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LOCAL COASTAL PROGRAM (LCP) UPDATE GUIDE[1]

Part I - Updating LCP
Land Use Plan (LUP) Policies
(Published April 2007; revised July 2013.)

Part II - Updating LCP
Implementation Plan (IP) Procedures
(Published 2010.)

What is an LCP?

A Local Coastal Program is a document that includes a local government's (a) land use plans, (b) zoning ordinances, (c) zoning district maps, and (d) within sensitive coastal resource areas, other implementing actions, which, when taken together, meet the requirements of, and implement the provisions and policies of the California Coastal Act at

Frequently Used Acronyms

LCP: Local Coastal Program

LUP: Land Use Plan [component of the LCP]

IP: Implementation Plan [zoning ordinances, zoning district maps, and other implementing actions

The **LCP Update Guide** consists of two parts:

Part I – Updating LCP Land Use Plan (LUP) Policies - is relevant to an update of the Land Use Plan component of the LCP. Part I covers the resource protection policies contained in Chapter 3 of the Coastal Act, (grouped into eleven sections), and implementation measures directly related to carrying out the policies of the LUP.

Part II – Updating LCP Implementation Plan (IP) Procedures - covers the procedures that local governments use to implement LCP policies. These procedures primarily involve local issuance of coastal permits pursuant to a local government's LCP.

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Introduction

This document provides guidance for updating Local Coastal Programs (LCPs). The California Coastal Act of 1976 ushered in an era of significant new land use planning in California. Based on the Coastal Act's requirements, local governments prepared and implemented LCPs to carry out the Act's mandate to protect coastal resources and maximize public access to the shoreline. LCPs established the kinds, locations, and intensities of new development allowed in the coastal zone, and identified other development standards necessary to achieve the objectives of the Coastal Act. Once an LCP was certified by the Coastal Commission as consistent with Coastal Act requirements local governments were then given the authority to, and responsibility for, issuing coastal permits for most new development, subject to the standards of their certified LCPs.

Who issues the permits? *As of 2012, about 72% of the 128 local coastal program segments of the 76 coastal jurisdictions were certified and the local jurisdictions were issuing coastal permits for most developments in those certified areas. In addition to areas that do not yet have a certified LCP, the Coastal Commission retains permitting jurisdiction below mean high tide, on public trust or tidelands, and may exercise permit authority within its appeal jurisdiction (see Coastal Act 30603, at: http://www.coastal.ca.gov/coastact.pdf).*

As a result, certified LCPs have become an important part of California's coastal zone management program. But due to changes in the amount, condition, and location of development and sensitive resources over time, the Commission and many local governments have also recognized that LCPs need to be updated over time in order to remain effective. Significant changes may have occurred since the last LCP certification that can directly impact efforts to protect California's coast. Population and development patterns may have changed, leading to new pressures on resources and public access. New nonpoint source pollution laws may be in place, and scientists have learned more about sensitive species, habitats and other coastal resources over time. Global climate change and sea level rise are also real concerns that must now be considered in land use decisions and planning.

Similarly, the Commission and local governments have over time encountered numerous procedural issues, for example concerning permit or appeal procedures that can undermine effective implementation of LCPs. Questions and disputes on implementation procedures can delay the development review process and require more staff resources to resolve. Although sometimes unavoidable, procedural conflicts also divert attention from the core LCP objective of coastal resource protection.

This LCP Update Guide is therefore intended to support LCP update efforts by providing information and guidance for addressing some of these emerging issues in the update of a certified LCP. It is not intended to cover every issue that should be considered in an update, but it does highlight some recent Coastal Commission decisions, and policy and procedural concerns, that most coastal communities may need to address. It thus serves as a good place to start.

If you do not yet have a certified LUP or IP, this LCP Update Guide can be consulted, but it is not intended to be a complete manual on how to prepare an LCP for initial certification. Contact Commission staff for information on regulations and methodology for completing a new LCP.

Updated Analyses Needed to Support LCP Amendments

LCP Amendment submittal procedures may be found at in Chapter 6 of the Coastal Act, at: http://www.coastal.ca.gov/coastact.pdf

and in CCR Title 14, Div. 5.5 at Chapter 8 13500-13648, at: http://government.westlaw.com/linkedslice/default.asp?SP=CCR-1000

The original LCPs developed by local governments included significant planning data and background analyses to support the proposed policies and ordinances. Because circumstances change over time, it may be necessary to update these background data and analyses. New information, such as updated buildout projections and analysis of available public services, is a key to supporting revised policies and procedures and to addressing consistency with the Coastal Act. Any LCP update amendment submittal must include appropriate documentation. Some examples of recommended analyses to perform and update are presented throughout this document.

Identifying the Components that Comprise the LCP

In many cases, different portions of LCPs have been certified at different times and undergone multiple revisions. This has sometimes led to confusion about what documents comprise the certified LCP. An LCP update provides an opportunity to clarify exactly what your LCP includes. You should specifically identify which documents, portion of documents, and maps are a part of the final certified program and thus intended to apply in the coastal zone. The relevant portions of any reference documents or sources cited should also be incorporated into the updated LCP submitted for certification. These steps will ensure that any changes to these documents are considered amendments to the LCP and thus will continue to apply in your coastal zone.

Local Context Matters

This LCP Update Guide is intended to highlight recent policy and procedural concerns in core Coastal Act issue areas. Please be aware that the information presented here is guidance only. It should be considered in conjunction with the legal requirements of the California Coastal Act and the California Code of Regulations. The Guide offers some examples of how certain issues have been addressed by the Commission (and local governments in other cases). While these examples may be useful, resource conditions and local circumstances may differ by community, some examples may not apply or you may need to address other topics beyond those presented in this document.

An LCP update will usually address all major policies groups in Chapter 3 of the Coastal Act. Specific questions about what should be addressed in an LCP should be discussed directly with the appropriate Commission District Office. Contact information can be found at: http://www.coastal.ca.gov/address.html

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LCP Update Guide

Section 1. Public Access

One of the fundamental goals of the Coastal Act is to provide maximum public access to the coast. This includes protecting *existing* and providing *new* public access. The authority for this mandate partially derives from the California Constitution, which declares that "access to the navigable waters of this State shall be always attainable for the people thereof." (Article 10, Section 4 of the California Constitution.) The Coastal Act also recognizes that the provision of public access needs to take into account public safety concerns and the protection of private property and natural resources from overuse.

Review the principal Coastal Act policies concerning public access *-- Sections 30210 through 30214 and 30500(a) and 30604(c), at: http://www.coastal.ca.gov/coastact.pdf.*

LCPs are essential to reaching the goal of maximum public access. Coastal Act §30500 requires that each LCP contain a specific Coastal Access Component to "assure that maximum public access to the coastal and public recreation areas is provided." In general, LCPs should provide policies and standards to assure that existing public access is protected, and that maximum public access to and along the shoreline is both planned for and provided with new development when warranted. Pursuant to Coastal Act §30531, LCPs should, to the maximum extent practicable, incorporate a public access inventory, including a map showing the specific locations of existing and proposed public access to the coast.

In light of continuing population growth that may increase demand to use California's beaches and shoreline recreational resources, updated LCP Access Components need to reflect new information and changed conditions. Access components should also reflect new laws related to both the California Coastal Trail (CCT) and complete streets as described below.

What should an updated public access component include?

- Descriptions and maps of existing, required, suitable and planned access, including segments of the California Coastal Trail and the status and location of those subject to offers to dedicate easements or deed restrictions;
- Estimates of visitor and facilities use (see Section 2 - Recreation of this Guide);
- Estimates of unmet and future demand and identification of deficiencies by location and type of access;

- Assessments of any public safety or fragile resources concerns that may require additional access management measures;
- Identification of encroachments on, or disincentives to use of, public beaches or accessways (e.g. illegal no parking signs or barriers, private development or landscaping on beaches) and measures to remove or reduce them;
- Measures to ensure new access, through the regulatory program or other mechanisms;
- Measures to manage access and other activities on beaches in a manner that protects the public access;
- Measures to expand access through sufficient parking and alternative transportation;
- Identification of potential prescriptive rights and measures to ensure such rights are protected;
- Measures to site new development to not impede access and to be compatible with public access areas;
- Mitigation measures for unavoidable impacts of recreational beach loss from permitted development;
- Zoning ordinance provisions that provide for accessways and access facilities;
- Signing provisions.

Additional guidance on some of these topics is discussed later in this section. The Commission staff is currently updating, and expanding digital coastal access inventory data. You are welcome to contact staff regarding such information when updating your coastal access component.

Where can I read some examples of updated access components?

Some revised Public Access components are:

- **City of San Diego La Jolla Community Plan and Local Coastal Program Land Use Plan** (see especially pages 30 - 33 and Appendices/Access Inventories), at: http://www.sandiego.gov/planning/community/profiles/pdf/cp/cpljfullversion.pdf
- **City of Newport Beach Coastal Land Use Plan** Chapter 3 Public Access and Recreation**,** at: http://www.city.newport-beach.ca.us/PLN/LCP/Internet%20PDFs/CLUP_Part%203_Public%20Access%20and%20Recreation.pdf

For an example of a Commission Periodic LCP Review that included recommendations for updating an access component, see:

- **Los Angeles County's Marina del Rey Periodic LCP Review**, Section 5, at: http://www.coastal.ca.gov/recap/mdr/mdr-adopted-5-mm9.pdf

To see suggestions for updating the LCP access ordinances, refer to Part II of the LCP Update Guide.

What are some of the issues to address in an update of a Public Access component?

The following highlights some new information that should be considered in updating the Access component of the LCP.

♦ Implementing the California Coastal Trail

Definition of the California Coastal Trail

A continuous public right-of-way along the California coastline; a trail designed to foster appreciation and stewardship of the scenic and natural resources of the coast through hiking and other complementary modes of non-motorized transportation.

Your updated LCP should provide for the California Coastal Trail (CCT) to span your entire jurisdiction (except where there is a more seaward location in another jurisdiction). Local, regional, state and federal agencies are all essential partners in ensuring that the CCT will eventually connect along the coast from Oregon to Mexico. Long envisioned as a statewide goal, the CCT has also been recognized by the federal government as California's Millennium Legacy Trail. Underscoring the importance placed on the completion of the CCT, the State legislature in 2001 directed the Coastal Conservancy, in consultation with the Coastal Commission and State Parks, to further coordinate the development of the trail and prepare a report to the legislature. The resulting document is a key resource for consultation:

- **Completing the California Coastal Trail**, at: http://www.coastal.ca.gov/access/coastal-trail-report.pdf.

Additional legislation in 2007 instructed each agency, board, department, or commission of the state with property interests or regulatory authority in coastal areas to cooperate with the Coastal Conservancy with respect to planning and making lands available for completion of the trail. This direction includes such activities as construction of trail links, placement of signs and management of the trail. Moreover, local transportation planning agencies whose jurisdiction includes a portion of the CCT, or property designated for the trail, are required by the legislation to coordinate with the Conservancy, the Commission and Caltrans regarding development of the trail. Those transportation planning agencies also are to include provisions for the CCT in their regional plans:

- **Regional Transportation Plan Guidelines,** pp. 24, 111 and 215, at: http://www.catc.ca.gov/programs/rtp/2010_RTP_Guidelines.pdf

Note as well that Coastal Act §30609.5 provides for permanent protection of any state owned land that may have been designated as part of the CCT. It also provides for permanent protection of state owned lands located between the sea and the first public road for public recreational purposes. An example of a suggested LCP policy promoting this approach is:

- **County of San Mateo LCP Amendment No. SMC-MAJ-1-07 (Midcoast LCP Update),** Suggested Modification No. 53, page 80, at: http://documents.coastal.ca.gov/reports/2009/12/Th18a-12-2009.pdf

  Ensure that transportation agencies, including Caltrans, San Mateo County Transportation Authority, San Mateo County Public Works, etc., coordinate their actions to provide for the California Coastal Trail (CCT) along the San Mateo County coastline. In particular, no highway, County road or street right-of-way will be transferred out of public ownership unless it has first been evaluated for its utility as part of the CCT or other public access, and is found to have no reasonable potential for such use. Transfer of public roads or rights-of-way out of public ownership that may provide such public access shall require a coastal development permit appealable to the Coastal Commission. The sale or transfer of state lands between the first public road and the sea with an existing or potential public accessway to or from the sea, or that the Commission or County has formally designated as part of the California Coastal Trail, shall comply with Coastal Act section 30609.5.

