resources present on these lands are also subject to the applicable policies of the Resource Conservation & Management Element. Recreation areas are mapped on Figure OS-a.

OS-4b **Coastal access policy.** The City shall maintain coastal access corridors to Arcata Bay and other public use areas and public trust lands within the coastal zone.

Coastal access routes include:

1. Access from Samoa Boulevard to Arcata Bay via South "I" and "G" Streets.
2. Access to Mad River Beach via Mad River Road.
3. Access to Manila Dunes via Samoa Boulevard.

OS-4c **Relationship to the Parks and Recreation Element.** This element contains policies for management of open space lands designated for outdoor recreation. The Parks and Recreation Element contains goals and policy direction for: providing a range of recreation opportunities; sharing facilities; park and recreation program efficiency; environmental compatibility; and user safety.

POLICY OS-5 OPEN SPACE IN HEALTH AND SAFETY HAZARD AREAS

Objective. Designate health and safety hazard areas such as seismic fault and liquefaction zones, unstable soils or slopes, floodplains, areas susceptible to wildland fire, and watershed/reservoir safety zones. Provide appropriate protections, or restrictions, to minimize unnecessary exposure of people and property to health and safety hazards.

OS-5a **Designation of open space for public safety.** Designated open space for public safety is shown on Figure OS-a. Setbacks for seismic faults and liquefaction zones, unstable soils or steep slopes, mapped Flood Hazard Zone A, areas susceptible to wildland fire, and watershed/reservoir safety zones, shall be established as part of the development review process. Where severe safety considerations exist (e.g., within the Alquist-Priolo Zone), open space easements shall be granted to the City to protect people and property from health and safety hazards.

Open space areas, with slopes 15% or greater shall retain their natural landform features; excavation shall be restricted, according to the City's adopted grading ordinance, and removal of vegetation shall be limited to selected thinning of timber stands and removal of hazard trees.

Open Space areas that are flood-prone may be used for agricultural and recreational purposes but shall be kept free from urban development. A flood plain overlay zone shall be applied to all Natural Resource [NR] and Agricultural [AE] areas subject to inundation according to the Flood Insurance Rate Map (Flood Hazard Boundary Map) developed by the Federal Emergency Management Agency (FEMA) or the Federal Insurance Administration.

OS-5b **Development limitations and management for health and safety hazard areas.** The policies of the Public Safety Element shall be followed for all development activity in areas with known or suspected safety hazards. In particular, seismic hazards, other geologic hazards, and flood hazards policy topics are applicable.

4.3 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURES	RESPONSIBLE PARTY	TIME FRAME
OS -1	**Open Space Preservation** Preserve existing and acquire additional open space lands identified in this element through the following measures: • Purchase of open space lands in fee. • Secure easements by negotiated agreement. • Maintain open space designations on City and County planning maps. An appointed Open Space Advisory Committee will be responsible for implementing the Open Space Element and making relevant recommendations to City Council, including possible funding through bond measure approval. The advisory body is to participate in the next County General Plan update and promote incorporation of the City's open space goals, policies, and implementation measures in the County community plans covering the Arcata Planning Area.	Community Development Dept./ Planning Commission	Year 1

RESOURCE CONSERVATION & MANAGEMENT ELEMENT

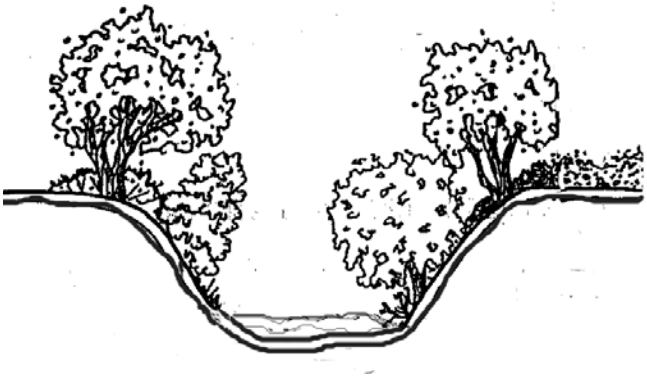
4.4 INTRODUCTION

Overview of Arcata's Natural Resources. Collectively, Arcata's natural resources constitute a significant component of the community. The forested hillsides, including the community forest, the Arcata Bottom, baylands, tidelands, creeks and wetlands are features of the natural ecosystem, which is as much a part of the community as homes, businesses, and schools. Goals and policies for conserving, enhancing, and managing the City's natural systems and features are critical ingredients of the General Plan.

> **Biodiversity** - "The variety of organisms considered at all levels, from genetic variants belonging to the same species through arrays of species to arrays of genera, families, and still higher taxonomic levels; includes the variety of ecosystems, which comprise both the communities of organisms within particular habitats, and the physical conditions under which they live."
>
> Edward O. Wilson
> *The Diversity of Life*, 1992

Arcatans have demonstrated that natural resource conservation and management are civic responsibilities, which can be met by emphasizing resource enhancement rather than resource depletion. By taking an ecosystem management approach, the City can evaluate natural resource interrelationships, and plan to maintain regional biodiversity when making resource conservation and management decisions.

Overview of Arcata's watercourses, wetlands, baylands and tidelands. Arcata's nine named creeks and associated sloughs provide: flood control, freshwater habitat, riparian habitat, scenic enjoyment, water quality, educational opportunities, public safety, fish and wildlife habitat (e.g., fish spawning and migration, wildlife nesting and foraging areas), open space, recreation, marine habitat, and groundwater recharge. These creeks also have tributaries with similar feature and functions. Arcata's creeks and sloughs, including areas with tidal action, are illustrated in Figure RC-a, on the following page.



The City has an adopted a Creeks Management Plan (CMP) which contains policies for: creek zone and flood hazard management; erosion and sedimentation, vegetation and wildlife; water quality; recreation; and public awareness. The CMP was adopted to address land uses that have significantly altered Arcata's creeks from their original condition.

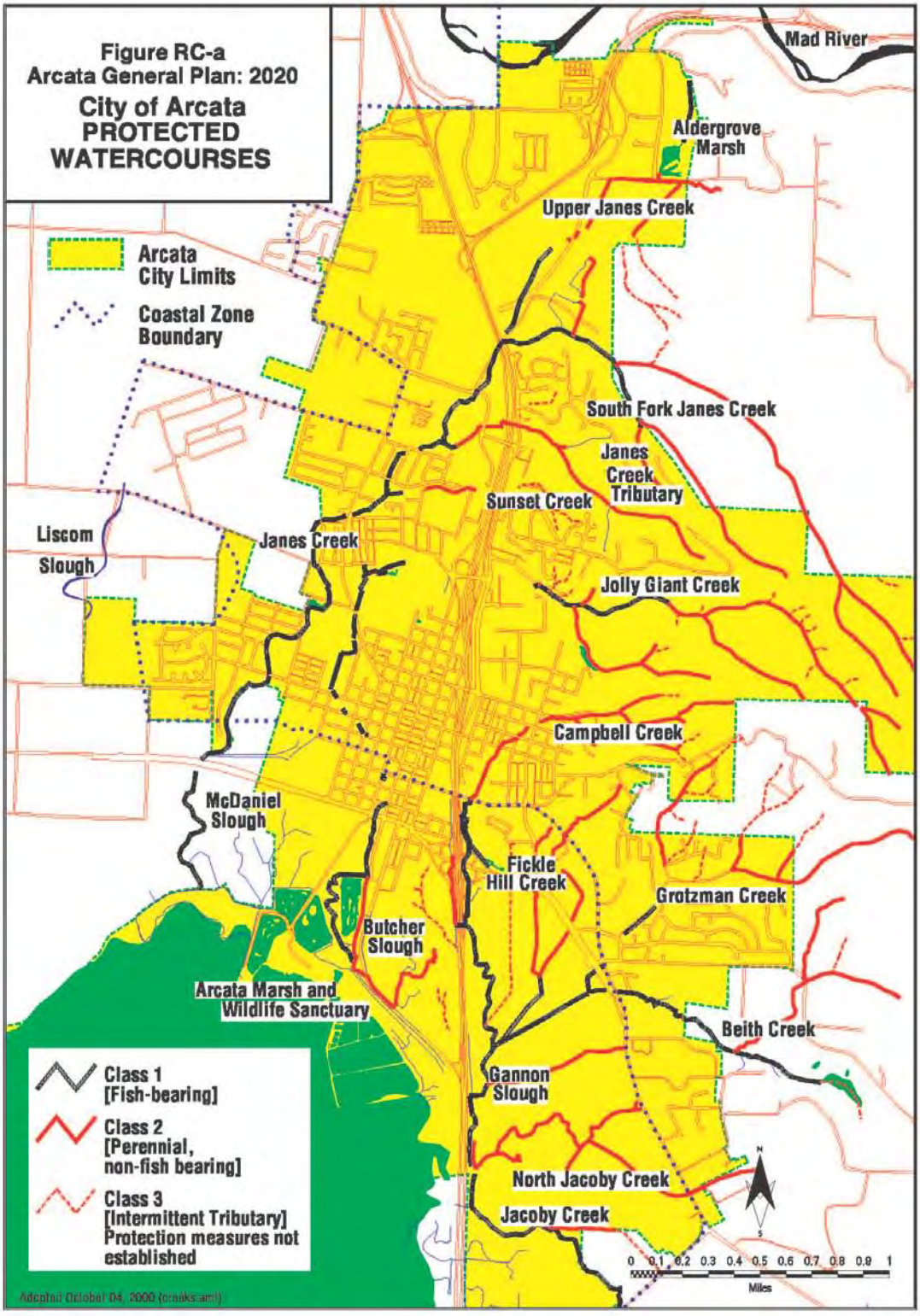
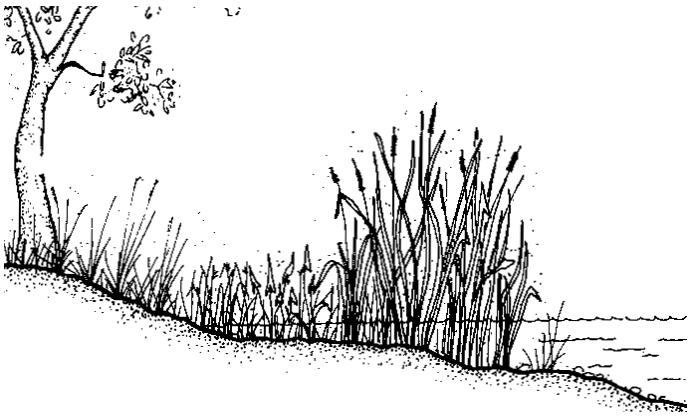


Figure RC-a
Arcata General Plan: 2020
City of Arcata
PROTECTED
WATERCOURSES
Arcata
City Limits
Coastal Zone
Boundary
Mad River
Aldergrove
Marsh
Upper Janes Creek
South Fork Janes Creek
Janes
Creek
Tributary
Sunset Creek
Liscom
Slough
Janes Creek
Jolly Giant Creek
Campbell Creek
McDaniel
Slough
Fickle
Hill Creek
Grotzman Creek
Butcher
Slough
Arcata Marsh and
Wildlife Sanctuary
Beith Creek
Gannon
Slough
North Jacoby Creek
Jacoby Creek
Class 1
[Fish-bearing]
Class 2
[Perennial,
non-fish bearing]
Class 3
[Intermittent Tributary]
Protection measures not
established
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
Miles
Adopted October 04, 2000 (creeks.aml)

These alterations have resulted from the present use of stream courses as storm drains, and past land use practices which produced large amounts of sediment, contributing to creek degradation. Alterations also included structures such as tidegates, which prevent or severely limit access for anadromous fish to all but Jacoby and Jolly Giant creeks. Except for Jacoby Creek, the riparian forests have been completely removed from at least half of each stream channel. Pollutants from a variety of sources (including petroleum products from urban run-off and suspended sediments from soil erosion) degrade the appearance and the biological integrity of the creeks.

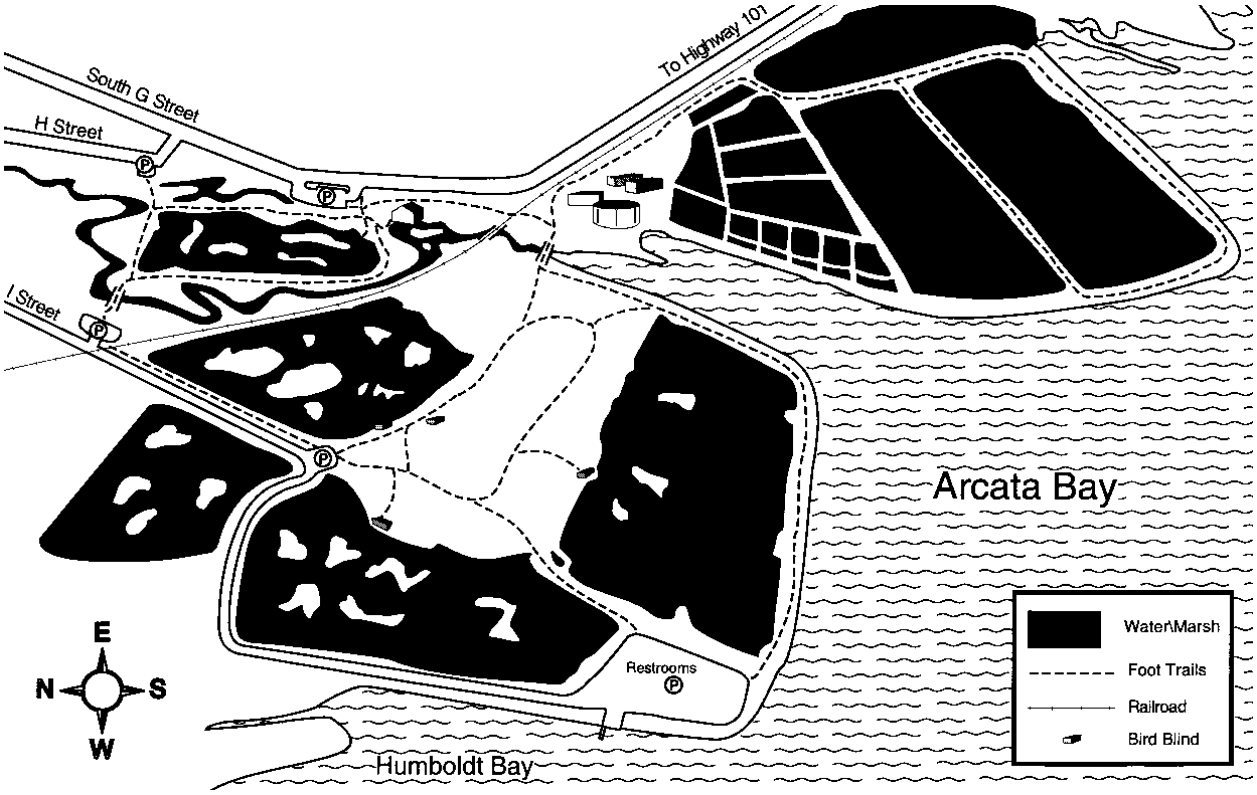
The Resource Conservation and Management Element contains overall goals and policies for creek management, which are supported by CMP policies and implementation measures. The CMP provides policy direction for new and modified development along creeks, and for existing activities in creek zones, in order to fully realize the creek's beneficial uses.

The westernmost reach of the Mad River forms the northern boundary of Arcata's Planning Area. The river originates at the northern edge of the Yolla-Bolly wilderness area, in Trinity County, approximately 100 miles southeast of its outlet to the Pacific Ocean. Its associated riparian corridor forms the northern portion of the City's perimeter greenbelt and a natural buffer between Arcata and the community of McKinleyville, to the north.



Wetlands provide flood protection, groundwater recharge, water quality treatment, food production and wildlife habitat, which are valued by the community. Wetlands are highly productive, complex ecosystems, seasonally or permanently saturated, and support specially adapted vegetation. Wetlands are often found in transitional zones, or ecotones, between uplands and open water habitats. Arcata's marshes may be among the best examples of local wetlands. The Aldergrove marsh was a log pond that has now been reconstructed and significantly enhanced as a ten acre freshwater marsh, as part of the Aldergrove Industrial Park development. A plan view of the 170 acre Arcata Marsh and Wildlife Sanctuary is shown on the following page.

Arcata Bay is part of Humboldt Bay, which is fourteen miles in length, from north to south; covers more than 17,000 acres; and is the second largest coastal estuary in California. A significant portion of the northerly waters of Arcata Bay are owned by the City, are within its City limit, and represent a significant natural, visual, aquacultural, and recreational resource for the community. The tidelands adjacent to the Bay include salt marshes and sloughs, excepted where diked/reclaimed and used as pastureland.



Overview of agricultural resources. Agricultural lands represent an important natural resource within the City. Arcata's agricultural lands are currently used primarily for flowers, silage and hay production, food production, and livestock grazing. The Ferndale, Russ, and Loleta series are Arcata's most productive agricultural soils.

The agricultural lands in and around Arcata produce crops of raspberries, strawberries, lilies, daffodils, potatoes, corn, artichokes, hay (forage for cattle), and a number of other shallow rooted crops. There is community support for the continuation of dairy, beef, vegetable, fodder, and flower production in the City and the Planning Area, and recognition that protection of agricultural values, as well as open space and recreational values, is important.

Arcata's agricultural lands include farmed wetlands. Most of the farmed wetland areas around Humboldt Bay are former tidelands, once owned by the State, which private parties acquired from the State under the Swamp and Overflowed Lands Act. These lands were diked/reclaimed around the turn of the century.

These areas are below ten feet in elevation, have relatively impermeable soils, and retain run-off for long periods of time. While the State conveyed the fee title interest in these former tidelands, they are still subject to an easement under the Public Trust Doctrine, for the benefit and enjoyment of the people of this state. Much of this Public Trust land bordering Arcata bay can provide important wildlife habitat and recreational opportunities.

These farmed wetlands are no longer salt and brackish wetlands, but now function as freshwater wetlands, with meandering year-round creek and slough channels. Arcata's diked former tideland areas typically include the less productive types of Loleta and Bayside soils and are generally used for pasture.

Soil classifications are based on the most recent surveys. In the event that an updated soil survey is completed in the future, the classifications and associated mapping shall be changed accordingly.

Overview of forest resources. The eastern portion of Arcata is located on forested slopes of Fickle Hill Ridge. The slopes contain mostly second growth conifer stands. These forested lands are both publicly and privately held. The City of Arcata owns two separate tracts of forest land that comprise approximately 1,125 acres. Together, the publicly owned Arcata Community and Jacoby Creek Forests constitute a significant ecological, recreational, economic and educational resource for the citizens of Arcata and the surrounding region.

The City adopted the *1994 Arcata Community Forest & Jacoby Creek Forest Management Plan* to provide guidance for integrated multi-resource management activities and to establish standards and guidelines for the Arcata Community Forest and Jacoby Creek Forest. The Resource Conservation and Management Elements contain overall goals and policies for forest management. The Forest Management Plan includes goals, policies, detailed management direction, monitoring and evaluation techniques for the City-owned forests. The forest management plan goals are listed below.

THE 1994 ARCATA COMMUNITY FOREST & JACOBY CREEK FOREST MANAGEMENT PLAN GOALS ARE TO:

- Maintain the health of the forest system, specifically, maintain the integrity of the watershed, wildlife, fisheries and plant resources, their relationships, and the process through which they interact with their environment.
- Produce marketable forest products and income to the City in perpetuity, balancing timber harvest and growth.
- The Community Forest shall also be managed to provide forest recreational opportunities for the Community.
- The City's forests shall serve as models of managed redwood forests for demonstration and educational purposes.

Guiding Principles and Goals.

A. Protect, maintain and enhance natural ecosystem processes and functions in the region, in order to maintain their natural ecological diversity.

B. Restore and maintain the physical and biological integrity of Arcata's streams.
C. To protect, restore, enhance, and maintain riparian habitat on those lands subject to wetlands and streamside protection zone.
D. Recognize and protect wetlands as highly productive complex ecosystems that provide vital habitat and cleansing systems.
E. Restore and maintain the physical and biological integrity of publicly owned former tidelands (farmed wetlands) subject to the Public Trust easement, to a diversity of tidal, freshwater, and riparian habitats.
F. Protect and enhance prime agricultural lands for their food production, resource, and aesthetic values.
G. Manage a sustainable production of forest products on both public and private timberlands.
H. Manage water resources at the watershed level, to maintain high ground and surface water quality.
I. Manage surface and groundwater resources to provide water quality and quantity adequate to support natural ecosystem processes and functions.
J. Conserve soil resources as the foundation of resource production, and minimize erosion and other soil depleting processes.
K. Promote energy conservation, and development and use of alternative, non-polluting, renewable energy sources for community power in both the public and private sectors.
L. Maintain an active relationship with adjacent communities and government agencies to encourage cooperative management of natural resources and ecosystems in Arcata's Planning Area.
M. Conserve natural resources through reduced materials consumption and recycling (see integrated waste management policies in the Public Facilities & Infrastructure Element).
N. Establish an Agricultural Advisory Committee to help maintain a compatible relationship between agricultural and non-agricultural activities and uses.

4.5 POLICIES

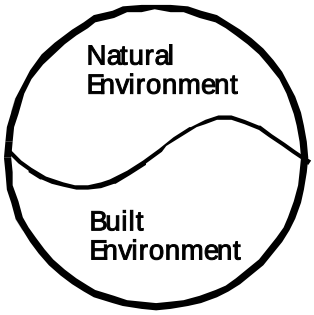
The following policies are included in the Resource Conservation and Management Element:

RC-1 Natural Biological Diversity/Ecosystem Function
RC-2 Streams Conservation & Management
RC-3 Wetlands Management
RC-4 Open Waters of Arcata Bay and Tidelands
RC-5 Agricultural Resources Management
RC-6 Forest Resources Management
RC-7 Water resources Management
RC-8 Energy Resources Management
RC-9 Soils and Mineral Resources

POLICY RC-1 NATURAL BIOLOGICAL DIVERSITY/ ECOSYSTEM FUNCTION

Objective. Set an overarching policy that emphasizes the overall value of biological diversity and the fact that all natural resources are optimized when they function as part of a healthy ecosystem.

RC-1a **Maintain Biological and ecological integrity.** Maintaining ecological balance, system function, biological integrity, and natural diversity is the primary focus of the Resource Conservation and Management Element. Protecting ecological functions of natural habitats, and natural drainage and infiltration processes, will enhance natural ecosystems in the Planning Area. Ecological system functions elements and processes are maintained through the following measures:



1. The structure and composition of ecological systems within the City shall contain the same native plant and animal species, in the same relative abundances and proportions, which are found in the least-disturbed natural ecosystems in the Planning Area.
2. The ecological functions performed by ecological systems in the City shall resem-ble the functions of the least-disturbed natural ecosystems in the Planning Area.
3. Ecological systems and natural processes are not disrupted by exotic organisms to a significant degree.
4. Ecological systems and natural processes are not to be disrupted by land use activities to a significant degree (e.g., a culvert or other drainage device that blocks fish passage).

An "adaptive management" approach shall be utilized to maintain ecological and biological integrity, including monitoring the status of ecological systems in the City and adjusting City implementation of this Plan, in order to more closely approximate the conditions provided in the Planning Area's least-disturbed natural ecosystems.

RC-1b **Non-native plant and animal species.** Some non-native species, such as pampas grass (*Cortaderia jubata*), Himalaya berry (*Rubus discolor*), Scotch broom (*Cytisus scoparius*), blue gum eucalyptus (*Eucalyptus globulus*), English ivy (*Hedera helix*), English holly (*Ilex aquifolium*), and cotoneaster (*Cotoneaster franchetii*), are invasive exotics that can and do displace native species. The presence of these non-native species reduces the area's natural diversity, biological integrity and aesthetics. Only native species, or species demonstrated to be non-invasive, shall be used in public landscapes and are to be strongly encouraged in private landscapes. The City shall provide public information that explains why invasive species are a problem. The City shall also maintain a program that recommends effective but non-toxic eradication measures, and eradicates non-native species on public lands where they are displacing native species.

RC-1c **Habitat value protection.** Environmentally sensitive habitat areas (ESHA) shall be protected against any significant disruption of their habitat values, and only uses dependent on and compatible with maintaining those resources shall be allowed within ESHAs. Proposed development in areas adjacent to ESHAs 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.

RC-1d **Sensitive habitat definition.** The City declares the following to be ESHAs within the Planning Area:

1. Rivers, creeks, sloughs, and associated riparian habitats: Mad River; Jacoby Creek; Beith Creek; Grotzman Creek; Campbell Creek; Jolly Giant Creek; Janes Creek; Gannon Slough; Butcher Slough; and McDaniel Slough.

2. Wetlands, estuaries, and associated riparian habitats: Arcata Bay; Mad River Slough; Liscom Slough; Butcher Slough; the Aldergrove marshes and ponds; and the Arcata Marsh and Wildlife Sanctuary.
3. Other unique habitat areas: waterbird rookeries; shorebird concentration sites; habitat for all rare, threatened, or endangered species on federal or state lists; and vegetated dunes.
4. Public Trust lands such as grazed or farmed wetlands (i.e., diked/reclaimed former tidelands).

RC-1e **Threshold of City review for sensitive habitat effects.** Development on parcels designated Natural Resource [NR] on the Land Use Plan Map, or within 250 feet of such a designation, or development potentially affecting a sensitive habitat area, shall be required to be in conformance with applicable habitat protection policies of this Element. All proposed development plans, including grading and drainage plans, submitted as part of a planning entitlement application for these areas, shall show the precise locations of all sensitive habitat areas on the site plan.

RC-1f **Sensitive habitat buffer requirements.** A setback separating all permitted development from adjacent sensitive habitat areas shall be required. The purpose of such setbacks shall be to prevent any degradation of the ecological functions provided by the habitat area as a result of the development. The following shall apply to such setbacks:

1. The minimum width of setbacks for streams and wetlands shall be as provided in policies RC-2 and RC-3, respectively.
2. The minimum width of all other habitat setbacks shall be 100 feet, unless the designated setback would eliminate all reasonable use of the property.
3. A definition and map of sensitive habitat will be maintained by the City.

RC-1g **Sensitive habitat information required in development application review.** Where there is a question regarding the boundary, buffer requirements, location, or current status of an ESHA identified pursuant to General Plan policies, the public or private applicant shall provide the City with the following:

1. Base map delineating topographic lines, adjacent roads, and location of dikes, levees, flood control channels, and tide gates, as applicable.
2. Vegetation map, including identification of species that may indicate the existence or nonexistence of a sensitive environmental habitat area.
3. Soils map delineating hydric and non-hydric soils.
4. Census of animal species indicating the existence, or non-existence, of an environmentally sensitive habitat area.

This information shall be provided to the Department of Fish and Game, US Fish and Wildlife Service, National Marine Fisheries Service, and other affected agencies for review and comment. Any comments and recommendations provided by the Department shall be immediately sent to the applicant for his or her response. The decision concerning the boundary, location, or current status of the environmentally sensitive habitat area in question shall be based on the substantial evidence in the record and supported by written findings.