If the CCT, or planning for the CCT, remains incomplete in your jurisdiction, an LCP update is an opportunity to add policies generally describing the CCT and a planning and implementation process to guide its completion. The primary siting criteria for the CCT is that it should be located within sight, sound, or at least the scent, of the sea wherever feasible. An example of a suggested suite of LCP policies that promote the CCT is:

- **County of San Mateo LCP Amendment No. SMC-MAJ-1-07 (Midcoast LCP Update),** Suggested Modification No. 48, page 72, at: http://documents.coastal.ca.gov/reports/2009/12/Th18a-12-2009.pdf

In addition to incorporating these basic policies, an LCP update is also an opportunity to review existing access provisions to determine if any should be revised to mention or take the CCT into account. Once a CCT plan or a phase of a CCT plan is complete for your jurisdiction, you should amend your LCP's access component to include these details.

Several CCT planning exercises have commenced. These efforts typically examine opportunities and constraints, evaluate alternatives and then offer both alignment and design recommendations along with implementation strategies. Existing accessways can be inventoried and evaluated, and recommendations to make necessary improvements and create additional links to result in a complete trail system can be presented. For example:

- **Strategic Plan for the California Coastal Trail in Mendocino County,** at: http://mendocinolandtrust.org/?Coastal_Trail:Strategic_Plan

Some of the physical siting issues facing the CCT include:

- Coexisting with railroad lines;
- Not disrupting agricultural and other rural lands; and
- Spanning coastal waterways.

The Rails to Trails Conservancy website contains examples of trails on railroad rights-of-way, both active and abandoned:

- **Rails to Trails Conservancy Trail Building Toolbox**, at: http://www.railstotrails.org/ourwork/trailbuilding/toolbox/index.html

The following is a compilation of CCT options for rural areas, including some creek crossings:

- **Designing the California Coastal Trail along the Gaviota Coast, Rural Trail Design Options**, at: http://longrange.sbcountyplanning.org/planareas/gaviota/documents/GavPAC%20Materials/GavPAC%20Meeting%2046/Trails%20Council%20Rural%20Trail%20Design%20Options%2001-31-12.pdf

For significant water crossings, the best CCT option is usually incorporating a bike and pedestrian facility on the highway bridge, separated from motor vehicle traffic; for example:

- **Coastal Permit No. 1-09-027 (Caltrans/Greenwood Creek Bridge Replacement/Mendocino County),** at: http://documents.coastal.ca.gov/reports/2009/10/W18e-10-2009.pdf

This example illustrates that while one of the general alignment principles is to minimize the CCT's proximity to motor vehicles, of necessity the State and local governments' highway system rights of way sometimes provide the only public lands where the trail can be located given other obstacles (e.g., extremely steep canyons, highly sensitive habitats, seasonally flooded lowlands, breached river mouth sand bars, military bases, and tightly built-up developed areas). In addition, the bicycle

strand of the CCT is sometimes best accommodated somewhere within highway rights of way. Each coastal highway project, particularly those along Highways One and 101, is expected to examine how all modes of travel will be accommodated (the Complete Streets concept) and whether any gaps or connections in the CCT in the vicinity need to be addressed. In approving highway projects, the Commission, for example, has required incorporation of trails alongside the highway, shoulder improvements to benefit cyclists and sidewalks on bridges. An example of a suggested LCP policy promoting this approach is:

- **County of San Mateo LCP Amendment No. SMC-MAJ-1-07 (Midcoast LCP Update),** Suggested Modifications No. 37, p. 46 and No. 53, p.79, at: http://documents.coastal.ca.gov/reports/2009/12/Th18a-12-2009.pdf

♦ Expanding Non-Automotive Transportation

LCPs should include provisions to maximize public access to the coast through a variety of alternative transportation modes, as called for in Coastal Act §30252. Such alternatives are increasingly needed to address roadway congestion as well as climate change due to impacts of greenhouse gases.

Complete Streets Requirements

Any revision to the Circulation Element of the General Plan must comply with the Complete Streets legislation adopted in 2008. Complete Streets entails accommodating all users – e.g., pedestrians, bicyclists, transit riders, elderly and the disabled. These provisions can be incorporated into the LCP. Guidelines and references for Complete Streets can be found at:

- **Update to the General Plan Guidelines: Complete Streets and the Circulation Element**, at: http://opr.ca.gov/docs/Update_GP_Guidelines_Complete_Streets.pdf

Beach Shuttles

LCP Policies should encourage expanded transit opportunities. These can be implemented through measures such as route or schedule changes, different transit stop locations, connections from hotels and motels and/or revisions to carry-on policies to better serve beachgoers. Policies to require and fund beach shuttles as mitigation for impacts of new development can be considered. This LCP amendment describes a beach shuttle program:

- **City of Capitola Major Amendment Number 1-07 (Capitola Village Parking),** at: http://documents.coastal.ca.gov/reports/2009/3/Th9a-3-2009.pdf

Bicycle planning

LCP policies and development standards can also encourage bicycling.

To learn of different ways to accommodate bicycle travel, read:

- **Highway Design Manual** Bikeway Planning and Design Chapter 1000**,** at: http://www.dot.ca.gov/hq/oppd/hdm/pdf/chp1000.pdf

At coastal destinations, bicycle parking should be provided. For recommendations for types of bicycle racks to install and where to site them, see:

- Association of Pedestrian and Bicycle Professionals, **Bicycle Parking Guidelines** (Spring 2002), at: http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf

Bicycle Transportation Plans, required in order to be eligible for Bicycle Transportation Account Funding, also can be incorporated into your LCP; see:

- **Bicycle Transportation Plans Requirements,** at: http://www.dot.ca.gov/hq/LocalPrograms/bta/BTPProcessFinal.htm

The *Highway Capacity Manual* has now been updated to add methodologies for measuring bicycling and pedestrian levels of service:

- Transportation Research Board **The California Highway Capacity Manual** (2010), availability information at: http://books.trbbookstore.org/hcm10.aspx

♦ Preventing Loss of Public Access

LCP updates should evaluate whether incremental actions since LCP certification may reduce public access and, as discussed in the following sections, include measures to prevent any reduction in public access. In most cases these actions (even those not involving physical structures) will require issuance of coastal development permits because they constitute "development" as defined in Coastal Act §30106 ("…change in the intensity of use of water, or of access thereto;…".) (See Part II of this Guide for some additional information about how this can be addressed in permit requirements.)

Encroachments on Public Access

Most structural development on beaches, even structures such as decks, boardwalks or parking lots, limits the use of the beach. Your LCP should include policies that regulate structural development on public beaches and access sites to development and potentially provide for limited structures that are coastal dependent, or otherwise important or essential

for public recreation or public safety, and which are sited and designed to minimize encroachment. You should consider whether similar policies limiting encroachments are appropriate on upper sandy beach areas that are privately-owned, especially where there may be potential prescriptive rights. This is particularly important where the ambulatory boundary between public and private land is not clearly specified and thus where private development may chill rightful public access along the shoreline.

Examples of LCP policies addressing this topic are found in:

- **City of Newport Beach Coastal Land Use Plan,** Chapter 3 Public Access and Recreation, at: http://www.city.newport-beach.ca.us/PLN/LCP/Internet%20PDFs/CLUP_Part%203_Public%20Access%20and%20Recreation.pdf

  3.1.1-4. Identify and remove all unauthorized structures, including signs and fences, which inhibit public access.

  3.1.3-2. Continue to restrict the nature and extent of improvements that may be installed over public rights of way on the oceanside of beachfront residences and to preserve the City's right to utilize oceanfront street easements for public projects.

Temporary Events on Beaches

Temporary events staged on beaches also limit use by the general public, especially when they would commit large areas to special, commercial events on most summer weekends. Your LCP should address such topics as the type, location, and intensity of such events, including scheduling, transportation to the event, how the location of the event will affect public use, signage, mitigation measures, and clean-up. Examples of Commission decisions concerning temporary events are:

- **Coastal Permit Appeal A-5-MNB-07-178 (Association of Volleyball Professionals Tournament in Manhattan Beach)**, at: http://documents.coastal.ca.gov/reports/2007/6/Th16a-6-2007.pdf
- **Coastal Permit 3-03-0334 (Monte Foundation, fireworks at Seacliff State Beach)**, at: http://www.coastal.ca.gov/sc/3-03-034.pdf.

The Commission has adopted the following Guidelines:

- **Guidelines for the Exclusion of Temporary Events** (May12, 1993), at: http://www.coastal.ca.gov/la/docs/temp_events_guidelines.pdf

An example of an LCP ordinance regarding temporary events is:

- **Carmel-by-the-Sea Implementation Plan**, Section 17.52.10 (I), at: http://ci.carmel.ca.us/indexplanning.html.

Beach and Accessway Closures

Some public agencies have considered closing beaches or parking lots for financial, safety or other reasons over time periods ranging from nights, to certain days, certain seasons or even longer. Your LCP should have provisions that enable an objective evaluation of whether the closures are justified; for example, are there unsubstantiated concerns about nighttime criminal activity or have their been several documented incidents? LCPs should generally have provisions to ensure that all existing public accessways remain open to the general public without restrictions or interference. LCP policies addressing closures should provide that closures that could affect access are tailored so as to not interfere with the public's ability to get to and along the shoreline, particularly those areas below mean high tide line. If some closure can be justified, public access can still be protected by limiting the time and extent of the closure and ensuring that the amount and type of other nearby access is maintained or correspondingly enhanced as mitigation. The Commission has not approved any request to close public beaches to the public on a continuing basis, but it has sometimes approved the nighttime closure of public beach parking lots at certain hours as long as nearby street parking is still available.

Examples of Commission actions are:

- Excerpt of Commission adopted suggested modifications for **City of Laguna Beach LCP Amendment No LGB-MAJ-1-10 (Land Use Element Update),** acted on December 12, 2011, at: http://documents.coastal.ca.gov/reports/2011/12/W9c-12-2011.pdf

  Action 4.3.6*: A public beach closure/curfew cannot apply to the area of Coastal Commission original jurisdiction (State tidelands, submerged lands and public trust lands) including but not necessarily limited to the area seaward of the mean high tide line. Public access to the water's edge and at least 20 feet inland of the wet sand of all beaches shall be permitted at all times. Closure to public use of any portion of the beach inland of the mean high tide line is not encouraged and requires a coastal development permit which must maintain the public's right to gain access to State tidelands. Measures that limit public use of the beach shall be limited to those necessary to address documented public safety events that cause a risk or hazard to the general public and shall be the minimum necessary to*

address the potential risk or hazard to the general public. The need for continuation of safety measures that limit public access shall be reassessed on a periodic basis to assure maximum public access is provided. (Ongoing implementation – short-to-long-term.)

- **Coastal Permit Appeal A-6-COR-06-86 (City of Coronado curfews at Bay View Park)**, at: http://documents.coastal.ca.gov/reports/2006/11/T11e-11-2006.pdf.

Similar policies were adopted in the City of Huntington Beach Amendment HNB-MAJ-1-10 (Downtown Specific Plan Update), but it also incorporated provisions that allowed limited closures for beach maintenance after approval of a coastal development permit:

- **City of Huntington Beach LCP Amendment 1-10 (Downtown Specific Plan Update)**, Section 3.3.7.15 Public Access (A), at: http://documents.coastal.ca.gov/reports/2011/6/W9b-6-2011.pdf.

Also in this amendment the Commission addressed potential closure of public piers, including for certain maintenance:

*Add new subsection **3.3.6.14** on page 3-94 as follows:*

Any public pier curfew/closure that applies to any portion of the pier which is over State tidelands and within the Coastal Commission area of original jurisdiction requires a coastal development permit. Closure to the public of any portion of the pier inland of the mean high tide line is not encouraged and requires a coastal development permit which must maintain the public's right to gain access to State tidelands. Any inland closure shall provide for continued public access to any portion of the pier over State tidelands and requires an approved coastal development permit.

Measures that limit public use of the pier shall be limited to those necessary to address documented public safety events that cause a risk or hazard to the general public and shall be the minimum necessary to address the risk or hazard to the general public. The need for continuation of safety measures that limit public access shall be reassessed on a periodic basis to assure maximum public access is provided. Limited duration closures for periodic maintenance (not to exceed one year) are permissible when approved pursuant to a coastal development permit. Limited duration closures due to public safety concerns arising from severe storm events shall be permitted only for

the duration of the storm event and as necessary to effect repairs. An emergency coastal development permit shall be processed with the California Coastal Commission in such cases as soon as the situation permits.