RC-1h **Habitat integration for ecological integrity and development of a protected habitat corridor system.** An ecological connection network plan for linking native habitats in the Planning Area, and all of the environmentally sensitive habitat areas identified in this Plan, shall be prepared. The network shall incorporate all existing large areas (or "nodes") of habitat for fish and wildlife species (such as marshes and forests) and "linkages" or "corridors" of natural habitat (such as stream zones and sloughs) for migration and species movement. The plan will link large "nodes" of natural habitat together with the "linkage" connections as a functioning ecological network. Nodes and linkages shall include a "core" of natural ecosystem elements and shall provide a protected "buffer" along the outer margins of the core habitat which shall function to protect the ecological values in the "core" habitat.

RC-1i **Use of biocides and other compounds with biological consequences.** Pesticides, herbicides and insecticides (biocides); hormones and antibiotics (growth promoters); and hydrocarbon based compounds, used both commercially and individually, can accumulate to toxic levels in biological organisms, including humans. Certain of these substances, even at low levels, can affect reproductive health.

The City shall maintain and make available a current list of alternative, environmentally-safe products for controlling unwanted vegetation and pests, growing crops and enhancing production of animal products. The use of substances and compounds which can accumulate to toxic levels is restricted by the City (Pesticide Ordinance), and a program for fostering the reduction in private use shall be developed and implemented.

POLICY RC-2 STREAMS CONSERVATION & MANAGEMENT

Objective. Enhance, maintain, and restore the biological integrity of entire steamcourses (headwaters to mouth), and their associated riparian habitats, as natural features in the City's landscape.

RC-2a **Designation of protected streams.** The provisions of this policy shall apply to those streams shown on the Protected Watercourse Map (Figure RC-a). These watercourses and their associated riparian areas serve as habitat for fish and wildlife, provide space for the flow of stormwater runoff and flood waters, and furnish open space and recreational areas for city residents.

RC-2b **Environmental Buffer Area (EBA).** A streamside protection area is hereby established along both sides of the streams identified on the City Watercourse Map. The purpose of the EBA is to remain in a natural state in order to protect streams' ecosystems and their associated riparian habitat areas. The EBA shall include:

1. In areas where existing development, as defined in the Land Use Code, is adjacent to the stream, the EBA shall be not less than 25 feet outward on both sides of the stream, measured from the top of bank.
2. In all other locations within the City, the EBA shall be not less than 100 feet outward on both sides of the stream, measured from the top of bank.
3. In locations within the City having significant areas of riparian vegetation exceeding 100 feet in width measured from the top of bank, the EBA shall be expanded to encompass all of the riparian vegetation, except in no case shall the EBA exceed 250 feet in width from the top of bank on either side of the stream.

EBAs outside of the City shall follow the policies in the Humboldt County Framework Plan, regarding Streamside Management Areas.

RC-2c **Allowable uses and activities in Environmental Buffer Areas.** The following compatible land uses and activities may be permitted in EBAs, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements:

1. Outside the Coastal Zone:
   a. agricultural operations compatible with maintenance of riparian resources;
   b. fencing along property boundaries and along EBA setback boundaries to prevent bank erosion and degradation of natural riparian vegetation by livestock;
   c. maintenance of existing roads, driveways, and structures;

d. construction of public road crossings;
e. forest management practices as permitted by the State of California or Arcata's Forest Management Plan;
f. construction and maintenance of foot trails for public access;
g. construction and maintenance of utility lines;
h. resource restoration projects;
i. emergency or preventive removal of sediment and vegetation for flood control purposes (only when authorized by the City of Arcata).

2. In the Coastal Zone:
   a. all uses and activities listed in (1) above;
   b. public coastal access improvements;
   c. boat launching facilities.

3. If the provisions herein would result in any legal parcel, not on Public Trust lands, created prior to the date of this plan, being made unusable in its entirety for any purpose allowed by the land-use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel, subject to approval of a conditional use permit. Any land use, construction, grading, or removal of vegetation which is not listed above shall be prohibited.

RC-2d **The Wetland and Stream Protection Combining (:WSP) Zone.** The :WSP zone of the Land Use and Development Code shall be applied to all streamside protection areas. [The WSP zone should be a land use designation under the NR district, e.g., NR-WSP, NR-AG, NR-TPZ.]

RC-2e **Review and approval of projects affecting streamside protection areas.** Applications for development on any parcel which is located partially or wholly within an SPA shall be subject to the requirements of Policy RC-1 and RC-2.

RC-2f **Conservation easement.** Dedication of a conservation easement, or equivalent deed restriction, encompassing the area within the EBA shall be required as a condition of approval of any discretionary planning permit, including design review, when any portion of the project site falls within an EBA. Such easements may be conveyed to the City of Arcata, to another governmental agency which shall manage the easement to protect the EBA's functions, or to an appropriate non-profit entity.

RC-2g **Maintenance of streams as natural drainage systems.** Arcata's creeks carry a significant amount of the City's stormwater. Drainage controls shall be enforced through implementation of the Drainage Master Plan, to protect water quality, and minimize erosion, sedimentation and flood impacts to City creeks. A comprehensive stream maintenance program shall be prepared to augment stormwater utility rehabilitation projects designed to improve flow capacity, minimize channel erosion, and enhance riparian habitat.

RC-2h **Restoration of degraded creek resources.** Portions of Janes, Jolly Giant, Campbell, and Grotzman Creeks are culverted or covered, causing degradation of creek resources. Streams such as Janes Creek have tide gates which are barriers that prevent anadromous salmonids from accessing critical habitat. Furthermore, recreational use has degraded riparian vegetation along upland reaches of certain creeks (e.g., Jolly Giant, Campbell, and Jacoby Creeks) within Redwood Park and the Community Forest. Lack of vegetation along creek courses can cause erosion, resulting in water and airborne impacts. Restoration activities for improving degraded stream resources shall include:

1. Uncovering of creek courses in public rights-of-way, as part of public works improvement projects.
2. Encouraging landowners to restore degraded EBA and stream resources, including native riparian vegetation establishment and exotic species removal, as part of a new development or renovation.
3. Controlling uses that are damaging to upland reaches of creeks in the Community Forest and Redwood Park.
4. Removing or modifying barriers such as tide gates that prevent migrating anadromous salmonids which are federally listed endangered species from reaching their critical habitat.
5. Exclusionary fencing to keep livestock out of the EBA.

The Streams Management Plan shall be implemented to provide guidance for rehabilitation and management of creeks that flow through Arcata. The SMP addresses new and modified development along creeks, and existing activities in creek zones. Stream rehabilitation projects shall be designed to maintain or improve flow capacity, trap sediments and other pollutants which decrease water quality, minimize channel erosion, prevent new sources of pollutants from entering the stream, and enhance instream and riparian habitat.

[Policies RC-2b, c, f, & h revised by Ordinance No. 1377, September 2008]

POLICY RC-3 WETLANDS MANAGEMENT

Objective. To protect existing wetlands areas and their functional capacities and values, maintain a standard of "no net loss" in area and value, restore degraded wetland areas, enhance wetlands functions, and create additional wetland areas to replace historical losses.

RC-3a **Requirement for wetland delineation and study.** All proposed development applications shall include a site plan that shows the precise location of any wetlands that exist on the subject property. Any application for development on a parcel where wetlands may be present shall include a wetland reconnaissance or delineation report as follows:

1. The reconnaissance or wetlands delineation and report shall be based upon field investigations and shall be prepared by a professional or technical expert qualified in wetlands biology or plant ecology.
2. For purposes of this plan, wetlands shall include coastal zone lands where one or more of the following three characteristics are present or non-coastal zoned lands where two or more of the following three characteristics are present:
   a. source of water (surface or subsurface) which is present for sufficient periods to promote hydric soils formation or growth of hydrophytic plant species;
   b. hydric soils; or
   c. hydrophytic plants.
3. Where a reconnaissance indicates the probable existence of wetlands, marsh reeds detailed wetland delineation shall be required, including a map with the best available contour information showing where each of the three factors are present and the precise boundaries of any areas which are determined to be wetlands.

4. If wetlands of any size are found to exist on the property, an analysis of the potential functional or habitat value of the wetlands shall be provided.

RC-3b **Filling of wetlands.** The following shall apply:

1. Filling of wetlands shall be prohibited in the Coastal Zone, unless it can be demonstrated that:
   a. the wetland restrictions, if imposed, would render a parcel, not subject to the Public Trust, unusable for any use permitted by the land use plan;
   b. there is no feasible, environmentally superior alternative to wetland fill for development of a permitted use; and
   c. the fill is the least amount necessary to allow development of permitted uses.
2. Filling of wetlands outside the Coastal Zone may be permitted only when the following has been demonstrated by the project proponent:
   a. the fill is the least amount necessary to allow a reasonable and harmonious configuration of development on the parcel;
   b. the wetlands proposed to be filled are small and isolated, and have limited functional value when compared to larger, contiguous wetland areas.
3. Filling of wetlands shall only be authorized if appropriate mitigation, resulting in "no net loss" in area and value of wetlands, is provided. Mitigation may consist of creating and maintaining a new wetland of equal or greater functional capacity and value than the wetland proposed to be filled,

restoration of previously degraded wetlands, or enhancement of existing wetland areas.

RC-3c **Designation of Environmental Buffer Areas (EBA).** An EBA shall be established to separate all permitted development from adjacent existing wetlands which are to be preserved in a natural state and new wetland areas which are created as a mitigation. The EBA's purpose is to remain in a natural state in order to protect wetland ecosystems and their associated habitat areas from destruction or degradation. The extent of the EBA shall be established based upon analyses and recommendations contained in a site-specific wetland delineation study, but shall include the wetland area and a setback area which shall generally range from a 50 foot minimum to a 100 foot maximum. Specific findings, based on evidence provided for City review, shall be required for setbacks less than 100 feet.

RC-3d **Allowable uses and activities in Environmental Buffer Areas.** The following compatible land uses and activities may be permitted in EBAs, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements:

1. Resource restoration or enhancement projects.
2. Farming, consistent with policy RC-3l.
3. Outdoor recreation activities, such as bird watching, hiking, boating, horseback riding, and similar activities.
4. Education, scientific research, and use of nature trails.
5. Drainage ditches when compatible with wetland function.
6. Minor modification of existing, serviceable structures.
7. Fencing to prevent livestock from degrading wetlands and riparian vegetation.

Any use, construction, grading, or removal of vegetation which is not listed above shall be prohibited.

RC-3e **Wetland and Stream Protection Combining (:WSP) Zone.** The :WSP zone of the City's Land Use Code shall be applied to all Wetland Protection Areas.

RC-3f **Review and approval of projects affecting Environmental Buffer Areas.** Applications for development on any parcel which is located partially or wholly within an EBA shall be subject to the requirements of Policy RC-1 and RC-3.

RC-3g **Conservation easements.** Dedication of a conservation easement, or equivalent deed restriction, encompassing the area within the EBA shall be required as a condition of approval of any discretionary action, including design review, when any portion of the project site falls within an EBA. Such easements may be conveyed to the City of Arcata, another governmental agency, or City-approved non-profit entity which shall manage the easement to protect the EBA's functions.

RC-3h **Designation of wetland protection zones.** The :WSP Zone shall be applied to wetlands, wetland setbacks, wetland buffer areas and modified wetland buffer areas, as defined in the City's Land Use Code, at the time of development review and approval.

A wetlands map, maintained by the City, will show the general location of wetlands, riparian corridors, and uplands within the City limits and urban services zone. All development within or adjacent to the areas identified on the map as wetlands or riparian corridors shall comply with City Wetlands Development Standards and shall include the following:

1. A wetland delineation.
2. A mitigation plan for impacted areas.
3. Setback areas from delineated wetlands.
4. Easements for onsite delineated wetlands.
5. Permitted and protected uses/activities within delineated wetland areas.
6. Fencing to prevent livestock from degrading wetlands and riparian vegetation.

A Wetlands Buffer Area shall be required to protect the areas shown as wetlands on the Wetlands Map. All development within the buffer areas shall comply with the Wetlands Buffer Area Development Standards of the Coastal Land Use and Development Guide.

RC-3i **Management of Arcata Marsh for wetlands values as well as wastewater treatment.** The marsh and wildlife sanctuary serves a variety of purposes and functions, including providing wetland habitat for a variety of species, wastewater treatment, and recreational use. These purposes shall be balanced for the benefit of all users.

RC-3j **Minimum mitigation requirements for wetland impacts.** Diking or filling of a wetland that is otherwise in accordance with

the policies of this General Plan, shall, at a minimum, require the following mitigation measures, monitoring program, and funding.

1. A detailed restoration plan, monitoring program, and funding source for each site shall be required as part of the project application. The restoration plan shall include provisions for restoration to equal or greater wetland biological productivity. The monitoring program shall include reporting requirements that document mitigation success. Dedication of the land to a public agency, purchase, or other stewardship method which permanently restricts the use of the site to habitat and open space purposes, shall be required. The site shall be dedicated, purchased, or other stewardship agreed upon, and mitigation funding shall be provided, prior to any permitted diking or filling.
2. Areas adequate to maintain functional capacity shall be opened to tidal action, or other sources of surface water shall be provided. This provision shall apply to diked or filled areas which themselves are not environmentally sensitive habitat areas, but would become so if, as part of a restoration program, they are opened to tidal action or provided with other sources of surface water. All of the provisions for restoration, purchase (if necessary), and dedication described under part 1 shall apply to any program or activity performed pursuant to this policy.
3. Mitigation shall, to the maximum extent feasible, be of the same type as the wetland to be filled (e.g., freshwater marsh for freshwater marsh, saltwater marsh for saltwater marsh, etc.).
4. Where no suitable private or public restoration or enhancement sites are available, or where a wetlands mitigation bank in Arcata's Planning Area has been established that provides suitable replacement area, an in-lieu fee may be required to be paid. The fees shall be paid to an appropriate public agency for use in the restoration or enhancement of an area of equivalent productive value or surface area, or to the entity managing the wetlands mitigation bank.