The Commission has provided some guidance for local governments to address beach curfews and State Park closures:

- **Guidance on Actions Limiting Public Access to Beaches and State Waters (Beach Curfews)**, (June 23, 1994), at: http://www.coastal.ca.gov/la/docs/Guidance_on_Beach_Curfews_June94.pdf
- **RE: Joint Oversight Hearing on State Park Closures** (October 21, 2011), at http://www.coastal.ca.gov/la/docs/parks-hearing-letter-ed.pdf

Street Abandonments

Public Access opportunities available through onstreet parking or pedestrian access can be adversely affected when local governments vacate or abandon streets or alleys in the coastal zone. LCP policies and criteria for review of such proposals should be based on the Coastal Act Chapter 3 coastal access policies, not just on whether the road is needed for motor vehicle transportation. If such abandonments are permitted, mitigation to ensure the maintenance of public access should be provided for where necessary such as allowing only partial abandonment of the road, requiring replacement public parking, creating public access easements, or deeding part of the road to a public recreational agency.

An example of Commission action is:

- **Coastal Permit Appeal A-5-VEN-05-259 (City of Los Angeles vacation of a public right-of-way)**, at: http://documents.coastal.ca.gov/reports/2006/4/T10b-4-2006.pdf.

Examples of policies addressing road abandonment are in:

- **Carmel-by-the Sea General Plan/Coastal Land Use Plan**, page 4-8, at: http://ci.carmel.ca.us/tasks/sites/carmel/assets/File/general_plan/Coastal_Access.pdf

  P4-8 *Abandonment or transfer of any public roadway or real property lying between the first public road and the sea shall not occur without reserving the right of public access over such real property unless an alternate route is made available to the public granting equal or greater public access to the Pacific Ocean in the same immediate vicinity. All impacts to public assess shall be fully mitigated. (LUP)*

- **City of Huntington Beach LCP Amendment 1-10 (Downtown Specific Plan Update),** Section 3.3.7.15 Public Access (A), at: http://documents.coastal.ca.gov/reports/2011/6/W9b-6-2011.pdf

Retaining Public Access

Part of an access component update can compare current opportunities for access to your original access inventory to ensure that there has been no reduction of access opportunities. For example, Commission staff reviewed trail segments in one county for a periodic review and found two closed trail segments and another one blocked by a fence. You may also receive an application for removal of an existing accessway or requirement to provide one. Your LCP should have the policy basis to address either the case of a closure that has not been permitted or a permit application for closure. LCPs should generally not allow a reduction in access previously required by an exercised coastal permit and any such proposal must be reviewed through a coastal permit amendment process. In general, existing accessways should remain open, as this LCP policy example provides:

- **Carmel Area Land Use Plan**, policy 5.3.2.1, at: http://www.co.monterey.ca.us/planning/docs/plans/Carmel_Area_LUP_complete.PDF

  5.3.2.1 *Existing major access areas shall be permanently protected for long-term public use...*

There may be some very limited circumstances where changes are proposed to existing public access that could be approved. Your LCP could specify the circumstances where such changes may be considered -- for example, if a path is eroding and presents a public safety hazard -- along with requirements to ensure that the accessway is concurrently resited or replaced with a more functional one.

Gated Roads

Gates to prevent vehicles or pedestrians from entering private roads or subdivisions can impact public access and recreation by blocking access to adjacent public trails and recreational areas. You should consider LCP designations and ordinances that discourage private roads and gates in new subdivisions and include standards to protect public access, including criteria for when gates may be considered. For example, gates could be considered under the following types of situations:

- If the private road has not been subject to any public use and does not provide a linkage between any existing or future public recreational area;

- If the area has no substantial evidence of prescriptive rights that would be affected;
- If the road has not been used historically and could not provide a critical trail link in the future;
- If the road does not provide an essential escape route during time of high fire hazard.

An example of Commission action to deny a private vehicular gate is:

- **Coastal Development Permit 5-07-385-A (Piedmont Cove Homeowners Assoc.)**, at: http://documents.coastal.ca.gov/reports/2008/7/W7a-7-2008.pdf

Examples of policies addressing this topic are found in:

- **City of Newport Beach Coastal Land Use Plan,** at: http://www.city.newportbeach.ca.us/PLN/LCP/Internet%20PDFs/CLUP_Part%203_Public%20Access%20and%20Recreation.pdf

  3.1.5-1. Prohibit new development that incorporate gates, guardhouses, barriers or other structures designed to regulate or restrict access where they would inhibit public access to and along the shoreline and to beaches, coastal parks, trails, or coastal bluffs.

  3.1.5-2. Prohibit new private streets, or the conversion of public streets to private streets, where such a conversion would inhibit public access to and along the shoreline and to beaches, coastal parks, trails, or coastal bluffs.

Parking Restrictions

It is important that any LUP update that proposes to revise parking standards reflect Coastal Act requirements for protecting public access. While revised parking standards can sometimes be consistent with smart growth goals, limitations on the ability to park near beaches, pathways and other public sites can reduce public access to these recreation sites for all but those living in the immediate vicinity. Examples of such limitations are time limits, passes or space allocation to residents or businesses, or space removal. Such limitations could raise issues with conformity with Coastal Act access and recreation policies.

If your LUP update proposes to modify parking policies and standards, it is essential that public access issues connected with the proposal are comprehensively analyzed and documented as part of the update, and public access impacts avoided. This was underscored in a June 13, 2013 Commission action that denied a proposal by the City of Los Angeles to establish an overnight parking district in the community of Venice. The Commission found that given the lack of an adequate study of parking

conditions in Venice, the Commission could not determine the impacts of parking restrictions on recreation and public access to the beach in order to find the project consistent with the Coastal Act. Previous Commission denial in 2010 of a prior proposal for the proposed overnight parking restriction is:

- **Coastal Permit Nos. A-5-VEN-08-344 and CDP 08-11 (City of Los Angeles, Dept. of Transportation)**, at: http://documents.coastal.ca.gov/reports/2010/9/W25c-9-2010.pdf

This prior request was denied because public access would be reduced and alternatives exist to address the perceived problem of a proliferation of camper vans overnight.

When adopted, the Commission revised findings for the most recent Commission action on this proposal will be linked here:

- **Coastal Permit Nos. 5-08-313 & A-5-VEN-08-343 (City of Los Angeles, Venice OPDs)**

Examples of LCP policies addressing this topic are found in:

- **City of Newport Beach Coastal Land Use Plan,** at: http://www.city.newport-beach.ca.us/PLN/LCP/Internet%20PDFs/CLUP_Part%203_Public%20Access%20and%20Recreation.pdf

  3.1.6-1. Prohibit the establishment of new preferential parking districts in the coastal zone except where such restrictions would not have a direct impact to coastal access, including the ability to use public parking.

- **Solana Beach Land Use Plan** "Coastal Recreation" chapter, at: http://solanabeach.granicus.com/MetaViewer.php?view_id=5&clip_id=923&meta_id=104328

  Policy 2.17 *... Public beaches and parks should maintain lower-cost parking fees (if any), and maximize hours of use to the extent feasible, in order to maximize public access and recreation opportunities. Limitations on time of use or increase in use fee for parking fees, which affect the intensity of use, will require a Coastal Development Permit.*

The amendment for the Huntington Beach Downtown Specific Plan Update also addressed parking limitations, See:

- **City of Huntington Beach LCP Amendment 1-10 (Downtown Specific Plan Update)**, Section 3.3.7.15 Public Access (B), at page 27: http://documents.coastal.ca.gov/reports/2011/6/W9b-6-2011.pdf. This amendment was effectively certified on 10/6/11,

at: http://documents.coastal.ca.gov/reports/2011/10/Th6b-10-2011.pdf

B. The implementation of restrictions on public parking along public streets with the potential to impede or restrict public access to beaches, trails or parklands, (including, but not limited to, the posting of "no parking" signs, red curbing, physical barriers, and preferential parking programs) shall be prohibited except where such restrictions are needed to protect public safety and where no other feasible alternative exists to provide public safety. Where such parking restrictions are determined to be necessary due to demonstrated public safety need with no feasible alternative, they shall be subject to a coastal development permit in accordance with Chapter 245 of the HBZSO. An equivalent number of public parking spaces shall be provided as mitigation for impacts to coastal access and recreation. Replacement public parking spaces shall be located within the closest, feasible proximity to the spaces lost.

Parking and Admission Charges

Imposing or raising parking or admission fees may deter some people from accessing recreational areas. An example of an LCP's commitment to free beach parking is:

- **Carmel-by-the Sea General Plan/Coastal Land Use Plan**, page 4-12, at: http://ci.carmel.ca.us/tasks/sites/carmel/assets/File/general_plan/Coastal_Access.pdf

  P4-43 *... Retain beach parking as a free resource to the public facilitating access for all.*

If new parking charges are anticipated, LCP policies should provide for evaluating whether any proposed fees are commensurate with expenses and not overly burdensome. Some mitigating techniques that could be applied to fee hike approvals include: offering free parking for an initial short period of time, offering free admission to bicyclists and pedestrians or providing transit service. An example of Commission action on a proposed fee increase is:

- **Coastal Development Permit 6-07-111 (State Parks, Carlsbad)**, at: http://documents.coastal.ca.gov/reports/2008/5/Th7a-5-2008.pdf

This permit lists the information needs to consider with regard to beach parking fees. Such data should be collected to support any LCP amendments that you may propose on this subject.

Another example from the City of Pacifica addresses the issues related to the public access and recreation impacts of implementing a parking fee program:

- **Coastal Development Permit No. 2-12-019 (City of Pacifica), at:** http://documents.coastal.ca.gov/reports/2012/11/Th11a-11-2012.pdf

Misleading Signs and Markings

Development such as installation of "private beach," "fire lane," "no parking," and "private parking" and other inaccurate signs, and painting red curbs in the public street right-of-way may adversely impact public access. The Commission has recently observed many instances of unauthorized placement of signs that mislead the public about where they may legally park in and adjacent to shoreline areas. Private parties post these inaccurate "No Parking" signs or ones dictating other restrictions that appear legitimate to the unsuspecting public, and often even to law enforcement personnel. LCP access components should prohibit installation of such development.

You can draft LCP policies that make such signs illegal and clarify that erection of signs pertaining to parking that are publically visible, or which might have an adverse effect on views inconsistent with your LUP policies that implement Coastal Act section 30251, is development requiring a coastal permit.

If this is an on-going problem in your jurisdiction, you can increase penalties for posting unpermitted, illegal signs. If warranted, you can develop a program to remove illegal signs, including, for example, a tip line or other communication method for people to report suspicious signs; procedures for your workers already in the field or other staff to be able to identify and remove illegal signs if the signs are on your property, or contact another government entity if it is on their property; or a protocol to warn suspect property owners about enforcement consequences of posting illegal signs. It is important that you make sure that you or another government entity have legal rights to the land before pursuing such measures. You could also develop a proactive program to inform the public where legal street parking exists, such as through signing, brochures, internet, etc. An example of a policy addressing this topic is found in:

- **City of San Diego La Jolla Community Plan and Local Coastal Program Land Use Plan,** at: http://www.sandiego.gov/planning/community/profiles/pdf/cp/cpljfullversion.pdf

  4.f. *All red-curbing on the first street adjacent to the ocean should be reviewed for appropriateness and previous*

authorization in order to assure that on-street parking is protected for beach visitors to the maximum extent feasible. Unauthorized red-curbing shall be removed.

Another example is found in:

- **City of Malibu Land Use Plan,** at: http://qcode.us/codes/malibu-coastal/

  2.81 *No signs shall be posted on a beachfront property or on public beach unless authorized by a coastal development permit. Signs which purport to identify the boundary between State tidelands and private property or which indicate that public access to State tidelands or public lateral access easement areas is restricted shall not be permitted.*

♦ Recreational Beach Valuation

If implementation of your LCP policies could result in adverse impacts to sandy beaches or other accessible shorelines, the LCP should include measures to fully mitigate the impacts of development, including impacts to public recreation. In such cases, you should consider conducting a thorough evaluation of losses to recreational value. Your LCP can incorporate a formula to calculate loss and mitigation as part of permitting development on the beach. Examples of Commission decisions involving assessment and mitigation of recreational beach impacts from shoreline structures are:

- **Coastal Development Permit 3-02-024 (Ocean Harbor House seawall in the City of Monterey)**, at: http://www.coastal.ca.gov/sc/Th13a-1-2005.pdf.
- **Coastal Development Permit 6-04-156 (Las Brisas Condominium seawall in the City of Solana Beach)**, at: http://www.coastal.ca.gov/sd/7-2005-F6b.pdf.