RC-3k **Wetland functional capacity maintenance requirement.** Diking, filling, or dredging of a wetland or estuary shall maintain or enhance the functional capacity of these resources. Functional capacity means the ability of the wetland or estuary to be physically and biologically self-sustaining and to maintain natural species diversity. In order to establish that the functional capacity is being maintained, all of the following must be demonstrated:

1. Presently-occurring plant and animal populations in the ecosystem will not be altered in a manner that would impair the long-term stability of the ecosystem (i.e., natural species diversity, abundance and composition are essentially unchanged as the result of the project).
2. A species that is rare or endangered will not be significantly adversely affected.

3. Consumptive (e.g., fishing, aquaculture and hunting) or non-consumptive (e.g., water quality and research opportunity) values of the wetland or estuary ecosystem will not be significantly reduced.

RC-3l **Uses allowed in diked/reclaimed former tidelands.** Allowable uses and development in grazed or farmed wetlands are limited to uses compatible with the Public Trust. These uses are specified in Land Use Element Policy LU-6 and are summarized below.

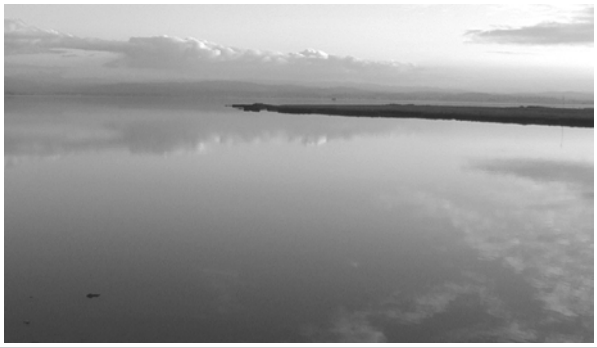
1. Agricultural operations limited to accessory structures, apiaries, field and truck crops, livestock raising, greenhouses (provided they are not located on slab foundations and crops are grown in the existing soil on site), and orchards.
2. Farm-related structures, including barns, sheds, and farmer-occupied housing, necessary for the performance of agricultural operations. Such structures may be located on an existing grazed or farmed wetland parcel only if no alternative upland location is available for such purpose and the structures are sited and designed to minimize adverse environmental effects on Public Trust resources and uses. No more than one primary and one secondary residential unit shall be allowed per parcel.
3. Restoration projects.
4. Nature study, aquaculture, and similar resource-dependent activities compatible with Public Trust resources and uses.
5. Incidental public service purposes which may temporarily impact the resources of the area (such as burying cables or pipes).

Expanding farming operations into non-farmed wetlands, by diking or otherwise altering the functional capacity of the wetland is not permitted. Farm-related structures (including barns, sheds, and farm-owner occupied housing) necessary for the continuance of the existing operation of the farmed wetlands may be located on an existing farmed wetland parcel, only if no alternative upland location is viable for such purpose and the structures are sited and designed to minimize the adverse environmental effects on the farmed wetland. Clustering and other construction techniques to minimize both the land area covered by such structures and the amount of fill necessary to protect such structures will be required.

[Policies RC-3a, c, d, f, & g revised by Ordinance No. 1377, September 2008]

POLICY RC-4 OPEN WATERS OF ARCATA BAY & TIDELANDS

Objective. Maintain existing Bay wetlands and tide lands, protect them from urban and agricultural encroachments, or degradation, and manage the open waters of Arcata Bay for their wildlife, fisheries,



navigation and ecological values and recreation and tourism uses.

RC-4a **Protection of open waters /tideland areas of Arcata Bay.**
The tidal and water areas of Arcata Bay constitute a fragile Public Trust resource and access shall be controlled to avoid resource degradation, while maintaining the public's right to navigation. Tidal marshes shall be enhanced and maintained, especially in the areas of McDaniel, Gannon, and Butcher's Sloughs, to protect wetland values.

RC-4b **Access to Arcata Bay.** The following routes are designated as Public Access Corridors and are to be properly signed and identified as approved Bay access points.

1. "I" Street from Samoa Boulevard, south through the Arcata Marsh and Wildlife Sanctuary to the boat launching facility on Arcata Bay.
2. South "G" Street south of "H" Street, to Highway 101.
3. Highway 101 from Samoa Boulevard (Highway 255), south to Bayside Cutoff.
4. Samoa Boulevard from Highway 101 west to Mad River Slough.

A system of foot trails and interpretive sites shall be established along the Arcata Bay shore westward to the City limit, subject to the following guidelines.

5. All planning and development in the area that is both South of Samoa Boulevard and west of State Route 101 and which is identified as tidelands, former tidelands, wetlands or riparian corridor on the adopted Wetlands Map shall be reviewed by the Creeks & Wetlands Committee, and coordinated with California Department of Fish and Game.
6. Development in the area bounded by Butcher's Slough and Gannon Slough should occur in conjunction with management of the National Wildlife Refuge and the Arcata Marsh and Wildlife Sanctuary.
7. Motorized vehicles shall be restricted to paved roads and parking lots.
8. Pedestrians shall be restricted to designated trails and facilities.
9. Valid scientific and educational studies of wetlands and tidelands are encouraged.

RC-4c **Coastal-dependent and public trust uses of Arcata's tidelands.** Tidelands of Arcata Bay support a variety of wildlife as well as human activities. The following provisions shall be made for managing tideland areas.

1. New development shall not restrict access to the shoreline. Access to coastal areas shall be required for new development.
2. Tidelands and water areas of Arcata Bay shall be designated Natural Resource-Public Trust Lands [NR-PTL], and identified as passive use recreational areas.

3. The Arcata Marsh and Wildlife Sanctuary shall be designated as Natural Resource [NR] and the recreational component of the project identified as a passive use recreational area.
4. The continued use of the tideland for scientific and educational studies is encouraged.
5. The Arcata Marsh and Wildlife Sanctuary (AMWS) shall be maintained and new facilities shall be consistent with the AMWS plan adopted by the City Council.
6. The South "I" Street boat launch shall be enhanced and maintained to accommodate small watercraft and windsurfing.
7. The placement of interpretative sites along the Arcata Bay shore, including Nature and Wildlife Centers, shall be coordinated with other agencies, and serve as an educational focal point for Arcata's natural resource areas.
8. Access on the levee from the AMWS westward to the City limit will be provided for passive recreation and nature observation.

RC-4d **Diking, dredging, filling, and shoreline structures.** Diking, filling, or dredging of Bay waters, wetlands, and estuaries shall be permitted where it has been demonstrated that the Public Trust resources and values are being protected, and mitigation measures have been provided, which minimize adverse environmental effects, for the following limited uses.

1. Incidental public service purposes including, but not limited to, burying cables and pipes, and maintaining existing dikes and public facilities.
2. Maintaining a channel adequate to serve the boat ramp at current levels of use.
3. Resource restoration purposes.
4. Nature study, aquaculture, or similar Public Trust resource dependent activities.
5. Agriculture as currently practiced within existing farmed wetlands but not including the expansion thereof.

In order to protect existing development, shoreline structures (such as dikes or tidegates) that may alter the natural shoreline, may be permitted only when they do not effect any federally listed species and no other feasible, less environmentally-damaging alternative is available, and only when not located within a wetland, unless the wetland will be the primary beneficiary of the structure.

The disposal of dredge spoils on existing wetlands shall not be permitted unless such disposal is necessary for either a Public Trust resource restoration project or

for the maintenance of existing agricultural operations in farmed wetlands. Fill will be allowed for aquaculture projects if it can be shown that it is necessary for the project, is required to be located within the wetland, and there is no other feasible, less environmentally damaging, alternative.

RC-4e **Aquaculture use of coastal wetlands/tidelands.** To protect aquaculture activities in Arcata Bay, the City shall:

1. Ensure that its wastewater discharge does not aggravate existing coliform loading problems in Arcata Bay.
2. Take measures to reduce coliform loading of perennial streams within its jurisdiction, as part of a stream maintenance program. These measures shall include controlling identified sources of coliform loading such as septic tank leachate and runoff from agricultural operations.

Aquaculture shall not adversely impact natural ecological processes nor native wildlife or fisheries or their habitat in the Bay. No new aquaculture uses shall be permitted unless it can be demonstrated that adequate precautions will be taken to prevent new adverse impacts to natural ecological processes. The City shall continue its management of:

1. Integrated wetland enhancement and wastewater treatment.
2. The tidelands, for commercial and native oyster harvesting.

RC-4f **Management of bayfront and marsh areas for coastal access, recreation, and tourism.** Tidelands and water areas of Arcata Bay shall be designated Natural Resource-Public Trust Land [NR-PTL] and protected from uncontrolled access. The following guidelines shall be used when permitting access to these areas:

1. Motorized vehicles shall be restricted to paved roads and parking lots.
2. Pedestrians shall be restricted to designated trails and facilities.
3. Valid scientific and educational studies of the wetlands and tidelands shall be encouraged.

New development shall not restrict public access to the shoreline. Public access to the shoreline shall be required of new development. Where consistent with the Humboldt Bay National Wildlife Refuge's Management Plan, controlled public access to the Refuge's Jacoby Creek Unit shall be developed along Arcata Bay from the AMWS to the City's westward limit.

POLICY RC-5 AGRICULTURAL RESOURCES MANAGEMENT

Objective. Protect and enhance agricultural uses on prime agricultural lands within the City, and encourage more productive agricultural use of agriculturally suitable lands.

RC-5a **Promotion of and participation in agricultural production within the City.** Diverse and intensive agricultural production and increased participation shall be promoted, in order to maintain the value of agricultural lands, improve the economic base, and increase employment and food production. The City does not, however, advocate more intensive agricultural uses and practices that would have adverse environmental impacts. Agricultural operations, such as Community Supported Agriculture (CSA) are strongly encouraged.

RC-5b **Agricultural Advisory Committee.** The City shall appoint an Agricultural Advisory Committee to advise on agricultural issues and programs. The responsibilities of the committee shall include, but are not limited to:

1. Development of a Community and Farm Protection Ordinance, as well as conflict resolution protocol.
2. Development of programs (educational, leasing, and purchase) that will encourage responsible productive uses of agricultural lands.
3. Identification of lands for preservation and/or acquisition programs.
4. Maintain a database of resources available to farmers, such as Williamson Act advantages, conservation easements, organic farming practices, and marketing strategies.

RC-5c **Community and farm protection.** Maintaining a compatible relationship between agricultural and residential uses will be based on:

1. Recognizing the rights of owners of productive agricultural land to make agricultural use of their land.
2. Identifying and minimizing potential conflicts between agricultural operations and adjacent residential, commercial, and community facility uses.
3. A Community and Farm Protection Ordinance shall provide a foundation for minimizing conflicts, educating the community, and a protocol for mediating unresolved disputes. Once adopted, the ordinance shall be mailed to all owners of agricultural and adjacent lands and disclosed to affected property owners at the time of parcel transfer.

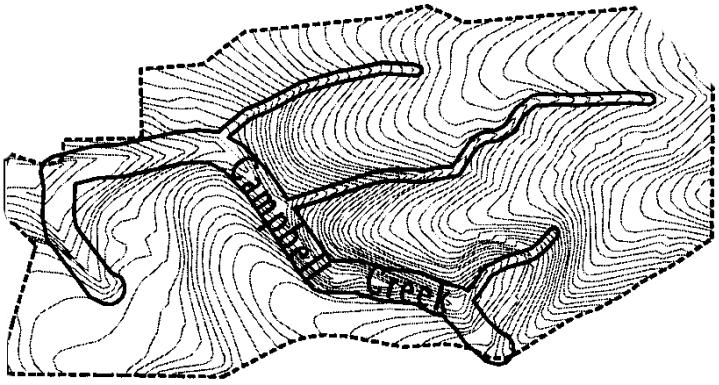
RC-5d **Permanent protection for agricultural lands.** Protection of agricultural resources shall be secured through the purchase of conservation easements, development rights, and outright acquisition. The City shall work in conjunction with other entities such as land trusts, whenever possible, to preserve agricultural buffers and maintain and enhance agricultural uses on prime agricultural soils.

POLICY RC-6 FOREST RESOURCES MANAGEMENT

Objective. Protect and enhance private and public forest lands (Community and Jacoby Creek) to maintain the integrity of the ecosystem while providing timber production, recreation, and habitat values.

RC-6a **Management of Arcata Community Forest (Not applicable in Coastal Zone).** The City's forest management plan includes the following policies:

1. **Recreation and aesthetics resource management** - The community forest will emphasize dispersed, day-use opportunities. Recreational use shall not be allowed to impact other resources such as fish, wildlife, or watershed.
2. **Timber resource management** - To ensure the sustainable and long-term production of forest products, the rate of harvesting must not exceed the rate of production. Long-term productivity refers to the continuing ability of the forest to produce timber while retaining the associated values of watershed, wildlife, soils, recreation and aesthetics. This is dependent upon the use of management practices that do not allow for the deterioration or impairment of soil productivity or the alteration of the natural landscape beyond its ability to recover. For planning purposes, long term means that exceeding fifty years.



3. **Watershed resource management** - Water quality, soil, riparian, and aquatic biological productivity shall be maintained and enhanced through the application of City forest management standards and the implementation of watershed improvement projects.

4. **Wildlife resource management** - Wildlife habitat is managed to promote species diversity and to ensure that populations of indigenous species are maintained. This can best be achieved through the maintenance and enhancement of habitat values. Habitat values which lead to species diversity include the following elements: breeding, foraging, watering, rearing, hiding and thermal cover.
5. **Vegetation and botanical resources** - Maintain the native component of species found in the redwood forest, both by controlling exotics and managing for a species mix that would be found naturally in the redwood forest.

RC-6b **Management of Jacoby Creek Forest (Not applicable in Coastal Zone).** The management policies for the Jacoby Creek Forest are the same as those for the Arcata Community Forest, listed above, except that the Jacoby Creek Forest is not open to recreational use.

RC-6c **Allocation of forest fund revenues (Not applicable in Coastal Zone).** At least twenty percent of net forest fund revenues, derived from timber cutting, shall be directed towards park acquisition, maintenance, and development. This can include acquisition of stream corridors, and riparian and greenbelt areas. These areas contribute to the diversity of parks and, in the case of linear parks along stream corridors, provide passive recreation areas compatible with the environment. The acquisition of open space shall be emphasized as an appropriate use for the remaining revenues.

RC-6d **Management practices for private timberlands (Not applicable in Coastal Zone).** The management of private timberlands shall be encouraged to use current principles of sustainable forestry for all aspects of forest use and function: recreation; timber production; biodiversity; air and water quality; and carbon storage. Timber owners are encouraged to apply for conservation easements, certified forestry, or compensation for carbon storage.

RC-6e **Timber harvest plans (Not applicable in Coastal Zone).** The City, in cooperation with California Department of Forestry, shall request review of all Timber Harvest Plans (THP) within the Planning Area. The City shall review THPs for measures that protect water quality, control erosion and flooding, and preserve the City viewshed. The city shall recommend that THPs which do not include these measures not be approved.

RC-6f **Urban conversions (Not applicable in Coastal Zone).** The sustainable management of timber resources, and related uses, shall be encouraged, so that the long term economic return from productive timber production will provide sufficient incentives to prevent urban conversions. Urban conversions are discouraged within the Urban Services Boundary.

RC-6g **Setbacks (Not applicable in Coastal Zone).** Development adjacent to the Community Forest boundary shall be setback at least 150 feet, unless this would make the use of the parcel infeasible for its designated purpose. However, larger setbacks may be required to prevent exposure to potential hazards and to maintain forest integrity.

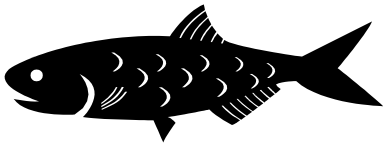
RC-6h **Monitoring (Not applicable in Coastal Zone).** Monitoring of forest practices, to ensure consistency with adopted management and harvest plans, shall be carried out as an implementation measure of this Element. The general objectives of the monitoring will be to:

1. Determine the effectiveness of management practices at multiple scales (i.e., individual sites to watersheds).
2. Validate ecosystem functions and processes have been maintained as predicted.

POLICY RC-7 WATER RESOURCES MANAGEMENT

Objective. Manage Arcata's water resources from a watershed perspective, to maintain surface and subsurface water quality and quantity. Runoff will be managed for the benefit of aquatic habitats.

C-7a **Protection of surface waters from point and nonpoint pollution sources.** The use of natural stormwater drainage systems, which preserve and enhance natural features, shall include the following:



1. Efforts to acquire land or obtain easements for drainage and other public uses of floodplains, where desirable to maintain stream courses in a natural state, shall be supported.
2. Recreational opportunities and aesthetics shall be considered in the design of stormwater detention/retention and conveyance facilities.
3. Sound soil conservation practices shall be required, and impacts of proposed developments, with regard to water quality and effects on watersheds, wetlands and drainage courses, shall be carefully examined.
4. The quality of runoff from urban and suburban development shall be improved through use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).
5. New development shall be required to mitigate to the maximum extent feasible increases in stormwater peak flows and/or volume. Mitigation measures should take into consideration impacts on the Mad River, Arcata Bay, and adjoining lands in the City and Planning Area.
6. New project designs shall minimize drainage concentrations, maximize permeable surfaces (such as unpaved parking areas) and maintain, to the extent feasible, natural site drainage conditions.

7. New projects that affect the quantity and quality of surface water runoff shall be required to allocate land necessary for detaining post-project flows and/or for incorporating measures to mitigate water quality impacts related to urban runoff. To the maximum extent feasible, new development shall not produce a net increase in peak stormwater runoff.

RC-7b **Protection of groundwater sources.** Septic systems and onsite disposal of toxic substances are the leading causes of groundwater contamination. Septic systems within the Urban Services Boundary shall not be permitted, and incidents of onsite toxics disposal shall be referred to the appropriate county and state agencies.

RC-7c **Watershed and urban runoff management.** To protect structures, critical facilities, existing habitat values and water quality, flooding shall be managed on a watershed basis, using a combination of biotechnical solutions, flood protection practices, and Drainage Master Plan's management practices.

RC-7d **Water quality monitoring.** Water quality and quantity shall be monitored on a regular basis to ensure that City policies are being adhered to.

POLICY RC-8 ENERGY RESOURCES MANAGEMENT

Objective. Reduce the net emissions of greenhouse gases from Arcata; reduce other negative impacts of energy production and use, including risks from nuclear power, air emissions, fuel spills, and wildlife and habitat destruction; reduce energy costs to the city and its residents, and increase the percent of energy purchases from sources within our region; increase the city's and nation's energy security and reduce our vulnerability to changes in energy availability and price; increase public awareness of energy issues and encourage an energy conservation ethic; monitor the cost and effectiveness of Arcata's actions so we and others can learn from them; and implement Arcata's Advisory Proposition B.

Advisory Proposition B
Approved by Arcata Voters April 8, 1980

"In accordance with America's renewed determination to be energy self reliant, be it resolved that the citizens of Arcata and their City government are committed to the enactment of conscientious energy conservation measures and the accelerated development and active promotion of safe and economical alternative renewable energy sources for our community.

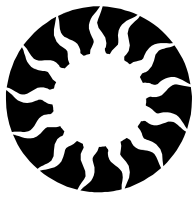
Be it further resolved that the City government of Arcata support complete independence from nuclear power including the permanent closure of the Humboldt Bay nuclear power plant and its replacement by safe, clean and efficient generating sources more compatible with the resources and health and safety of the Northcoast, such as conservation, solar power and generation from wood waste."

RC-8a **Encouragement of appropriate energy alternatives.** In making energy purchases, the City shall consider how suppliers meet the objectives of this policy. The City shall choose suppliers that provide good tradeoffs among these objectives, giving due consideration to investment in energy conservation as an alternative use of energy funds.

In addition, the City shall attempt to purchase at least 10% of its electrical energy (in energy units, not cost) from renewable sources within Humboldt County by the year 2020.

The City shall take measures to encourage the availability to, and use by, residents of energy suppliers that best meet the objectives of this policy. The City shall convert City vehicle fleets to a mix of fuels that best meets the objectives of this policy.

RC-8b **Encouragement of energy efficiency and conservation.** The City shall coordinate with energy suppliers and agencies to educate residents, property owners, and business operators about the need for and benefits of conserving energy. The City shall maintain and distribute current information about building insulation; energy efficient appliances, lighting, and heating; other conservation measures and materials; and home power alternatives.



The City shall continuously seek and implement cost-effective steps to reduce City energy use. The City shall attempt to reduce the City's total consumption of purchased energy by at least 20% (in energy units, not cost) by the year 2010.

The City shall adopt the goals of the national "Energy Star Program" (or its successor programs) for all City construction projects and all construction projects assisted by grants for which the City is an applicant. These goals include achieving a minimum of 15% greater energy efficiency than would a building designed with existing Title 24 standards.

Explore and, if appropriate, adopt energy efficiency standards for existing residential and commercial buildings upon substantial remodel. Consider requiring energy efficiency inspections, disclosure, and retrofits at change of ownership based on cost-effective and commercially available energy efficiency measures.

RC-8c **Promotion of energy efficiency in transportation.** The City shall give strong consideration to energy conservation and the goals of this policy in all transportation and traffic management decisions. It is City policy to reduce the need for motor vehicle trips within the city and between the city and other destinations, and to reduce per-trip energy consumption; this policy applies to

trips by residents, non-residents, and city staff. Such measures as bike and pedestrian paths, public transportation, parking and traffic management, and encouraging use of alternative-fueled vehicles shall be used to make these reductions.

RC-8d **Restoration for Greenhouse Gases Absorption.** Foster and restore forests and other terrestrial ecosystems that offer significant carbon mitigation potential.

[Policies RC-8b & d revised by Ordinance No. 1377, September 2008]

POLICY RC-9 SOILS AND MINERAL RESOURCES

Objective. Conserve and manage soil and mineral resources.

RC-9a **Erosion control measures on slopes and other areas of instability.** Policy PS-3 - Other Geologic Hazards in the General Plan Public Safety Element includes provisions for protecting steep and unstable slopes, and minimizing erosion and sedimentation. This policy shall be followed as a safety precaution and also to conserve soil resources.

RC-9b **Protection of productive soils and soils with limitations.** Local soils range from productive soil types capable of supporting agriculture and forestry, to those susceptible to shrink-swell and erosion. Clay soils are the most susceptible to shrink-swell, caused by fluctuations in moisture content. According to available soils information, the Bayside series is the only soil type in the Arcata area with identified clay content. Building construction on this soil type shall include measures to avoid damage from shrink-swell.

Certain areas of the City have high liquefaction potential during seismic events. Policy PS-2 - Seismic Hazards, in the General Plan Public Safety Element, addresses mitigation of liquefaction hazards. This policy shall be followed as a safety precaution, and also to manage related soil limitations. Policy RC-5, relating to agricultural soils, shall also be followed to conserve productive soils. The continued research, identification, and protection of productive soils by the Natural Resource Conservation Service and educational institutions shall be encouraged.

RC-9c **Management of mineral resource extraction, processing and transport (gravel).** Areas along the Mad River, within and upstream of the City's Sphere of Influence, are currently used for aggregate resource extraction. The City shall encourage Humboldt County to limit the quantity of aggregate extracted to an amount that is mean annual recruitment; and request that Policy RC-1and RC-2 be applied to protect natural biological diversity and ecosystem functions along the river. The City shall also request that the County not approve or renew permits for

commercial mineral resource extraction in A-E designated lands of the City's Planning Area. Mineral resource operations shall not result in additional soil runoff and shall be consistent with the City's seismic safety policies (see Policy PS-2 in Public Safety Element).

4.6 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURE DESCRIPTION	RESPONSIBLE PARTY	TIME FRAME
RC -1	**Creeks Management Plan** Regularly update the City Creeks Management Plan, at least every five years, to implement current provisions for maintaining biological integrity of entire watercourses. The Creeks Management Plan will also include updated provisions for education and restoration programs for degraded creeks.	Environ-mental Services Dept./Creek Advisory Committee	Year 1 then every 5 years
RC -2	**Community Forest Management Plan** Update the Community Forest Management Plan, at least every ten years, to implement current provisions for managing recreation, aesthetic, timber, watershed, wildlife, and vegetation resources. The Management Plan will also include updated provisions for allocation of forest fund revenues and urban conversions, as well as setbacks from the Community Forest boundary and a monitoring program for forest practices.	Environ-mental Services Dept./Forest Manage-ment Committee	Year 5 then every 10 years
RC -3	**Energy Efficiency and Conservation Program** Conduct a continuous program to identify and purchase appropriate energy supplies, implement and evaluate energy conservation measures, provide energy education and pubic information, and promote energy efficiency in transportation. Establish a funding mechanism to assure that a significant portion of the savings are used to fund energy programs and as a reward for savings.	Environ-mental Services Dept./ Energy Task Force	Year 1 then every 5 years
RC -4	**Non-native Plant and Animal Species Removal Program** The City shall provide public information that explains why invasive species are a problem. The City shall maintain a program that recommends effective but non-toxic eradication measures, and eradicates non-native species on public lands where they are displacing native species.	Environ-mental Services Dept./ Agricultural Advisory Committee	Year 1 then every 5 years
RC -5	**SPAs, :WSP Combining Zone, Resource Setbacks and Energy Conservation Measures (PLUC Amendment)** Revise the PLUC (formerly LUDG) regulations to be consistent with the General Plan policies for SPAs, the :WSP combining Zone, natural resource (forest) area setbacks and energy conservation techniques.	Environ-mental Services Dept./ Planning Commission	Year 1 then every 5 years
RC -6	**Surface Water Quality Ordinance** Prepare and adopt a water quality ordinance using water quality standards established in the Drainage Master Plan. The ordinance shall address the physical, biological, and chemical parameters of water quality, include monitoring provided through the MOU with HSU, and shall be updated at least every five years.	Environ-mental Services Department	Year 1 then every 5 years

#	IMPLEMENTATION MEASURE DESCRIPTION	RESPONSIBLE PARTY	TIME FRAME
RC -7	**Wetlands Management Plan** Prepare a Wetlands Management Plan that includes mapping of all known wetland areas, guidelines for wetlands management, setbacks, restoration goals and objectives, and review and approval requirements for wetland alterations.	Environ-mental Services Dept./Creek Advisory Committee	Year 2
RC -8	**Sensitive Habitat Mapping** Using the sensitive habitat definition from Policy RC-1d, prepare and regularly update a map of sensitive habitat in the City.	Environ-mental Services Dept.	Year 1
RC -9	**Pesticide Ordinance** Regularly update the City's Pesticide Ordinance.	Environ-mental Services Dept.	Every 5 years
RC -10	**Create Agricultural Advisory Committee** This City shall appoint a committee to be an impartial forum for addressing agricultural issues between property owners and agricultural operators. The committee will also be responsible for preparing the agricultural operations ordinance, researching incentives for continued agricultural operations, and advising the Planning Commission on any proposed development that would affect agricultural productivity.	City Council	Year 1
RC -11	**Participate in Humboldt Bay Management Plan** The City shall designate a representative to attend meetings, review documents, and represent the City's interest during the preparation of the Humboldt Bay Management Plan.	City Council appoints a represen-tative	Year 1
RC -12	**Community and Farm Protection Ordinance** The Agricultural Advisory Committee shall develop and maintain a Community and Farm Protection Ordinance, which shall provide a foundation for minimizing conflicts, educating the community, and a protocol for mediating unresolved disputes.	Agricultural Advisory Committee	Year 1
RC -13	**Biocides and Other Compounds Alternatives** The City shall implement a program to foster the reduction in private use of pesticides. This shall include maintaining and making available a current list of alternative, environmentally safe products for controlling unwanted vegetation and pests, growing crops and enhancing production of animal products. The use of substances and compounds which can accumulate to toxic levels is restricted by the City (Pesticide Ordinance).	Environ-mental Services Dept.	Year 1