Several coastal cities have been undertaking studies on this topic that could provide guidance. For more information see, for example:

- Philip G. King, **Economic and Fiscal Impact of Carlsbad Beaches (**2005)
- Philip G. King, **Economic Analysis of Beach Spending and the Recreational Benefits of Beaches in the City of San Clemente** (2001), at: http://userwww.sfsu.edu/~pgking/sanclemente%20final%20report.pdf.
- Philip G. King, **Economic Analysis of Beach Spending and the Recreational Benefits of Beaches in the City of Carpinteria**

(2001), at: http://userwww.sfsu.edu/~pgking/carpenteria.pdf.

- Daniel Lew and Douglas Larson, **Valuing Recreation and Amenities at San Diego County Beaches** (2005)
- Philip King and Douglas Symes, **The Potential Loss in GNP and GSP from a Failure to Maintain California's Beaches**, at: http://userwww.sfsu.edu/~pgking/Econ%20Impact%20of%20Out%20of%20State%20and%20For%20tourism%20v7.pdf.

♦ Comprehensive Beach Management

Management measures can help address many issues concerning the beach, including access, recreation and wildlife preservation. Measures might include temporary closures for snowy plovers, limits on beach grooming, seasonal restrictions on sandbar breaching, and rules for various recreational events (e.g., volleyball tournaments). All of these activities are defined as development under the Coastal Act and require coastal permits. To avoid having to apply for or issue multiple permits and to address sometimes competing policy guidance (e.g. providing public access while protecting resources), you could prepare beach management plans. Your LCP can direct plan preparation and/or incorporate the plan itself.

The City of Santa Cruz offers an example of an LUP policy requiring such a plan:

> *1.7.3 Prepare and implement a beach management plan for Main and Cowell Beaches including all properties, public and private, that addresses drainage onto the beach, litter control and beach maintenance, lagoon levels at Neary Lagoon, special events coordination, distribution of recreational uses, handicapped areas, and interpretive signs to ensure safe public access and protection of environmentally sensitive areas. Any future land division of properties including sandy beach shall contain use restrictions consistent with this plan. When a management plan is adopted by the Coastal Commission, it is the City's desire to work with the Coastal Commission to provide for long-term coastal development permits for appropriate elements of the management plan.*

The Commission staff has provided some guidance on preparing beach management plans:

- **Beach Management: Issues and Solutions** (December 1996), at: http://www.coastal.ca.gov/la/lcpguide/Beach_Management_Issues_and_Solutions_Dec96.pdf

Examples of Commission actions are:

- **Coastal Development Permit 3-11-027 (City of Santa Cruz Beach Management Plan)**, at: http://documents.coastal.ca.gov/reports/2011/6/Th10c-6-2011.pdf
- **Coastal Development Permit 4-10-066 (City of Santa Barbara Waterfront Department)**, at: http://documents.coastal.ca.gov/reports/2011/3/W22d-3-2011.pdf.

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Section 2: Recreation & Visitor-Serving Facilities

Review the principal Coastal Act policies concerning recreation and visitor serving uses - - Sections 30212.5, 30213, 30220 through 30224, 30250, 30252, 30253(5) and 30254, at: http://www.coastal.ca.gov/coastact.pdf.

The Coastal Act places high priority on protecting and maximizing recreation and visitor serving land uses, including lower cost facilities.

LCPs certified decades ago will have outdated information on visitor use and demand. As a result, your LCP may not reserve adequate areas and infrastructure capacity to meet current and projected recreation and visitor facility needs.

What should an updated Recreation and Visitor-Serving Facilities component include?

- Inventory and map of existing shoreline and near-shore recreational areas and facilities and support facilities (e.g., beaches, harbors, parking lots/spaces, visitor-serving commercial);
- Inventory and map of existing visitor-serving accommodations (e.g., campground, RV parks, motels, inns) by type, capacity, ownership and price range;
- Occupancy rates or other usage statistics for day use and overnight visitor-serving facilities and recreation areas;
- Demand projections for future recreational and visitor-serving facilities;
- Designations and zoning of suitable oceanfront lands for recreational uses;
- Land use map designations and corresponding zoning for adequate recreation and visitor-serving facilities suitably located and sufficient to meet projected demand;
- Designations and zoning for upland facilities needed to support expanded recreational water use and suitably located;
- Measures to impart priority to visitor-serving commercial uses in mixed-use zones (see Section 6. Planning and Locating New Development);
- Requirements for deed restrictions and other measures to ensure that visitor-serving uses retain their primary function of serving visitors over time;

- Identification of potential public agency acquisitions, development or redevelopment, and management of public recreation and visitor-serving facilities.
- Measures to provide parking for and alternative transportation to recreation and visitor-serving facilities (see Section 1. Public Access).

Each of the above should address the provision of lower cost amenities pursuant to Coastal Act Section 30213.

Additional guidance on some of these topics is discussed later in this section.

What are some issues to address in an LCP update of recreation and visitor-serving facilities policies?

♦ Condominium Hotels/Timeshares

In the past several years the Commission has reviewed proposals for new development of overnight facilities that are owned as private residential units but managed as part of a hotel rental pool. However, there has not yet been much assessment of the long term success of this type of overnight accommodation in ensuring protection of public visitor-serving facilities as a priority use. The Commission has addressed this trend for "condo hotels" (or other types of fractional ownership of overnight units) in several permits and LCP amendments and at a special workshop:

- **Hotel Condominium Workshop** (July 2006), at: http://documents.coastal.ca.gov/reports/2006/8/W3-8-2006.pdf

The Executive Director has also issued interim guidance to local governments for addressing this trend:

- **Condominium-Hotel Development in the Coastal Zone** (December 2006), at: http://www.coastal.ca.gov/legal/condo-hotels.pdf

Some jurisdictions have decided against permitting this type of use. For example, the City of Solana Beach has proposed this policy:

- **City of Solana Beach Local Coastal Program Land Use Plan**, at: http://solana-beach.hdso.net/LCPLUP/LCPLUP-Chapter5-Redline.pdf

  Policy 5.4: Maximize the visitor serving nature of the commercially zoned land by prohibiting fractional ownership (e.g., condominium hotels and timeshares) with the commercial areas of the City. Fractional ownership limits the number of people who can obtain lodging along the coast on an annual basis, Due to the lack of available land area to locate more fractional ownership (without

eliminating hotel/motel uses that will allow greater visitor serving access), the City will continue to prohibit these land uses within the City boundaries.

If condo hotel or other fractional ownership arrangements are to be considered in an LUP update, it is critical to assess whether the LUP includes adequate protections for visitor serving overnight uses in such developments, as well as if policies provide for mitigation of impacts to these priorities uses and whether prohibitions against converting existing hotel units to such residential uses would be appropriate.

Recent LCP amendments that have included detailed criteria for permitting condo hotels are:

- **City of Huntington Beach LCP Amendment No. HNB-MAJ-2-06**, at: http://intranet/planning/Recreation_and_Visitor_Serving/CondoHotel/HuntingtonBeachAmend_CondoHotel.pdf;
- **City Of Redondo Beach RDB-MAJ-2-08 (Area 2 Certification),** at: http://documents.coastal.ca.gov/reports/2009/7/Th11a-7-2009.pdf.

The adopted documents incorporating the Commission's modifications are, respectively:

- **City of Huntington Beach Coastal Element**, Recreational and Visitor-Serving Facilities, at: http://www.huntingtonbeachca.gov/files/users/planning/CE_110_171.pdf
- **City Of Redondo Beach Municipal Code,** Title 10, Chapter 5, Article 2, Division 3, Section 10-5.811, at: http://qcode.us/codes/redondobeach/

♦ New Overnight Facilities, Upgrades, and Conversions

Another trend observed in the coastal zone is for property owners to propose upgrades or conversions of their overnight facilities. Such changes can result in narrower ranges in price and type of overnight accommodations, including the loss of lower-cost visitor-serving facilities in the coastal zone. This problem is compounded by the fact that new development proposals are often for high-end hotels. As you update your LCP, rather than just designating appropriate areas for overnight accommodations, consider including policies and standards that ensure an appropriate mix of accommodations over time. Mitigations for allowing luxury or higher priced accommodations may be appropriate and could include construction or retention of lower cost facilities such as cabins, campgrounds, hostels, or budget hotels/motels. If these cannot be

incorporated into the subject site, then off-site mitigation could be required. In addition to the LCP amendments for Huntington Beach and Redondo Beach, cited above, a recent LCP amendment that incorporated such mitigation requirements is:

- **City of Newport Beach LCP Amendment NPB-MAJ-1-07**, at: http://documents.coastal.ca.gov/reports/2009/2/Th18d-2-2009.pdf.

If you are including mitigation in lieu fee requirements when lower cost accommodations will not be constructed as part of a project, then it is also important to consider whether your updated LCP contains a program for spending the collected funds, including identifying possible sites where the funds could be spent and which department has responsibility for collecting and allocating the money.

♦ Short-term (or Vacation) Rentals

In response to residents' concerns, some communities have been motivated to consider ordinances to regulate or prohibit the rental of private homes on a short-term basis. Such rentals can help meet Coastal Act Section 30222 requirements to protect the priority for visitor-serving uses over residential uses and help to maximize public access as required by the Coastal Act. Thus, complete prohibitions on such rentals can be problematic. However, past Commission actions have recognized the potential effects of short-term rentals on residential communities and considered standards to regulate the length of time and conditions for them in a manner that protects residential communities while maximizing public access and priority visitor use. Proposals for policies or ordinances to address short term rentals will be based on the unique conditions in each jurisdiction. An update should include a revised assessment of existing overnight accommodations and other visitor-serving facilities in your jurisdiction and whether the supply is adequate to meet future demand. Depending on such assessment, any proposed restrictions on short term rentals must be consistent with the priority land use and public access policies of the Coastal Act.

Examples of LCP amendments addressing vacation rentals include:

- **Santa Cruz County LCP Amendment No. 1-11 Part 3 (Vacation Rentals),** at: http://documents.coastal.ca.gov/reports/2011/7/W6b-7-2011.pdf

♦ Renovation of Harbors and Marinas

Harbors and marinas as recreational facilities are encouraged by the Coastal Act and such upland facilities should be shown as allowed uses in appropriate shoreline locations. Many existing facilities are older, and in recent years the Commission has reviewed more proposals for renovation

and redesign/reconstruction of these facilities. An LUP update should provide new information on boating demands and on public access needs.

The LCP update should acknowledge that jurisdiction is generally shared for such facilities, with water areas remaining in the Commission's continuing permit authority and land based facilities often within local permit jurisdiction, but usually within appeal areas. However, because many projects have both land and water components, the LUP can address overall issues. (The Coastal Act policies are the standard of review for reviewing proposed development within the Commission's continuing jurisdiction. For review of appeals from local coastal permit decisions, the standard of review is the certified LCP).

Major renovations and reconstructions of harbor and marina facilities can raise many Coastal Act issues that should be addressed. Although they are a priority use under the Coastal Act, siting harbor and marina facilities must address all Coastal Act policies, including protecting environmentally sensitive habitat areas and water quality.

An LUP update can ensure that policies governing renovations, upgrades and expansions (or contractions) maximize public access for a broad range of recreation users. This can include policies that ensure availability of a range of boat slip sizes commensurate with the regional distribution of vessel type and size, or land use designations that broaden access to affordable boating opportunities. Non-motorized boating in harbors and marinas is an expanding recreational activity and includes stand-up paddle boarding, rowing and kayaking. Parking and launch facilities for these users should be provided in any LCP update. Also, in considering revisions to the LUP, the needs of commercial fishing activities should be accommodated (Coastal Act Section 30234).

An LUP update can also assess changes in demand for land-based support areas and adjust designations for such uses, with priority for coastal-dependent, coastal-related and visitor-serving facilities. An LUP update can assess a full range of needed facilities, including pathways, benches, overlooks, picnic tables, waterfront parks, restrooms and showers, boat launches or hoists, dry storage, fuel depots, parking, pump-outs or waste oil collection centers, boat rentals, administration buildings, maintenance yards, and boat repair yards. Again, LUP policies must ensure that such development is sited and designed consistent with policies of Chapter 3 of the Coastal Act.

Plans and standards for expansion or redevelopment of marina and harbor areas can often be developed through a special detailed area plan that can be incorporated into LCPs. Some recent examples of Commission action on harbor plans are:

- **Channel Islands Harbor Public Works Plan Amendment No. 1-07**, at: http://documents.coastal.ca.gov/reports/2008/10/Th30c-10-2008.pdf

Topics addressed included: marina and boating improvements, comprehensive planning, low-cost boating, recreational boating and commercial fishing in conjunction with resource protection.

- **Dana Point Harbor LCP Amendment No. 1-08**, at: http://documents.coastal.ca.gov/reports/2009/10/Th22a-10-2009.pdf.

Topics addressed included: reduction of boating slips, development of dry stacked storage, intensified land uses, parking ratios, and private yacht clubs.

- **Coastal Development Permit No. 5-10-263 (City of Long Beach Alamitos Bay Marina Rehabilitation Project),** at: http://documents.coastal.ca.gov/reports/2011/1/Th18b-1-2011.pdf

Topics addressed included: reduction in number of boating slips, development of more dry boat storage, water quality and habitat protection.

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Section 3. Water Quality Protection

The Coastal Act requires the protection and enhancement of marine and coastal water quality. In the last twenty-five years experts have identified nonpoint source (NPS) polluted runoff as the leading cause of water pollution both at the coast and inland. In response, the federal government mandated that states address the issue under both the Clean Water Act (CWA) and the Coastal Zone Management Act (CZMA). In California, the Coastal Commission and the State Water Quality Control Board developed a joint nonpoint source pollution control program that provides a single unified, coordinated statewide approach to dealing with NPS pollution. A total of 28 state agencies are working collaboratively through the Interagency Coordinating Committee to implement the NPS Program Plan.

Review the principal Coastal Act policies concerning Marine Resources and Water Quality at Sections 30230 through 30236. These statutes can be found at: http://www.coastal.ca.gov/coastact.pdf.

Given the widespread nature of nonpoint source pollution, managing land use on a watershed basis is critical. In the coastal zone, certified Local Coastal Programs (LCPs) are a key mechanism for achieving coastal water resource protection. In conjunction with the State's Stormwater and Total Maximum Daily Load (TMDL) Programs, which are administered by the State and Regional Water Quality Control Boards, LCPs provide an important planning and regulatory framework for addressing NPS water quality impacts. LCPs should be updated to include policies, ordinances, and programs that establish Best Management Practices (BMPs) for new development both during construction and for the life of a project. They should also incorporate appropriate aspects of local or regional stormwater permits, statewide nonpoint source pollution policies and TMDL requirements.

What should an updated water quality component include?

NOTE - Because of recent changes in Water Quality requirements, this section is still under construction.

In the meanwhile, this page is serving merely as a placeholder for the Water Quality section.

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Section 4. Environmentally Sensitive Habitats and Other Natural Resources

Environmentally Sensitive Area *is defined in Coastal Act §30107.5 as: any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Review the principal Coastal Act policies concerning Marine Resources and ESHA *in Sections 30107.5, 30121, 30240, 30230, 30231, 30233, at: http://www.coastal.ca.gov/coastact.pdf.*

The Coastal Act sets high standards for the protection of Environmentally Sensitive Habitat Areas (ESHA), including various types of wetlands, riparian areas, coastal prairies, woodlands and forests, and other natural resources in the coastal zone. The Commission has gained significant experience in applying the Coastal Act and LCPs to the protection of such resources. Also, there have been some important changes regarding the protection of ESHAs that stem from new scientific research, such as the identification of new sensitive species, or from court decisions interpreting the requirements of the Coastal Act.

What should an updated Natural Resources component include?

- A definition of *ESHA* that is consistent with the Coastal Act §30107.5;
- A definition of *wetland* that is consistent with Coastal Act §30121 and §13577(b) of the Code of Regulations;
- A statement that the condition of the wetland does not affect its regulatory status as a wetland, as defined in your LCP;
- An ESHA map and descriptions of existing, known sensitive habitat areas;
- A statement that the ESHA maps are not an exhaustive compilation of the habitat areas that meet the ESHA definition;
- Requirements for conducting site-specific biological evaluations and field observations to identify ESHA and other sensitive resources and potential impacts, including cumulative impacts, at the time of proposed development or plan amendment applications;
- Requirements for a historical analysis of disturbed areas adjacent to or within ESHA to determine if these areas were cleared or disturbed pursuant to a valid local or Coastal Commission coastal development permit;
- Requirements for determining and protecting adequate buffers to ESHA based on scientific evaluation;
- Designations and zoning, where practical, over ESHAs that limit uses to resource-dependent ones;
- Allowable uses that may result in the diking, filling or dredging of

wetlands, lakes, and open coastal waters only when consistent with Coastal Act §30233;

- Protective policies carrying out Coastal Act §§30230, 30231, 30233 and 32040;
- Designations and zoning of areas adjacent to ESHAs to ensure uses are compatible with the protection of the resources;
- Policies to ensure compatibility between ESHAs and adjacent land uses;
- Measures to address landscaping and vegetation clearance for fire protection purposes to avoid and minimize impacts to ESHA;
- Protective policies to avoid or minimize the removal of native tree species of special concern;
- Measures to avoid invasive species;
- Mitigation measures for any resource-dependent or other allowed uses in ESHA, including mitigation ratios for unavoidable loss of ESHAs;
- Requirements for protection of ESHA through the use of open space easements or deed restrictions;
- Requirements for ensuring complete and detailed restoration and monitoring plans for projects involving habitat mitigation and restoration;
- Measures to address beach grooming, consistent with protection of sensitive species (e.g., grunion and western snowy plover);
- Tree trimming and removal policies;
- Standards for erecting bird safe buildings;
- Lighting and noise reduction policies;
- Wind energy policies that account for ESHA protection and wildlife movement;
- Provisions addressing climate change and sea level rise effects on ESHA.

Where can I read some examples of updated resource policies?

- **San Luis Obispo County Periodic LCP Review**, at: http://www.coastal.ca.gov/recap/slo/slo-intro.pdf. http://www.coastal.ca.gov/recap/slo/slo-esha.pdf.
- **San Luis Obispo County - Estero Area Plan Update**, at: http://documents.coastal.ca.gov/reports/2008/7/Th16a-7-2008.pdf
- **UC Santa Barbara Long Range Development Plan (LRDP Amendment 1-09),** at:

http://documents.coastal.ca.gov/reports/2006/11/F3a-s-11-2006.pdf

- **City of Malibu Land Use Plan, Chapter 3—Marine and Land Resources,** at: http://qcode.us/codes/malibu-coastal/
- **City of Malibu Local Implementation Plan, Chapters 4—Environmentally Sensitive Habitat Area Overlay and 5—Native Tree Protection Ordinance,** at: http://qcode.us/codes/malibu-coastal/
- **City of Newport Beach Coastal Land Use Plan, Chapter 4: Coastal Resource Protection,** at: http://www.newportbeachca.gov/index.aspx?page=1316

What are some of the issues to address in an updated resources component?

Updating your LCP's resources section is an opportunity to first ensure that adequate definitions and methods are in place to identify all ESHA and then to revise your maps and inventories accordingly. Next, you can ensure that policies and designations remain protective of ESHA, as directed by Coastal Act policies, based on the latest available scientific information and precedential decisions. Protection can also encompass buffering of ESHA, mitigating for the allowed loss of any ESHA and following up on any mitigation or restoration to ensure success. Advances in ESHA protection regarding invasive species, beach grooming, tree trimming, bird safe buildings, night lighting, noise, wind energy and climate change should also be considered in an LCP update.

♦ Definitions of ESHA and Wetlands

Since many LCPs were first certified, there have been problems on appeals and increased litigation stemming from confusing and inconsistent definitions for ESHA and wetlands. To avoid confusion, LCPs should incorporate the basic Coastal Act definition found in §30107.5:

Section 30107.5 Environmentally sensitive area

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

Similarly, you can avoid confusion and ensure consistency with the Coastal Act by using the definitions of wetlands found in §30121 of the Coastal Act and §13577(b) of the California Code of Regulations (CCR).

Section 30121 Wetland

> *"Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and*

include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

CCR §13577(b) (in part)

Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate.

Based on these definitions, wetlands under the Coastal Act may only display one of the wetland parameters typically used to define wetland areas, unlike the U.S. Army Corps of Engineers, which uses a three parameter definition under its federal authorities. In October 2011, the Coastal Commission conducted a workshop on wetland definition and delineation that may be useful in understanding these distinctions:

To watch a video of the presentation provided to the Commission by staff biologist Dr. John Dixon, see:

- **Wetlands Briefing Definition and Delineation of Wetlands in the Coastal Zone** (begins at approximately 0:33:40 and concludes at approximately 1:40:40), at: mms://media.cal-span.org/calspan/Video_Files/CCC/CCC_11-10-05/CCC_11-10-05.wmv

To read a copy of the Background Information Handout to the briefing, see:

- **Definition and Delineation of Wetlands in the Coastal Zone,** at: http://documents.coastal.ca.gov/reports/2011/10/W4-10-2011.pdf

The Coastal Act definition of wetland (§ 30121) does not distinguish between wetlands according to their quality. Thus, under the Coastal Act, poorly functioning or degraded areas that meet the definition of wetlands are subject to wetland protection policies. To ensure consistency with the Coastal Act, therefore, you should consider including in your LCP a statement that the condition of the wetland does not affect its regulatory status as a defined wetland. This principal has been established in the following court case:

- **(2000) Kirkorowicz v. California Coastal Commission, 83 Cal. App. 4th 980)**, at: http://caselaw.findlaw.com/ca-court-of-appeal/1402621.html

Certainty in the application of ESHA policies can also be enhanced by providing more detail and examples of the kinds of habitats that may be defined as ESHA in a particular area. For example:

- **City of Malibu Land Use Plan,** Policy 3.1, at:

http://qcode.us/codes/malibu-coastal/,

3.1 Areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments are Environmentally Sensitive Habitat Areas (ESHAs) and are generally shown on the LUP ESHA Map. The ESHAs in the City of Malibu are riparian areas, streams, native woodlands, native grasslands/savannas, chaparral, coastal sage scrub, dunes, bluffs, and wetlands, unless there is site-specific evidence that establishes that a habitat area is not especially valuable because of its special nature or role in the ecosystem. Regardless of whether streams and wetlands are designated as ESHA, the policies and standards in the LCP applicable to streams and wetlands shall apply. Existing, legally established agricultural uses, confined animal facilities, and fuel modification areas required by the Los Angeles County Fire Department for existing, legal structures do not meet the definition of ESHA.

- **City of Newport Beach Coastal Land Use Plan, Chapter 4: Coastal Resource Protection**, at: http://www.newportbeachca.gov/index.aspx?page=1316

♦ ESHA Identification

Coastal Act Section 30240 states:

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

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

ESHA designations are often based on the presence of rare plants, animals and/or habitats, or on areas that support populations of rare, sensitive, or especially valuable species or habitats. Section 30240(a) of the Coastal Act restricts development within ESHA to only those uses that are dependent on the resource, and requires that ESHA be protected against significant disruption of habitat values. It also requires that areas adjacent to ESHA and parks and recreation areas be sited and designed to prevent degradation of those areas and to be compatible with the continuance of those habitat and recreation areas.

Pursuant to Section 30107.5, in order to determine whether an area constitutes an ESHA, and is therefore subject to the protections of Section 30240, the Commission has asked if either of the following conditions have been met:

1) There are rare species or habitat in the subject area;
2) There are especially valuable species or habitat in the area, which is determined based on:
    a) whether any species or habitat that is present has a special nature, OR

b) whether any species or habitat that is present has a special role in the ecosystem

When the Commission has found that either of these two conditions is met, it has assessed whether the habitat or species meeting these conditions is easily disturbed or degraded by human activities and developments. If they are, the Commission has found the area to be ESHA. It should be noted that even disturbed or degraded habitats may constitute ESHA depending on the level of disturbance.