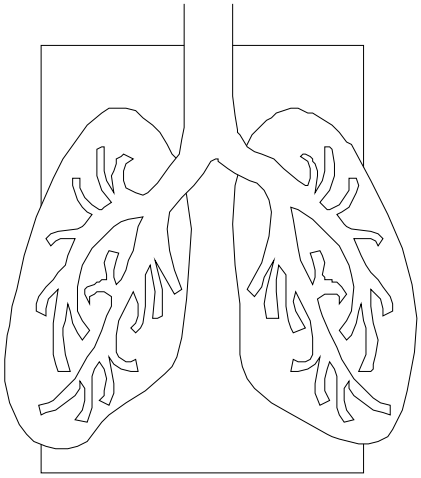
AIR QUALITY ELEMENT

4.7 INTRODUCTION

Overview of factors contributing to air pollution. One of the best ways to control air pollution is to develop transportation infrastructure and land use goals and policies which compliment and work in harmony towards air pollution control objectives. Air quality in the City of Arcata is regulated by the North Coast Unified Air Quality Management District (NCUAQMD). The NCUAQMD's primary responsibility is to achieve and maintain federal and state air quality standards. NCUAQMD currently meets all federal standards, but is classified as non-attainment (exceeds maximum limits) for California Ambient Air Quality Standards for airborne particles that are ten microns in diameter and smaller (PM-10).

Federal and state ambient air quality standards also include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. Of these pollutants, motor vehicles are a major contributor of carbon monoxide, nitrogen dioxides, and ozone. While engine and fuel improvements have significantly reduced these emissions from motor vehicles, measures to reduce vehicle travel can further improve air quality from these pollutants.

Particulate matter includes a wide range of solid or liquid particles including smoke, dust, aerosols, and metallic oxides. Two significant sources of PM-10 include motor vehicle exhaust with its associated secondary reactions in the atmosphere related to exhaust gases, and wood-burning stoves/fireplaces. PM-10 emissions associated with motor vehicles include vehicle exhaust and tire and brake wear. However, most particulate releases from motor vehicles are a result of road dust suspension. For example, road dust comprises 77% (580 tons/year) of vehicle-related PM-10 releases in the Arcata/Eureka area. Because road dust sources cannot be controlled, reductions in vehicle use are needed to significantly reduce PM-10 emissions caused by suspended road dust.



Wood-burning stoves, fireplaces, and residential open waste burning are also a source of PM-10 emissions. Research on human health effects of PM-10 show a correlation between elevated PM-10 concentrations and aggravation of chronic illnesses and elevated mortality rates. Fine particulate matter can affect health more than larger particles because it can bypass respiratory filtration systems and lodge deep in the lungs[1].

Overview of Arcata's air quality. Air quality is affected by both emissions and

meteorological conditions. Arcata air quality is influenced by its coastal location and relatively stable temperatures are throughout the year. Temperatures average 50 degrees Fahrenheit, with a yearly average range of 40-60 degrees Fahrenheit. Prevailing winds are from the northwest in summer and southwest in the winter. During winter months moderate temperatures, frequent fog, and moderate to heavy precipitation cause inversions which impact air quality.

Arcata is within the northwestern most air district in the State, the NCUAQMD, which encompasses 7,100 square miles including the counties of Humboldt, Del Norte, and Trinity, and serves a population of nearly 170,000. The NCUAQMD presently meets all federal and state air quality standards, except for the state standard for particulate matter of ten microns and smaller (PM-10). The table below shows the federal and state PM-10 standards.

TABLE AQ-1 AMBIENT AIR QUALITY STANDARDS FOR PM-10 EMISSIONS

AVERAGING TIME	FEDERAL STANDARD	CALIFORNIA STANDARD
Annual Arithmetic Mean	50 ug/m^3	30 ug/m^3
24 Hour Average	150 ug/m^3	50 ug/m^3

Source: North Coast Unified Air Quality Management District Particulate Matter (PM10) Attainment Plan, Draft Report, 1995. ug/m^3 = micrograms per cubic meter.

The NCUAQMD began measuring North Coast PM-10 concentrations in 1985. Of the total suspended particulates measured, PM-10 comprise approximately 60% of particulate matter. Table AQ-2 shows local PM-10 measurements.

TABLE AQ-2 PM-10 MEASUREMENTS IN THE ARCATA/EUREKA AREA

MONITORING LOCATION	MAX. 24 HOUR VALUE	ANNUAL AVERAGE
Arcata (1990)*	43.0	11.8
Eureka (1985)	75.0	32.7
Eureka (1990)	83.0	24.4
Eureka (1996)	87.3	15.9

Source: Summary of NCUAQMD Air Monitoring Data, June 1997.
All values are in ug/m^3 = micrograms per cubic meter.
* The 1990 measurement in Arcata was part of a special purpose study performed by the state.

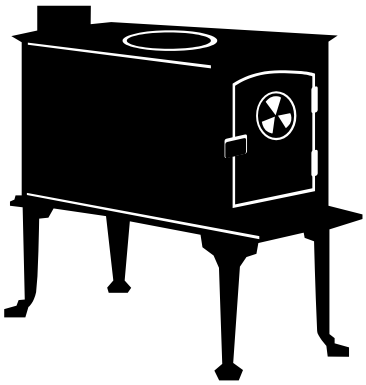
While the values shown in Table AQ-2 do not indicate that Arcata or Eureka always exceed state standards, the NCUAQMD as a whole has a non-attainment classification and all communities within the district contribute to that status.

Primary sources of PM-10 contributors in the Arcata/Eureka area include residential fuel combustion (24%); industrial wood and paper manufacturing (19%); paved road dust (16%); construction and demolition (14%); and unpaved road dust (7%). During periods of high PM-10 releases, wood-burning fireplaces account for approximately 50%,

automobiles 31%, pulp mills 14%, and other sources 5%. Table AQ-3 shows general overall sources of pollution by major category, and the percent contribution of each source to the various pollutants.

The last district study conducted by the NCUAQMD was the Chemical Mass Balance Study of Composition of Particulate Matter, in 1992. That study did find that diesel emissions constituted a fairly large component of PM-10. Diesel emissions have been declared a toxic emission by the State, and the State Air Resources Board is instituting a diesel engine replacement/retrofitting program.

Measurements indicate that the Eureka area has the greatest measured PM-10 concentrations in the Humboldt Bay area of the NCUAQMD. While the Eureka area air quality is improving, several days during the winter months still exceed state PM-10 standards. District-wide, the number of days which exceed standards have decreased from about 24% in 1985 to about 8% in 1993; 3% in 1994; 2% in 1995; 3% in 1996; and 2% in 1997. This represents a 92% decrease over the past twelve years. The months with highest PM-10 concentrations are December, January and February due to meteorological conditions[2] and increased use of wood burning stoves and fireplaces.



Although air quality is improving, air quality is only measured on 1/6 of the days in the year. The general criterion for non-attainment is one exceedance of the standard during a calendar year. Generally, the NCUAQMD must record no exceedances for three consecutive years to be considered in attainment for pollutants.

Significance criteria for air contaminants. The NCUAQMD publishes significant emission rates for stationary sources of air contaminants (Regulation I, Rule 130). Emissions are considered significant (defined in terms of tons emitted per year) if a new or modified stationary source exceeds the values shown in Table AQ-4. There are no established significance criteria for mobile sources of emissions, but large projects (such as residential subdivisions and shopping centers) can be compared with stationary source criteria to identify the cumulative impacts of many mobile sources such as motor vehicles.

North Coast Unified Air Quality Management District PM-10 attainment plan. As required by the California Clean Air Act, the NCUAQMD adopted an attainment plan in 1995 to identify major PM-10 sources and develop and implement control measures to meet state ambient air quality standards. The NCUAQMD's attainment plan established goals to reduce PM-10 emissions and eliminate the number of days in which standards are exceeded. Exceptions are made for uncontrollable events such as wildfires, structure fires, and unusually high winds. The plan includes three areas of recommended control strategies to meet these goals: transportation, land use, and burning. The table below identifies the categories of measures included in each control strategy. The draft PM-10

attainment plan developed by the North Coast Unified Air Quality Management District was adopted May 11, 1995.

TABLE AQ-3 EMISSIONS SOURCES AND CONTRIBUTION TO VARIOUS POLLUTANTS

SOURCE TYPE	EXAMPLES OF EMISSION CONTRIBUTORS
Industrial	pulp mills, sawmills, power plants, other heavy industry
Commercial	gas stations, restaurants, dry cleaners, body shops, etc.
Residential	home heating, residential open waste burning, solvent/ paint use, lawn equipment etc.
Mobile	cars, planes, trains, road dust and other transportation sources
Agriculture and Forestry	forest management burning, field burning, herbicide use, etc.

POLLUTANTS	INDUSTRIAL	COMMERCIAL	RESIDENTIAL	MOBILE	AGRICULTURAL
Nitrogen Dioxide	17.2%	1.0%	3.0%	78.8%	0%
Carbon Monoxide	7.1%	2.0%	4.1%	46.9%	39.8%
Sulfur Dioxide	59.0%	1.0%	1.0%	39.0%	0%
PM-10	13.1%	7.1%	6.1%	58.6%	15.2%
Total Organic Gases	7.1%	47.5%	6.1%	30.3%	9.1%

TABLE AQ-4 SIGNIFICANT EMISSION RATES FOR STATIONARY SOURCES (TONS/YEAR)

CONTAMINANTS	TONS PER YEAR
Carbon Monoxide	100
Nitrogen Oxides	40
Sulfur Dioxide	40
Particulate Matter	25
PM-10	15
Ozone	40
Various Other Contaminants [1]	0.0004 to 10

Source: Regulation I of the NCUAQMD, Rule 130-Definitions

[1] Other contaminants include lead, asbestos, beryllium, mercury, vinyl chloride, fluorides, sulfuric acid mist, hydrogen sulfide, and reduced sulfur compounds. Contact NCUAQMD for detailed information on emission rates and significance criteria.

TABLE AQ-5 NCUAQMD CONTROL MEASURES

CATEGORY	CONTROL MEASURES
Transportation	Public transit, rideshare programs, park and ride lots, vehicle buy back and smoking vehicle programs, traffic flow improvements, bike routes.
Land Use	Pedestrian and transit oriented development, walkable communities, integration of land use and transportation planning.
Burning	Residential open waste burning restrictions, conventional fireplace replacements, improved woodstoves, new development requirements, woodstove curtailments on high smoke days, education, and home weatherization.

The control measures described above are included in the NCUAQMD's PM-10 Attainment Plan and provide additional measures to reduce air pollution emissions. The NCUAQMD has existing control measures for commercial, non-residential burning, industry, forestry and agricultural burning, and construction. These measures are not included in the attainment plan because emissions reductions resulting from them are already reflected in the air quality monitoring. This element's objectives and policies include many of the NCUAQMD PM-10 Attainment Plan's control measures, particularly for transportation and land use planning.

Guiding Principles and Goals.

A. Reduce motor vehicle related air pollution.
B. Participate in regional efforts to improve air quality.
C. Educate the community about effects of air pollution and how it can be reduced.
D. Reduce emissions from wood-burning stoves and fireplaces.
E. Reduce emissions from forest management and burning.
F. Reduce emissions from industrial sources.
G. Reduce emissions from residential open waste burning.

4.8 POLICIES

The Air Quality Element includes the following policies:

AQ-1 Reduce Point and Area Sources of Air Pollutants
AQ-2 Reduce Mobile Sources of Air Pollutants
AQ-3 Regional Air Quality Standards, Monitoring, and Education
AQ-4 Odor

POLICY AQ-1 POINT AND AREA SOURCES OF AIR POLLUTANTS

Objective. Improve air quality by reducing emissions from stationary point sources of air pollution (e.g., equipment at commercial and industrial facilities), and stationary area sources (e.g., wood-burning fireplaces and gas powered lawn mowers) which cumulatively emit large quantities of emissions.

AQ-1a **Reduce emissions from stationary point sources: commercial and industrial.** Coordinate with energy providers to develop incentive programs encouraging the use of less polluting, energy efficient designs and equipment in commercial and manufacturing uses. Encourage commercial and industrial uses to self-enforce emissions reductions by maintaining and repairing equipment, correcting leaks, installing control devices, and minimizing accidental releases. Coordinate with NCUAQMD to establish buffer zones between point sources and the public, particularly sensitive receptors such as schools, hospitals, and convalescent facilities.

AQ-1b **Reduce emissions from stationary area sources: residential, commercial, and industrial**. Limit wood-burning fireplace installations in new construction to low - emitting, State and EPA certified fireplace inserts or woodstoves, pellet stoves, or natural gas fireplaces. New construction retrofits must comply with energy efficient construction codes to reduce energy consumption including high efficiency windows, water heaters, and furnaces.

AQ-1c **Coordination between NCUAQMD and Arcata Fire Protection District**. Arcata Fire Protection District officials shall coordinate with the NCUAQMD to develop procedures for identifying, monitoring, and informing the public of high pollutant incidents related to fires and accidental or intentional releases of toxic or unknown materials. Coordination should encompass current air quality levels, meteorological conditions (stagnant air), prevailing wind directions, location of nearby sensitive receptors, potentially affected land uses, and types of potential toxic materials. Coordination and required permits are particularly important during the planning and implementation of controlled burns.

AQ-1d **Review of development projects for emissions reductions**. Evaluate new construction plans to reduce point and area sources of pollution. Consult with the NCUAQMD during the environmental review process to ensure that:

1. Air quality impacts of development projects are assessed using analytical methods and significance criteria for emission rates approved by the NCUAQMD.
2. Air quality mitigation is feasible, workable, monitorable, and cost effective.
3. Impacts of projects that may be individually insignificant, but cumulatively significant are minimized or mitigated.
4. Innovative measures are incorporated into the project design to reduce air quality impacts.

Encourage the NCUAQMD to enforce these measures and their related policies.

POLICY AQ-2 MOBILE SOURCES OF AIR POLLUTANTS

Objective. Improve air quality by reducing emissions from transportation sources, particularly motor vehicles, and other mobile sources. Reduce vehicle miles of travel and encourage shifts to alternative modes of travel.

AQ-2a **Implement land use measures to reduce vehicle trips, miles traveled, and air pollutant emissions**. Implement or encourage the land use and development measures which reduce motor vehicle travel as outlined in the Transportation Element. These measures are also effective in reducing mobile sources of air pollutants.

AQ-2b **Implement transportation measures to reduce vehicle trips, miles traveled, and air pollutant emissions**. Implement or encourage the following measures to reduce vehicle miles traveled and provide alternatives to the single occupant motor vehicle, as outlined in the Transportation Element.

1. Provide as direct and safe a travel route as possible for all travel modes.
2. Implement and support public education programs explaining the negative impacts of single occupant vehicle use, and encourage the development of employer-based measures to reduce employee automobile travel.
3. Require A&MRTS and encourage other fleet operators to convert vehicles to run on less polluting alternative fuels at the earliest feasible time (See Policy RC-8a).

AQ-2c **Reduce or minimize the creation of "hot spots" or localized places of concentrated automobile emissions**. Implement or encourage the following measures to reduce hot spots, which occur where groups of vehicles are required to idle (e.g., at congested intersections, driveways and drive-through facilities).

1. Minimize the delay and congestion at unsignalized and signalized intersections to reduce emissions from idling vehicles. Attempt to achieve this through reducing automobile travel, minor capacity improvements, or fine-tuning of intersection operations. Discourage major capacity improvements at intersections, minimize new signalized intersections, or any other improvement which discourages walking, bicycling, or transit use.
2. Minimize or restrict land uses with drive-through facilities located in areas of concentrated traffic or near congested intersections.
3. Construction of projects with large parking lots or high volume driveways shall identify traffic impacts and provide evidence that project design will optimize internal circulation and minimize delay. Ensure that mitigation measures balance the needs of automobiles, pedestrians, bicyclists, and transit riders.

AQ-2d **Design Arcata's highest traveled arterials to minimize stopping**. Recognize that automobiles are most efficient and less polluting at constant, moderate speeds between 25 and 35 miles per hour. Minimize idling delay, excessive congestion, and excessive speeds with the following measures:

1. Encourage Caltrans to coordinate traffic signals on Samoa Boulevard to maximize progression.
2. Eliminate traffic bottlenecks with traffic flow improvements (such as re-allocating turning lanes, or converting all-way stop control to roundabouts or two-way stop control), without impacting the safety of pedestrians, bicyclists, or transit facilities.
3. Review access plans for commercial driveways to ensure designs minimize idling vehicles and concentrations of traffic. For larger projects require multiple driveways rather than single driveways and consider turn restrictions where delays to existing driveways could be significant.
4. Encourage and support law enforcement's efforts to expeditiously manage traffic incidents.

AQ-2e **Recognize that poor air quality is caused by the combination of high pollutant emissions and meteorological conditions which do not allow for dispersal of pollutants.** The City shall coordinate a joint effort with the NCUAQMD to minimize the impact of high pollutant incidents and notify the public about meteorological conditions that contribute to poor air quality. The joint effort shall include employing the following measures:

1. Implement added air pollution control measures during predictable meteorological events of stagnant air. Inform the public of high pollutant incidents and encourage measures which minimize impacts, such as limiting use of wood-burning fireplaces, gas powered equipment, and avoiding non-essential vehicle travel.
2. Promote and encourage employer-based Transportation Demand Measures (such as subsidized bus fare, flexible work hours, and incentives to carpool) to reduce automobile travel, particularly during periods of poor air quality.
3. Support and encourage local industrial and commercial efforts to reduce emissions and particulate pollution from industrial plants and trucks, particularly during periods of poor air quality.
4. Require traffic and construction site dust control measures at construction projects. Require measures which reduce emissions from construction activity and maximize efficiency of traffic flow during inversion conditions.

AQ-2f **Enforce air quality control measures and monitoring at construction sites**. Construction emissions shall be controlled because, although they are temporary in nature, they can often be the greatest air quality impact of a project. Require the following control measures for construction activities when necessary:

1. Water all active construction areas twice per day and use erosion control measures to prevent water runoff containing silt and debris from entering the storm drain system.
2. Cover trucks hauling soil, sand, and other loose material.
3. Pave, water, or apply non-toxic soil stabilizers on unpaved access roads and parking areas.
4. Sweep paved access roads and parking areas daily.
5. Sweep streets daily if visible material is carried onto adjacent public streets.

For larger construction sites (four acres or greater) require the following measures when necessary in addition to those above:

6. Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
7. Enclose, cover, water, or apply non-toxic soil binders to open materials stockpiles.
8. Limit traffic speeds to 15 mph on unpaved access roads.

9. Install erosion control measures to prevent silt runoff onto public roadways.
10. Replant vegetation in disturbed areas within 30 days after project completion.

For construction sites near sensitive receptors, require the following measures when necessary, in addition to those above:

11. Install wheel washers for exiting trucks, or wash all equipment leaving site.
12. Install wind breaks, or plant trees/vegetation at windward sides of construction areas, or avoid removing existing vegetation which acts as a windbreak.
13. Suspend excavation and grading activity when winds exceed 25 mph.
14. Limit area subject to excavation, grading, and other construction activities at any one time.

AQ-2g **Enforce air quality control measures and monitoring for agricultural operations.** Air emissions from agricultural operations, including field burning, airborne soils, and over-spray from herbicide applications, shall be controlled and monitored through air quality standards as well as adherence to the Land Use Code.

POLICY AQ-3 REGIONAL AIR QUALITY STANDARDS, MONITORING AND EDUCATION

Objective. Participate in regional efforts to improve and monitor air quality and meet air quality goals, coordinate transportation and land use development planning with the North Coast Unified Air Quality Management District, and educate the public.

AQ-3a **Air quality standards and monitoring.** Identify potential emission sources of airborne toxins from mobile and stationary sources. This may be in coordination with the California Air Resource Board and the NCUAQMD, as appropriate. Enforce rigid high standards to restrict fumes, smoke, dust, or other environmental pollutants from stationary sources of pollution.

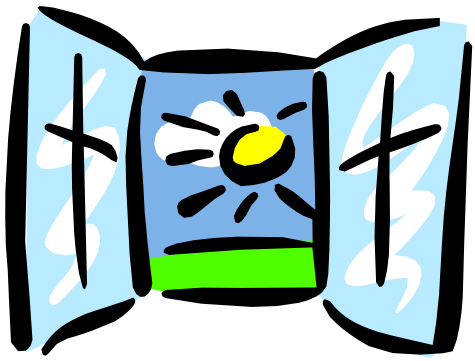
AQ-3b **Develop and distribute material to educate the public on air quality issues**. Work with Humboldt State University, the California Air Resources Board, and the NCUAQMD to develop educational material regarding air quality, impact of air quality on people, plants and animals, and what citizens can do to improve air quality. The City will make this information available.

AQ-3c **Cooperation in enforcement activities and programs**. Cooperate with the NCUAQMD in implementing and enforcing the district's rules and programs. Consider joint implementation of programs between the City and the district such as:

1. A voluntary wood-burning-devices dryness certification program.
2. Free cordwood moisture checks.
3. Brochures on wood burning.
4. Conversion of conventional wood burning devices to EPA certified devices.
5. Use of district non-compliance funds for low-cost replacements.

Develop stricter ordinances, guidelines, and development agreements for new residential development to limit wood burning devices. Use district techniques to identify improper wood burning device use, improperly dried fuel, and faulty equipment, and provide education to violators or take enforcement action.

AQ-3d **Indoor air pollution.** Factors such as sealed building interiors, inadequate ventilation, non-openable windows, and use of building materials that release toxic substances contribute to indoor air pollution. To maximize indoor air quality, the installation of openable windows and adequate ventilation systems, the use of pollution-reducing houseplants, as well as the selection of non-toxic building materials and interior finishes, is encouraged in all new buildings and in the retrofitting of existing buildings. The City shall maintain a list of non-toxic building materials and interior finishes, provide available information about building techniques and designs that reduce or eliminate indoor air pollution, and encourage a good-faith effort by private industry to use those materials and techniques.



POLICY AQ-4 ODOR

Objective. Minimize public exposure to noxious odors from industrial, manufacturing, processing, and food and beverage production operations.

AQ-4a **Odor controls**. Identify potential sources of noxious odors and regulate those sources to avoid adverse affects on adjacent sensitive receptors. Noxious odors are defined as foul smelling airborne emissions that are sufficiently concentrated to cause physical discomfort to those inhabiting adjacent areas. Regulations imposed to reduce effects of these odors shall include limiting hours for odor emissions, periodic monitoring, and filtering to reduce concentrations.

4.9 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURE DESCRIPTION	RESPONSIBLE PARTY	TIME FRAME
AQ -1	**Air quality education and air emissions reduction programs** Continue monitoring local air quality and setting high standards for air quality. The City, including the Fire Department, shall work with the NCUAQMD to establish an air quality monitoring station in Arcata.	NCUAQMD	On-going
AQ -2	**Funding sources for wood-burning appliance retrofits for low income and elderly** Research and apply for grant funding for qualifying low-income and elderly households to retrofit wood-burning appliances that have high emission rates.	Community Devel. Dept.	On-going

Endnotes

1. For further information on the health effects of PM-10 see the California Air Resources Board publication "Facts about Air Pollution and Health" (ARB Publications Department); the EPA document National Air Quality and Emissions Trends Report (EPA Office of Air Quality Planning and Standards, Research Triangle Park, NC); the Air Resources Board December 1982 publication California Ambient Air Quality Standards for Particulate Matter (PM-10); Federal Register Vol. 62, No. 138, 1997 for information on PM-2.5; and Health & Environment Digest Vol. 10, No. 4 "Airborne Particulates: A Deadly Public Health Concern."

Chapter 5
Design and Historical Preservation

Design Element
Historical Preservation Element

DESIGN ELEMENT

Preface

The Design and Historic Preservation Design Elements are not mandated under the state planning law. They are included in the Arcata General Plan because the issue of community appearance and livability is important to Arcata. In addition to addressing community-wide design features and criteria, the Design Element also is important for protection of scenic and visual qualities of the City and the coastal zone as required by the California Coastal Act of 1976.

5.1 INTRODUCTION

Overview of Arcata's Design Character. The city of Arcata is located in a setting of great natural beauty. A sense of physical and visual separation from other communities is provided by extensive open space lands which surround the city. These include Arcata Bay, marsh lands, and agricultural lands to the south; the agricultural lands of the Arcata Bottoms to the west; the Mad River and its agricultural floodplain to the north; and forested hills to the east. For residents and visitors alike, the aesthetic encounter with the landscape of the North Coast is presented along the State Route 101 corridor and several other principal roadways. From the south, the State Route 101 parallels and provides scenic views to the marshes and open waters of Arcata Bay to the west and agricultural land with a forested coastal foothill backdrop to the east. The sense of scale and "fit" of the Arcata townscape complements this scenic rural coastal environment.

The overall urban form of the city consists of a dense and compact urban core centered around the Plaza and downtown, with a series of varied and dispersed residential neighborhoods extending into the hills and bordering agricultural areas. These provide residents with a range of housing environments and an immediate relationship to natural areas. Several interspersed agricultural areas accentuate the juxtaposition of town and country. Much of the character of Arcata is derived from the architectural styles of its buildings, particularly of older historical residences and commercial buildings near the City's center. For the most part, buildings are small in scale and only a few buildings are three stories or more in height.

Guiding Principles and Goals.

A. Promote orderly and harmonious development of the City.
B. Assure that new development is designed to preserve important natural features and scenic resources.
C. Promote building designs that are well suited to their functions and sites.
D. Prevent excessive and unsightly grading of hillsides associated with development.
E. Create visual environments which are of high aesthetic quality and variety.
F. Achieve maximum benefit from natural environmental settings.
G. Assure that new buildings are designed to fit appropriately with the existing neighborhood context.
H. Promote stability of land values and desirability of investment in the City.
I. Incorporate "green building" concepts and features into new and renovated structures.

5.2 POLICIES

The Design Element contains the following policies:

D-1 Overall Community Character
D-2 Downtown Arcata Design
D-3 Scenic Routes, Resources, and Landscape Features
D-4 Subdivision Design
D-5 Residential Design
D-6 Design of Commercial and Industrial Development
D-7 Landscape Design

POLICY D-1 OVERALL COMMUNITY DESIGN CHARACTER

Objective. Maintain a community with diversity and quality in the built environment; with small-scale structures that are harmonious with their neighborhood context; and with a sharp physical and visual distinction between the urban area and the surrounding open space lands.