There are a numerous authoritative resources that can be used to help identify sensitive species and habitats. You should consider using the following resources in order to assess whether an area should be considered ESHA:

- The list of rare, threatened or endangered species prepared under the California or Federal Endangered Species Act,
- The list of "fully protected species" or "species of special concern" by the California Department of Fish and Wildlife (CDFW)
- The list of "1b" species prepared by the California Native Plant Society.
- The CDFW *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database*.

In addition, Commission staff will also consider identifying a species or habitat as rare when there is other compelling evidence of rarity such as consideration for listing as rare, threatened or endangered under the California or Federal Endangered Species Acts and/or evidence of rarity in published academic studies.

Many online tools have become available recently to assist in site specific analysis, including:

- **The California Natural Resources Diversity Database,** at**:** http://www.dfg.ca.gov/bdb/html/cnddb.html and http://www.dfg.ca.gov/bdb/pdfs/natcomlist.pdf,
- **List of State and Federally Threatened and Endangered Animal Species**, at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf
- **List of State and Federally Threatened and Endangered Plant Species**, at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf
- **Inventory of the California Native Plant Society**, at: http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi

For examples of a Resources Component with updated ESHA identification, see:

- **San Luis Obispo County - Estero Area Plan Update,** at:

http://documents.coastal.ca.gov/reports/2008/7/Th16a-7-2008.pdf

For policies regarding identifying riparian corridors, see, for example:

- **Santa Barbara Major LCPA 1-09-A**, at: http://documents.coastal.ca.gov/reports/2010/11/Th6b-s-11-2010.pdf

For identification of coastal dunes, coastal sage scrub, chaparral, and other ESHAs, see, for example:

- **City of Malibu Land Use Plan,** including Policy 3.1 quoted above, at: http://qcode.us/codes/malibu-coastal/,

For identification of wetlands and coastal dunes, see, for example:

- **City of Newport Beach Coastal Land Use Plan, Chapter 4: Coastal Resource Protection,** at: http://www.newportbeachca.gov/index.aspx?page=1316

♦ Use of Resource Maps

In recent years the Commission has identified at least two major concerns related to the use of LCP Resource Maps in coastal regulation. First, many LCPs adopted a decade or more ago may be relying on maps of environmentally sensitive habitat areas (ESHA) that are no longer accurate given new scientific information and changes in the natural environment. As a result, ESHA may not be protected.

Second, some jurisdictions may be relying solely on outdated maps in determining whether ESHA exists on a site, rather than including specific site analysis that considers the current biological conditions on the site. This could potentially result in an incorrect determination of whether a local action on a proposed project is appealable to the Commission and possibly result in litigation.

You should consider updating your LCP to clarify that while maps can serve as an illustrative tool to help identify potential resources, it is the actual presence of ESHA on the site that should dictate whether ESHA policies apply to a site. Your LCP update should ensure that ESHA and wetland determinations are based on actual site-specific conditions, not just existing maps, such as through biological surveys at the time of proposed development or plan amendments, and that any area that actually meets the definitions of either must be given all the protections provided in your LCP, regardless of its prior presence or absence on a resource map. You can better implement such a policy if your LCP policies and filing requirements ensure that a thorough site-specific assessment of habitat and resources is undertaken, if necessary, as part of the development review process in order to identify any such resources.

For policies regarding use of resource maps, see, for example:

- **Santa Barbara Major LCPA 1-09-A,** at: http://documents.coastal.ca.gov/reports/2010/11/Th6b-s-11-2010.pdf

♦ Cumulative Impacts

Section 30250 of the Coastal Act requires the analysis of cumulative impacts. It states, in part:
New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources...

In addition, Coastal Act section 30105.5 defines "Cumulatively; cumulative effect" as:

> *"Cumulatively" or "cumulative effect" means the incremental effects of an individual project shall be reviewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.*

In the Commission staff's experience, biological reports completed for development projects often do not adequately consider cumulative impacts. Depending on the scale of a particular project, its location, and the natural resources involved (level of sensitivity and rarity), a cumulative impact analysis may be important and necessary. You should consider updating your LCP to include an explicit requirement that an applicant conduct a cumulative impact analysis as part of the application process, if circumstances warrant such an analysis. (Note that Section 30250 requires cumulative impact analysis generally, not just for ESHA, and LCPs should address all cumulative impacts through planning.)

♦ Avoidance of Impacts to ESHA

The California Coastal Act requires that only development dependent on the resource be allowed in ESHA. The Commission has found that such things as hiking and educational trails, low impact camping, educational signage and kiosks, research, and restoration qualify as resource dependent development. It is important for LCP land use designations to reflect the requirements of Section 30240, and you should consider listing the types of limited uses that may be allowed in ESHA.

The court's decision in the Bolsa Chica Land Trust case, noted below, confirmed that the Coastal Act requires that ESHA be avoided and buffered from development impacts and that providing mitigation for impacts is not a sufficient justification for allowing development where the impacts to ESHA are avoidable:

- **Bolsa Chica Land Trust v. Superior Court** 71 Cal. App.4th 493, 507, at: http://scholar.google.com/scholar_case?case=17104884799653855840&q=Bolsa+Chica+Land+Trust+v.+Superior+Court&hl=en&as_sdt=2,5&as_vis=1

You should consider amending your LCP to clearly state that only "resource dependent" development is allowed in ESHA, consistent with Coastal Act §30240.

♦ Buffers

You should consider updating your LCP to establish setbacks or buffers between development and wetlands or ESHA in order to protect natural ecosystem functions of the respective habitat and organisms supported by the habitat. Buffers serve as transitional habitat and provide distance and physical barriers from human degradation and disturbance. Coastal Act section 30231 specifically references riparian buffers as a means to protect these areas.

Thus, updating the LCP is an opportunity to establish or revise required buffer dimensions to be more in line with the scientific literature and to be more specifically tailored to individual ESHAs. For example, in 1988, the Habitat Management Division of the Washington State Department of Wildlife recommended minimum buffers of 61m (200 feet) for forested wetlands and 91m (300 feet) for non-forested wetlands, such as salt marshes, based on the essential needs of fish and wildlife. Similarly, a number of studies examining the effectiveness of riparian buffers have determined that 30-60m (97.5-195 feet) wide riparian buffer strips will effectively protect water resources through physical and chemical filtration processes (Lee & Samuel 1976; Phillips 1989; Davies & Nelson 1994; Brosofske *et al.* 1997, Wenger & Fowler 2000). Regarding raptors, Richardson and Miller (1997) recommend buffer zones for 11 species (osprey, Cooper's hawk, northern goshawk, sharp-shinned hawk, golden eagle, red-tailed hawk, ferruginous hawk, bald eagle, prairie falcon, peregrine falcon, and American kestrel) ranging from 50 to 1600m (164 to 5250 feet).

Some LCPs already have incorporated such tailored buffer provisions. For example Sonoma County requires a 600-foot buffer for heron rookeries and the City of Carpinteria requires a 300-foot buffer for trees supporting nesting raptors. The City of San Diego requires buffers of: 300 feet from any nesting site of Cooper's hawks, 1,500 feet from known locations of the southern pond turtle, 900 feet from any nesting sites of northern harriers, 4,000 feet from any nesting sites of golden eagles, and 300 feet from any occupied burrow of burrowing owls.

Under circumstances in which it was not feasible to establish buffers as wide as those recommended in the scientific literature or where the literature is lacking in guidance for certain EHSAs, the Commission has required minimum 100-foot buffers. To ensure protection of ESHA, if such a standardized minimum buffer distance is included in your LCP, you should consider complementing it with a provision to require greater buffers on a case by case basis based on specific project reviews.

In more urbanized areas, lesser buffer distances may be warranted, as in this example:

- **Santa Cruz City-Wide Creeks and Wetlands Management Plan**, at: http://www.cityofsantacruz.com/index.aspx?page=371

Buffer width reductions may not be appropriate in areas where natural vegetation has previously been removed, but could return or be re-established. For example:

- **Santa Barbara County Coastal Zoning Ordinance**, at: http://www.sbcountyplanning.org/PDF/A/Article%20II.pdf

  Sec. 35-97.19 Development Standards for Stream Habitats…Riparian vegetation shall be protected and shall be included in the buffer. Where riparian vegetation has previously been removed, except in association with channelization, the buffer shall allow for the re-establishment of riparian vegetation to its prior extent to the greatest degree possible.

♦ Mitigation Ratios

You should consider updating your LCP to include mitigation ratio policies to direct mitigation and restoration when ESHA is unavoidably impacted. Established mitigation ratios for habitat restoration or replacement are important because: 1) in most cases there is a time gap with a loss of ecosystem function between the direct, indirect, or cumulative impacts to, or removal of, the respective habitat, 2) the artificial creation or restoration of habitats can never completely compensate for impacts, and 3) there is no guarantee that habitat creation or restoration will be entirely or even partially successful. A recent study on wetland restoration and creation showed that most of the projects it examined have not entirely compensated for loss of ecosystem functions (Ambrose *et al*. 2007). Because of the potential for less than 100% success in restoring a given area, it is important to consider LCP policies that incorporate mitigation ratios into their natural resource policies and standards. The Commission has in the past used the following mitigation ratios:

- 10:1 for native tree replacement (e.g. oaks, walnut, sycamore)
- 4:1 for wetlands
- 3:1 for riparian habitats
- 3:1 for other habitats that support state or federal rare, threatened, or endangered species, species of special concern or CNPS 1b or 2 listed plants
- 2:1 for coastal sage scrub not occupied by listed species.

♦ Restoration and Monitoring Requirements

Consider updating your LCP to include specific provisions to require a complete and detailed Restoration and Monitoring Plan for any proposed or required habitat creation or restoration. Because submittal of conceptual plans can cause review delays, you could consider adding a policy that updates your CDP filing requirements to require that applications involving habitat restoration or mitigation be deemed incomplete (or unfiled) until submittal of such a plan. Nearly all significant restoration projects will require preliminary field sampling and the results of this sampling could be included in the habitat creation or restoration and monitoring plan.

An updated LCP could include policies that require the following types of information in a restoration and monitoring plan:

- Stand-alone documents that describe actual methods and practices to be employed, including performance/success criteria and adaptive management and monitoring requirements;
- Complete information regarding restoration and monitoring, rather than just marginal notes on large format engineering or landscaping plans, simple tables and bulleted lists, or mere references to information in other planning documents or to literature on field or statistical methods;
- Plans that are sufficiently detailed that they could be implemented by a technical specialist who has not been involved in the project; and
- Plans that are written in such a way that an educated layperson could understand and evaluate the plan.

♦ Avoidance of Invasive, Non-Native Species And Requirements for Landscaping Plans

Invasive, non-native species, also called invasive exotics, are non-native plants and animals that have been somehow (often accidentally) introduced into an area, survive well in their new environment, and are problematic for a variety of reasons. Not all non-native species cause problems – only about 15% of non-native introductions are invasive. However, there is growing concern about non-native invasive species because of the serious economic and ecosystem consequences associated with their introduction. Invasive species can have myriad impacts upon native communities; they may: outcompete and displace native species, thereby changing the character of entire ecosystems; impede waterways; increase water loss in aquatic habitats through increased transpiration; increase fire hazard; change community structure in detrimental ways for native species; and modify habitats favoring other introduced species.

You should consider updating your LCP to include policies addressing invasive species, such as a prohibition on the use of non-native invasive plants in any landscaping plans, particularly in locations in or adjacent to sensitive

areas. The identification of such plants could be tied to authoritative lists, such as the one produced by the California Invasive Plant Council:

- **California Invasive Plant Inventory,** at: http://www.cal-ipc.org/ip/inventory/index.php

In addition to requiring that landscaping plans avoid the use of non-native invasive plant species, LCP policies could include, where appropriate, requirements that landscape plans are:

- Professionally prepared,
- Permanently implemented through bonding or deed restrictions,
- Designed to require the use of only non-invasive plants,
- Designed to ensure removal of non-native, invasive plants from the site,
- Designed to prohibit or minimize the use of rodenticides, herbicides and pesticides in areas adjacent to or within ESHA, and
- Designed to include minimum requirements for fire department required vegetation clearance through a brush management or fuel modification plan in areas adjacent to or within ESHA.

You could also consider regionally appropriate policies to promote additional methods of eradicating non-native invasive plants by the most environmentally benign methods available.