D-1a **Maintain small scale of building.** Buildings shall be designed to maintain the small-scale character of the community.
1. This may be accomplished by breaking larger developments into several smaller buildings rather than constructing a single large, monolithic building.
2. This shall be accomplished by avoiding large, unbroken expanses of wall and roof planes.
3. This shall be accomplished by providing articulation in building mass, surfaces, rooflines, wall planes, and facades, and including architectural ornamentation.

D-1b **Emphasize Arcata Plaza area as the main community focal point (Not applicable in Coastal Zone).** Buildings fronting on streets around the Arcata Plaza shall be multi-story. Architectural and other design elements shall emphasize the importance of the Arcata Plaza as the community's main focal point for commerce, entertainment, and special events. Designs shall promote pedestrian access and continuity of retail space at the street level. Parking should be accommodated off-site to the extent practicable.

D-1c **Promote quality and diversity of design compatible with neighborhood context.** Site and building design shall be harmonious with the neighborhood context, including existing structures. Within new subdivisions, diversity in building appearance rather than repetitive designs is encouraged.

D-1d **Preserve natural landforms and landscape features.** Site designs shall have the minimum disturbance necessary to natural conditions such as existing contours and vegetation, and shall preserve, to the maximum extent practicable, any unusual natural features.

D-1e **Promote energy efficiency and solar access.** Site and building design shall emphasize energy efficiency and solar orientation.

D-1f **Create buffers between incompatible land uses.** At boundaries between different land-use designations, and where different and incompatible land-uses are adjacent, buffer areas shall be incorporated into site design for new development. Buffers may consist of additional setbacks, landscaping, and visual and noise barriers such as fences or walls.

D-1g **Provide for bicycles, pedestrians, and transit in design.** Design of commercial, industrial, and multi-family housing shall incorporate provisions for bicycle and pedestrian circulation, and bus transit. Facilities should be located and designed so that these alternative travel modes are fully interconnected.

D-1h **City edges.** The development pattern shall be managed to retain the sharply demarcated physical and visual separation of Arcata from the urbanized areas of Eureka and McKinleyville. This shall be accomplished by:

1. Restricting development in surrounding open space lands to very low density (minimum parcel size from twenty to sixty acres).
2. Requiring that construction in hillside areas shall be sited so that it does not intrude above the ridgeline.
3. Retaining existing vegetation, providing landscape screening, and shielding exterior lighting to minimize visible impacts of any development on prominent sites or in open space areas, especially hillside sites visible from State Route 101.

D-1i **Renewable green building.** Site and building design shall incorporate green building concepts including maximizing use of recycled materials and recycling, energy efficiency, solar access, insulation, energy efficiency, use of toxic-free materials, natural lighting, native landscaping, permeable surfaces around structures, and minimizing construction waste generation.

POLICY D-2 DOWNTOWN (CENTRAL – COMMERCIAL) DESIGN

Objective. Maintain and continue to develop a built environment which accentuates the Plaza and surrounding downtown lands designated in the Commercial-Central use category as the commercial and cultural hub of the city, maintains the historical flavor of building and site design, integrates bicycle and pedestrian facilities, and which incorporates appropriate trees and other "softscape" elements.

D-2a **Design of Arcata Plaza (Not applicable in Coastal Zone).** The basic historical pattern or design of the Plaza shall be retained, including the symmetrical arrangement of pathways, the open expanse of lawn, and the central focal point of the McKinley statue.

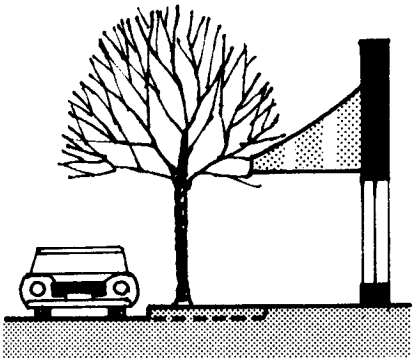
D-2b **Streetscape design.** Future changes to public street rights-of-way in the downtown shall focus on improving amenities and safety for pedestrians, bicycles, and reasonable and safe vehicle access. The following design features should be considered in future improvement projects:

1. Increase the width of sidewalks.
2. Demarcate pedestrian crosswalks with pavement marking or special paving materials or colors.
3. Provide or improve bike lanes, where appropriate.
4. Incorporate street trees in appropriate locations.
5. Use special paving materials or patterns for sidewalks at key locations or intersections.

6. Provide landscape screening between parking lots and the street.
7. Provide street and parking lot lighting that is adequate for safety but that is not overly bright.
8. Establish a uniform lighting fixture and post (or pole) design for streetlights;
9. Establish a uniform design for various items of "street furniture," such as benches, trash receptacles, water fountains, etc.
10. Require undergrounding of utilities and elimination of poles and overhead wires.

D-2c **Alleys.** The existing alleys in the downtown shall be retained and should be improved as multi-functional accessways. Businesses are encouraged to use alleys for secondary entries. Enhancements should emphasize amenities and safety for pedestrians, such as improved surfacing, lighting, landscaping, and enclosures for garbage and recycling receptacles where space permits.

D-2d **Street trees.** The City shall encourage the installation of street trees within the downtown area. The City shall develop a comprehensive street tree planting and maintenance program which includes the following components:



1. Identification of streets where trees may be installed.
2. Standards for the location of street trees; generally, locations will either be in wells located between on-street parallel parking areas, in cutouts within the sidewalk where the sidewalk is of sufficient width (7 feet or more), or in containers where the preceding locations are not workable.
3. Standards for spacing between street trees (usually 20 to 35 feet on center).
4. Specification of a list of acceptable tree species and the appropriate streets and locations for each species.
5. Standards for size of trees and specifications for their installation (e.g. size of well, staking, materials).
6. Identification of responsibilities, procedures, and standards for tree maintenance. Where space is insufficient for street trees, trees may be incorporated into the landscape design on private property adjacent to the street property line.

D-2e **Design criteria for new structures and additions.** The height, scale, and mass (volume) of new buildings and additions to existing buildings shall be compatible with other buildings in the immediate vicinity. Each building shall have an entry from the sidewalk to the street-level floor. Building elevations shall be articulated: long, continuous, unbroken wall and roof planes should be avoided. The visual organization and proportions of building elevations — including the size, spacing and shape of window and door openings — should be consistent with neighboring buildings. Architectural detailing and ornamentation, such as cornices, eaves,

recessed or covered entryways, and awnings, are encouraged. Design review applications shall include depiction of buildings on adjoining lots, either in elevation drawings or photographs.

D-2f **Design criteria for vacant lots on Arcata Plaza.** In addition to the criteria in D-2e, the following criteria shall also apply to development on vacant parcels with frontage on streets surrounding the Plaza:

1. All buildings shall have a minimum height of two stories to create a sense of enclosure for the City's central open space and focal point.
2. All floors of buildings should be parallel to and at the street parcel line.
3. Any building located at a corner or intersection shall incorporate architectural features at the ground floor which emphasize pedestrian circulation, such as building cut-offs, walk-through arcades, pedestrian spaces, or similar elements.
4. Parking is encouraged to be provided off-site; if any on-site parking is provided, it shall be accessed from the rear.
5. Loading docks shall not be required.

D-2g **Design criteria for remodeling existing facades (storefronts).** In remodeling facades, the distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features shall be avoided whenever possible. Deteriorated architectural features shall be repaired rather than replaced whenever practicable. Storefronts shall be designed to fit inside the original opening and not extend beyond it. Contemporary design for alterations and additions to existing structures shall not be prohibited when such alterations and additions do not destroy significant historical or architectural character of the property. The size and proportions of any additions shall be compatible with the original building.

D-2h **Site design, including parking areas.** The placement of new buildings and building additions on a site should be compatible with site layout on neighboring properties. In general, buildings should be sited immediately adjacent to the sidewalk and any onsite parking should be placed to the rear of the building. Parking areas shall be separated from the street and sidewalk by a landscape buffer of at least six feet. Trees that reach a mature height of at least twenty feet should be included in the

interior of all parking lots with more than two parking spaces. Pedestrian spaces, circulation areas, or gathering areas are encouraged as design elements.

D-2i **Design of signs.** Permanent signs in the Central-Commercial area shall be oriented to pedestrians rather than automobile traffic, and shall conform to the following criteria:

1. Signs shall be placed so that they do not obscure other building elements such as windows, cornices, or decorative details.
2. Size, materials, style, and color shall complement the building facade and shall be compatible with the surrounding area.
3. Copy shall be limited to icons, logos, business identification, and hours of operation (rather than advertising copy).
4. Flush-mounted signs with copy in a specifically designated horizontal band is the preferred type; monument and hanging (cantilevered) signs may be allowed, provided that the latter has a vertical clearance of at least 7.5 feet and an encroachment permit is obtained.
5. Pole signs shall be prohibited, except for public traffic, directional and safety signs.
6. When lighted, signs shall be designed to minimize glare and with the minimum amount of illumination necessary to make the sign legible; neon signs with distinctive designs are acceptable. Plastic-faced internally lit signs should be discouraged.
7. At the time of any future alterations of an existing sign, the sign shall be required to be modified to conform in its entirety to these policies. Alterations shall mean any change to the structure, area, or height of a sign, but shall not mean a change in copy.

D-2j **Incorporation of amenity features in new development.** Any new development shall incorporate an appropriate combination of project enhancements in lieu thereof. Potential enhancements include, but are not limited to, the following:

special paving materials in parking lots
public art, including sculpture and murals
outdoor spaces for public use
street trees or street furniture
fountains or other water features
secondary pedestrian access from alleys
balconies or decks on upper floors
sidewalk and/or entry mosaics or decorative tile
special architectural features
flower beds
window boxes
courtyards
awnings
planted wall trellises
recessed entryways

POLICY D-3 SCENIC ROUTES, RESOURCES, AND LANDSCAPE FEATURES

Objective. Identify and protect scenic routes, resources, and landscape features. Retain natural features, coastal scenic resources, and scenic vistas as important aesthetic components of the built environment and visual and associative links to nature. Minimize impairment and obstructions of scenic views to the minimum necessary to allow reasonable development.

D-3a **Designation of coastal scenic highways.** The following coastal scenic highways are hereby designated:

1. 7th Street and Bayside Road, from 7th Street overcrossing to Crescent Drive
2. Bayside Cutoff, from State Route 101 to Old Arcata Road
3. Old Arcata Road, from Bayside Cutoff to Crescent Drive
4. Samoa Blvd. (State Route 255), from Crescent Drive to Manila
5. Janes Road, from 11th Street to Foster Avenue
6. State Route 101, from the southerly City boundary to the Mad River
7. South "I" Street, from Samoa Blvd. south
8. South "G" Street, from "H" Street to State Route 101
9. All public roads west of the City in the Arcata Bottom

D-3b **Designation of non-coastal scenic highways (Not applicable in Coastal Zone).** The following non-coastal scenic highways are hereby designated:

1. Fickle Hill Road
2. Jacoby Creek Road
3. Golf Course Road
4. L. K. Wood Blvd. from the St. Louis Road Overcrossing to 14th Street

D-3c **Design policy for projects affecting scenic highways.** The following standards shall apply to any development which affects scenic highways:

1. Billboards or other off-premises signs are prohibited.
2. Landscape planting along State Route 101 shall not interrupt scenic views to the bay or eastward across agricultural lands.
3. New development or redevelopment in the industrial area of South "G" Street shall provide dense landscape screens along all perimeter lot lines visible from State Route 101.
4. The City shall work jointly with the County of Humboldt, Caltrans, and the Coastal Commission to enhance scenic views along scenic highways, particularly State Route 101 and 255 corridors.

D-3d **Scenic entryways.** The appearance of the following additional entryways should be enhanced with appropriate landscaping and entry signs or structures:

1. Samoa Blvd. (State Route 255) between Jackson Ranch Road and "K" Street
2. State Route 101 between Bayside cutoff and Samoa Blvd.
3. State Route 101 between the Mad River and Giuntoli Lane
4. State Route 299 from North Bank Road to Giuntoli Lane
5. Old Arcata Road from Bayside Cutoff to Jacoby Creek Road

These public improvements may include uniform landscaping, pedestrian enhancements, and directional signing.

D-3e **Arcata Bay—Open waters, shoreline, and tidal marshes.** Proposed land uses and development shall not significantly alter the natural appearance or landforms of the waters, shoreline, and tidal marshes of Arcata Bay, which are designated in the natural resource land-use category. Where these resources are visually degraded, developments shall be required to restore or enhance their appearance. Development within the area bounded by Samoa Blvd., Butcher's Slough and Gannon Slough shall include local native plant landscaping, screenings and other measures to ensure compatibility with scenic coastal resources and with the educational, recreational, wildlife and other uses of the Humboldt Bay National Wildlife Refuge and the Arcata Marsh and Wildlife Sanctuary.

D-3f **Bay and ocean views.** Views of Arcata Bay and the Pacific Ocean from vantage points along public streets in hillside areas of Arcata shall not be blocked by development. Any impairment or partial obstruction of these ocean views from new development shall be the minimum necessary to allow reasonable development.

D-3g **Wooded hillsides.** Views of wooded hillsides forming the City's eastern edge from vantage points along public streets west of the State Route 101 should not be blocked by development.

D-3h **Farmlands and open countryside.** Views of farmlands and open countryside — in the Arcata Bottom, along the State Route 101 south of Samoa Boulevard, north of Giuntoli Lane, and along State Route 255 west of the city, should be protected.