While the marine environment is within the Commission's jurisdiction, LCP policies for land based accessory development or activities can help ensure that boats, barges and other equipment towed or transported to a site for dredging or other in-water work will avoid or minimize introducing non-native invasive species into nearshore and coastal waterways.

♦ Beach Grooming: Beach Wrack, Snowy Plover, Least Tern and Grunion Adverse Impacts

Recent research has reinforced the importance of protecting "*beach wrack"* as part of the marine ecosystem. *"Beach wrack"* refers to the mounds of seaweed and other loose organic material that is brought ashore and accumulates by the natural processes of tides and waves. While these mounds may appear to beach visitors as unsightly debris, research has found that wrack is an important nutrient source for the beach ecosystem, in that it provides micro-habitat for a variety of organisms, supports the prey of many marine and terrestrial invertebrates and shorebirds, and contributes to the establishment of coastal strand and incipient dune habitat. Regular grooming of sandy beaches can destroy the wrack and degrade the near shore habitat. Research has shown that groomed beaches have lower invertebrate species richness, abundance and biomass and supports fewer birds in absolute numbers and species diversity

(Dugan *et al.* 2010, Dugan *et al.* 2003). And grooming strips beaches of native plants and incipient dunes, making beaches more vulnerable to erosion.

Beach grooming can negatively impact sensitive shorebird species, such as the western snowy plover and the California least tern, that forage and nest on the open beach. The western snow plover (*Charadrius alexandrinus nivosus*) was listed as a federally threatened species under the Federal Endangered Species Act in 1993, due to habitat loss and disturbance throughout its coastal breeding range which stretches from Washington to Baja California, Mexico. The western snowy plover establishes nests (simple scrapes in the sand) just above the wrack line in the upper beach and coastal strand zone. These nests are very exposed and vulnerable to disturbance and predation. The California least tern (*Sterna antillarum brownii*) was listed as an endangered species in 1972, with a population of less than 600 breeding pairs. The California least tern breeds on exposed tidal flats, beaches and bays of the Pacific Ocean within a very limited range of southern California, in San Francisco Bay, and in the extreme northwest of Mexico. Since listing, aggressive management efforts have helped the least tern population grow to about 4,500 breeding pairs, but it is still listed and remains vulnerable to predators, natural disasters and further human disturbance.

The Commission has identified plovers and terns and their nesting and foraging habitat as ESHA protected them under Section 30240 of the Coastal Act. Many of the beaches along the California coast include critical habitat areas for the western snowy plover; at least 90% of the breeding population on the Pacific coast, which remains under 3,000 in number, is found on California beaches, and the central coast from San Luis Obispo through Ventura County contains nearly 45% of the plover population. Plovers make their nests on sandy beaches using anything they can find, including driftwood, shells, kelp and other vegetative debris found in beach wrack. Least terns usually nest on barren or sparsely vegetated sand or gravel areas, and may even make use of very shallow artificial indentations, such as a footprint. Beach grooming not only removes potential plover and tern nest material, but can also flatten the subtle topographic depressions that these birds use to nest in.

Beach grooming can also negatively impact California grunion (*Leuretheses tenuis*), which are a species of fish with a very unique mating ritual. Grunion come ashore in the spring and summer to reproduce during particularly high night-time tides. Female grunion come up on the beach first, and dig their tails into the sand to lay their eggs. Next, male grunions come ashore and wrap themselves around females to deposit their sperm and fertilize the eggs. For the next ten days or so grunion eggs remain buried in the sand until the next high tide when the eggs hatch and young grunion are washed out to sea. If beach grooming occurs while grunion eggs are buried, all the eggs may be destroyed. In order to protect buried grunion eggs, the Beach Ecology Coalition has developed beach grooming protocols that prevent negative impacts to grunion (see link below).

In order to avoid adverse beach ecosystem impacts detailed above, cities and counties that have historically conducted beach grooming activities may consider reviewing their beach maintenance practices to determine if grooming could be curtailed entirely, or conducted in a more ecologically sound manner. With the growing understanding of the importance of beach wrack to healthy beach ecosystems and the sensitivity of beach habitats and organisms, you could consider LCP policies that would prohibit beach grooming. Alternatively, you could consider policies that encourage alternative beach grooming strategies, such as hand grooming, seasonal grooming, zonal grooming (e.g., leaving wrack on some beaches year-round), rotational grooming (alternating grooming to allow beach ecology to "recover"), and threshold grooming (grooming only when the amount of wrack surpasses a specific volume).

You could consider updating your LCP to include policies and management measures for beach maintenance that strike the appropriate balance between protection of sensitive beach resources and maintaining the recreational values of sandy beaches. An update of your LCP could provide explicit guidance for protecting threatened and endangered wildlife species and their habitats. The US Fish and Wildlife Service website can provide good background information on western snowy plovers and California least terns, and the federal register can provide maps showing critical habitat areas for both species. The 2007 USFWS Recovery Plan for the western snowy plover, and USFWS Revised Recovery Plan for the California least tern, approved in 1985, both include objectives and measures that can be taken for protecting and managing existing populations, in order to aid in the recovery of these threatened and endangered species. (See links provided below.)

Where applicable, LCPs could also include policies and management procedures that protect grunion by restricting sand-disturbing activities when grunion are present. You could consider policies that limit beach grooming and other disruptive activities to areas above the semi lunar high tide mark.

For more information on the effects of beach grooming, see for example:

- **Ecological Impacts of beach Grooming on Exposed Sandy Beaches;** by Dr. Jenifer Dugan, University of California, Santa Barbara; at: http://www-csgc.ucsd.edu/RESEARCH/PROJPROF_PDF/RCZ174.pdf
- **Beachepedia article on beach grooming** at: **http://www.beachapedia.org/Beach_Grooming**
- **A Feast Interrupted; Beach Grooming Takes Away Shorebirds Dinner**; by Hal Hughes; in Coast & Ocean Vol. 19, no. 4, Winter 2003/2004, (pg. 12) at: http://www.coastal.ca.gov/la/lcpguide/A%20Feast%20Interrupted-Hughes-Coast%20and%20Ocean-Winter%202003%202004-v19-no4.pdf

for a complete edition of Coast and Ocean,Vol. 19, go to: http://scc.ca.gov/webmaster/coast_ocean_archives/1904.pdf

For more information concerning beach wrack see:

- **Kelp Wrack: Hopping with Life in Ventura County**; by Jenifer Dugan, Sea Grant Publication, at: http://nsgl.gso.uri.edu/casg/casgg11020.pdf
- **Population Dynamics and Ecology of Beach Wrack Macro-invertebrates of the Central California Coast** by D. Lavoie, Southern California Academy of Sciences Bulletin, BCAS-A84(1), April 1985, at: http://cluster.biodiversitylibrary.org/b/bulletin8401sout/bulletin8401sout.pdf#page=3
- **The Response of Macrofauna Communities and Shorebirds to Macrophyte Wrack Subsidies on Exposed Sandy Beaches of Southern California.** J.E. Dugan, et al., Estuarine, Coastal and Shelf Science 58S (2003) pgs 25–40. at: https://www.bren.ucsb.edu/academics/courses/254/Readings/Dugan_et_al_2003.pdf

You can find more information on western snowy plover, California least tern, and grunion at:

- **Western Snowy Plover - Audubon online species page**, at: http://ca.audubon.org/birds/snowy_plover.php
- **Western Snowy Plover – USFWS official species profile page**, at: http://www.fws.gov/arcata/es/birds/WSP/plover.html
- **Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover; Final Rule; 50 CFR Part 17)**; for maps showing critical habitat areas, at: http://www.fws.gov/arcata/es/birds/WSP/documents/2005Sept29_designationCriticalHabitat.pdf
- **Western Snowy Plover - Sharing the Beach**, California State Parks brochure, at: http://www.westernsnowyplover.org/pdfs/state_parks_sharing_beach_brochure.pdf
- **Rules and Guidelines for protecting western snowy plovers**; California State Parks brochure, at: http://www.parks.ca.gov/pages/735/files/flyerploverhr.pdf
- **California least tern – USFWS official species profile page**, at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B03X

- **California least tern – USFWS 5-year Review - Summary & Evaluation**, at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B03X
- **USFWS Revised California least tern Recover Plan**, at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B03X
- **California least tern – California Department of Pesticide Regulations**, at: http://www.cdpr.ca.gov/docs/endspec/espdfs/clt_bio.pdf
- **California Grunion Facts and Runs**, by California Department of Fish and Game, at: http://www.dfg.ca.gov/marine/grunionschedule.asp
- **Grunion.org website** (where you can also watch a National Geographic video on grunion), at: http://grunion.pepperdine.edu/.

To read Coastal Commission discussion of these issues, check out the following adopted staff reports:

- **City of Solana Beach LCP Land Use Plan**, at: http://documents.coastal.ca.gov/reports/2012/3/W12e-3-2012.pdf
- **Beach and Sediment Management Program for the Santa Barbara Harbor and Waterfront Area**, at: http://documents.coastal.ca.gov/reports/2006/4/Th12c-4-2006.pdf
- **City of Santa Cruz Beach Management Plan**, at: http://documents.coastal.ca.gov/reports/2011/6/Th10c-6-2011.pdf
- **City of Newport Beach Coastal Land Use Plan,** Chapter 4: Coastal Resource Protection**,** at: http://www.newportbeachca.gov/index.aspx?page=1316

♦ Tree Trimming and Removal

Many cities and counties are obligated to trim trees for regular tree maintenance, safety of the public, and protection of property. There may also be public view issues related to maintaining vegetation, including trees, in a manner that protects public views, especially from Highway One. To address these situations while also considering protection of habitat, you could consider updating your LCP to include tree trimming policies that ensure the protection of bird nesting habitat protected by the Migratory Bird Treaty Act and the long-term protection of breeding, roosting, and nesting habitat of state and federally listed bird species, California bird species of special concern, and bird species that play an especially valuable role in the ecosystem. A number of jurisdictions, including the cities of Long Beach and Dana Point, have adopted policies that address tree trimming and removal, both outside of and

during bird breeding season, for any tree that has been used for breeding and nesting within the past five years.

You could also consider LCP policies that address any tree removal that is not part of a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973. Generally this would include timber harvests of less than three acres, of non-commercial species, or for non-commercial use, as well as other tree removal (down to the single tree) done for non-harvesting purposes. (For tree removal associated with timber harvests more than three acres, see Section 11. Timberlands). LCPs should already have policies addressing other Coastal Act topics that would apply to tree cutting, such as environmentally sensitive habitat or scenic view protection. But, given existing or proposed development, there may be a need for provisions that specifically address tree removal. Some habitat related issues that have come to the Coastal Commission's attention in recent years include the following:

- Removal of trees that had provided vegetative screening of development in scenic viewsheds;
- Cutting and disposal methods of diseased trees;
- Trimming, thinning, or pruning that while not completely removing a tree renders it unsuitable for habitat or more prone to dying;
- Removal of non-native trees that nevertheless serve as habitat;
- Unauthorized tree removal undertaken due to a perceived hazard.

For tree trimming and tree removal policies approved by the Commission, see for example:

- **Channel Islands Harbor Public Works Plan 1-07** with addenda with suggested modification regarding bird surveys required for tree trimming activities (see pg 4, no 8, regarding Policy 11), at: http://documents.coastal.ca.gov/reports/2008/2/F5a-2-2008.pdf
- **Channel Islands Harbor Notice of Impending Development (NOID) 1-09,** for 5-yr tree trimming program, at: http://documents.coastal.ca.gov/reports/2009/6/W17a-6-2009.pdf
- **Coastal Development Permit #5-08-187 (City of Long Beach)** to conduct annual and emergency tree trimming activities consistent with the City of Long Beach tree trimming and tree removal policy, at: http://documents.coastal.ca.gov/reports/2009/2/W23b-2-2009.pdf
- **Dana Point Harbor Major LCP Amendment 1-08,** pages 54-56, for tree trimming, at: http://documents.coastal.ca.gov/reports/2009/10/Th22a-10-2009.pdf
- **City of Dana Point Major LCP Amendment DPT-MAJ-1-10 (Dana Point Harbor Revitalization IP)**, at: http://documents.coastal.ca.gov/reports/2011/4/W11a-4-2011.pdf

- **Marina del Rey – Major LCP Amendment 01-11** --bird nesting and tree trimming issues, at: http://documents.coastal.ca.gov/reports/2011/11/Th11a-11-2011.pdf and http://documents.coastal.ca.gov/reports/2011/11/Th11b-11-2011.pdf

♦ Bird-Safe Buildings

Since most development is concentrated along rivers, woodlands, coasts, and wetlands that birds depend on for food and shelter, urban sprawl and intensified urbanization have eliminated and/or degraded bird habitat in many places around the globe. Loss of habitat squeezes birds into urbanized areas where they encounter man-made structures. Modern urban buildings that have clear glass or reflect light during the day and are lit at night, as well as suburban and rural buildings with large windows and reflective surfaces, can present serious hazards for birds. Bird populations, which have declined from loss of habitat, are seriously threatened by the growing presence of man-made structures within their transit and migratory flight space.

Over three decades of research has documented that buildings and windows are the top killer of birds in North America. In the United States, an estimated 100 million to one billion birds perish each year from fatal encounters with buildings. This level of bird mortality is believed to be significant enough to impact the viability of bird populations, leading to local, regional, and national declines.

A number of factors contribute to a building being a hazard for birds. When updating your LCP, you could consider adding policies that would require an assessment of the following factors when determining whether to require bird safe building practices: 1) location of the building in relation to recognized migration corridors or flyways; 2) proximity of the building to open terrestrial and aquatic foraging areas – parks, forests, rivers, streams, wetlands and ocean; 3) proximity of the building to documented stopover or roosting locations; and 4) regions prone to haze, fog, mist, or low-lying clouds. Researchers have found that a combination of building characteristics, coined, "bird-hazards," present the greatest threat to birds. These characteristics include buildings located within or immediately adjacent to open spaces with lush landscaping and with a façade of more than thirty-five percent (35%) glazing; buildings located adjacent to or near wetlands or open water and with a facade of more than thirty-five percent (35%) glazing; and buildings with 'bird traps' such as glass courtyards, transparent building corners, and glass balconies.

It is possible to design buildings so they are less hazardous to birds by implementing bird-safe building practices. Bird-safe building practices include features such as specific treatments and design considerations for windows and glazed surfaces, lighting, and landscaping.

You should consider adding policies to your LCP that would require bird safe building design, such as those listed below:

- All new buildings, and major renovations of existing buildings, shall be required to provide bird-safe building facade treatments in order to reduce potential for bird strikes.
- Landscaped areas next to buildings, including patios and interior courtyards, shall be designed and sited to avoid or minimize bird-strike hazards caused by reflective building surfaces.
- Buildings shall be designed to use minimal external lighting (limited to pedestrian safety needs) and to minimize direct upward light, spill light, glare and artificial night sky glow. Buildings shall also be designed to minimize light pollution from interior lighting to the maximum feasible extent.

For policies regarding bird safe buildings, see, for example:

- **City of Long Beach, Major LCP Amendment LOB-MAJ-1-10,** see suggested modifications on pages 6-7, at: http://documents.coastal.ca.gov/reports/2011/6/Th18a-6-2011.pdf

♦ Night Lighting

Over a century of scientific studies and observations have established that artificial night lighting attracts night foraging seabirds and night migrating songbirds and disrupts their normal breeding, foraging and/or migratory activities. Both seabirds and migratory songbirds have been observed to continually circle lights, falling prey to "light entrapment," whereby they remain trapped within the zone of illumination and are unable or unwilling to return to the darkness until overcome with exhaustion or the lights are hidden by the dawn. Birds have also been observed to become disoriented in the presence of bright lighting at night, suffering injury or death after colliding with lights or nearby structures or becoming stranded on lighted platforms where they can become vulnerable to injury, oiling or other feather contamination, exhaustion, and depredation by avian predators that may also be attracted to illuminated areas due to presence of prey species.

Recent studies suggest that the long visible wavelengths (light in the red spectrum) transmitted by red and white colored light as well as many broad spectrum florescent, high pressure sodium and metal halide lights may be particularly problematic because these wavelengths may disrupt the navigational and directional senses of some birds and that these effects may be compounded during periods of fog or low cloud cover.

Artificial lighting of marine waters may also have adverse impacts on marine organisms other than birds. Some forage fishes and plankton species may be attracted to the artificially lit waters, making them more vulnerable to predation. Predators such as marine birds, marine mammals and large predatory fishes have been known to use the illumination of lights to feed on fishes and plankton.

In addition to attracting predators, artificial light may interfere with diurnal vertical migration by zooplankton and some species of fish. Diurnal vertical migration by zooplankton to deep, poorly illuminated habitats during the day is thought to reduce the probability of attack by visual predators. Zooplankton and some pelagic fishes come up into the phytoplankton-rich surface waters to feed when it is dark and they cannot be seen by visual predators. The migration responds to changes in light intensity and water column temperature structure and may be influenced by artificial night lighting.

Where applicable, you should consider updating your LCP to include policies that require that the full range of potential effects associated with night lighting in coastal/marine areas is evaluated as part of development review and provide measures to avoid and/or minimize these effects.

Policies to avoid adverse impacts may include:

- Encouraging the use of directional and/or shielded lighting in place of upward facing lighting or spot lights;
- Avoiding the use of lighting directed over marine waters;
- Encouraging the use of shorter wavelength or "bird-friendly" lighting; and
- Avoiding the use of steady burning red or white lights in visually prominent areas.

Examples of policies and zoning include:

- **City of Malibu Land Use Plan**, see policies 3.42, 3.56, 6.18, and 6.23, at: http://qcode.us/codes/malibu-coastal/
- **City of Malibu Local Implementation Plan,** see section 4.6.2, at: http://qcode.us/codes/malibu-coastal/
- **City of Long Beach, Major LCP Amendment LOB-MAJ-1-10,** page 7 includes suggested modifications for lighting design and night time lighting that would avoid adverse impacts to migratory birds, at: http://documents.coastal.ca.gov/reports/2011/6/Th18a-6-2011.pdf
- **City of Malibu LCP Amendment MAJ-1-11 Part A**, which limited football field lighting, and conditions require monitoring of possible impacts during migration, at: http://documents.coastal.ca.gov/reports/2011/10/W13a-10-2011.pdf
- **International Dark Skies Associations' Model Lighting Ordinance,** at: http://www.darksky.org/outdoorlighting/mlo is a resource for specific and protective lighting standards.

Surface Noise

The effect of construction noise on animals is not well understood; however significant noise levels may affect animals in a number of ways. Most research has focused on the effects of highway and construction noise upon birds. This research has found that continuous noise above the ambient environment or single or multiple impulse noise above 100 dB may produce changes in foraging and reproductive behavior; may mask signals birds use to communicate; may mask biological signals impairing detection of sounds of predators and/or prey; may decrease hearing sensitivity temporarily or permanently; and/or may increase stress and alter reproductive and other hormone levels. There may even be more substantial and enduring impacts that potentially include interference with breeding by individuals and populations, thereby threatening the survival of individuals or species.

Much of the information regarding impacts of noise on birds has been extrapolated from studies involving the influence of noise on humans. Studies on humans have demonstrated that 60 decibels (dB) is a volume above which humans display avoidance behavior, aggravation, irritability, and distraction (USEPA Noise Effects Handbook, 1981). This same value (60 dB) is a widely used threshold for projects involving heavy equipment in areas supporting sensitive bird species. This threshold criterion is presented by many agencies and consultants as the noise threshold above which birds may be adversely impacted.

You should consider updating your LCP to include policies addressing noise impacts in an effort to minimize those impacts to sensitive birds and other animal species. Examples of such policies include:

- Requiring that construction projects that involve noisy equipment in close proximity to habitats that support sensitive birds or other sensitive animals follow noise impact precautions.
- Require the preparation of ambient noise reports for particular locations.
- Employ biologists qualified to monitor noise levels during construction.

While the 60 dB decibel range is widely accepted and employed for projects involving potential noise impacts upon birds, its use is without well founded scientific justification. And while this criterion can be valuable as a starting point, you should consider analyzing ambient environment noise levels when assessing the decibel thresholds as they are applied to projects on a case by case basis. Rural areas will have much lower exposure to significant ambient noise compared to urban areas.

For policies regarding surface noise, see, for example:

- **Channel Islands Harbor Public Works Plan (PWP)**, Pgs 14-15, Modifications #21 and 22 which deal with surface noise issues, at: http://documents.coastal.ca.gov/reports/2008/10/Th30c-10-2008.pdf

♦ Wind Energy

As noted in the September 2011, *U.S. Fish and Wildlife Service (USFWS) Draft Land-Based Wind Energy Guidelines*, "wind energy facilities can have negative effects on fish, wildlife, and their habitats." Scientific research also suggests that certain types of meteorological research structures erected to gather data on wind speeds and directions may also have adverse impacts on wildlife and habitat resources. However, with proper diligence paid to siting, operations, and management of wind energy projects, it is possible to mitigate for some of the adverse effects to fish, wildlife, and their habitats. The USFWS Guidelines note that "this is best accomplished through early coordination with the Service and other stakeholders. Such coordination should occur prior to any financial obligation or finalization of lease agreements to allow for the greatest range of development and mitigation options."

In addition to siting, the number, design, and size of wind energy conversion systems (WECS) also can have a substantial influence on their potential to result in adverse impacts. For example, the September 2011 USFWS *Draft Land-Based Wind Energy Guidelines* provides an evaluation of potential impacts associated with WECS and recommends potential mitigation measures, including a four-tiered process to be taken for new projects including screening of potential sites, site characterization, pre-construction biological monitoring and assessment, and post-construction fatality monitoring and impact evaluation. See:

- **U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines**, at: http://www.fws.gov/windenergy/docs/WEG_September_13_2011.pdf

When updating your LCP, you should consider policies that require identification of potential impacts of land based wind energy systems and recommendations for conditioning such projects to avoid, minimize, or mitigate for such impacts. One good source for identifying methods for minimizing impacts and for mitigating unavoidable impacts to birds is the USFWS guidelines. This subject is also discussed in the LUP Guide Section 10 on Energy and Industrial Development.

Local governments should also consider adopting wind turbine-specific policies that require: (a) incorporation of well-established "best practices" for minimizing impacts to wildlife; (b) include a basic monitoring condition (i.e., requiring the applicant to monitor and record any carcasses or injured animals; and (c) include a condition requiring the applicant to shut-down and remove the turbine if impacts exceed a particular threshold.

Section 10 of this LUP Update Guide on Energy and Industrial Development provides examples of Commission actions that discuss how to consider impacts of WECS and development. In addition, see:

- **California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Developments**, at: http://www.energy.ca.gov/windguidelines/index.html

♦ Climate Change and Sea Level Change

Coastal habitats face increased vulnerability from many aspects of climate change, such as changing weather patterns, temperature, precipitation, and sea level. Vulnerable coastal ecosystems include beaches, wetlands, riparian areas, coastal sage scrub, chaparral, grasslands, and woodlands.

The *2009 California Climate Adaptation Strategy* found that average temperatures throughout the state could increase 1.8 to 5.4°F by 2050 and 3.6 to 9°F by 2100, with temperature increases expected to be more pronounced during the summer months. The report is:

- **2009 California Climate Adaptation Strategy,** at: http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

In addition, 11 of the 12 climate models used to project changing climate conditions in California projected a significant decrease in precipitation from the 1961 – 1990 baseline condition, with more precipitation falling as rain instead of snow. These increases in temperature and possible decreases in precipitation will greatly alter the locations where native coastal species can thrive and grow.

In addition to changes to temperature and rainfall, increases in sea level will alter the physical characteristics of the habitat – inundating beaches, converting dry beach to intertidal or subtidal areas, and relocating the intertidal zone of wetlands to a more inland or upland location. And, the species that depend upon these habitat areas will either be lost or relocate with the habitat. Finally, ocean acidification will change the chemistry of the nearshore and offshore waters, stressing species that use calcium for shells or skeletal growth. Such changes will impact coastal habitats in myriad ways; a primary concern is that many coastal habitat species, permanently attached organisms (plants and some animals), and animals with small home ranges may not be capable of adapting as quickly as the climate is projected to change.

Other climate change concerns with regards to sensitive coastal habitats include: 1) increased erosion of habitats due to sea level rise, 2) loss of wetland habitat due to sea level rise, 3) increased competition from non-native species as native species become more vulnerable, 4) increased fires and 5) loss and fragmentation of migration corridors. Coastal organisms occupying habitats at the edges of their ranges and that are subject to situations such as those listed

above will be particularly vulnerable to extinction if they are not able to adapt to these changes.

The 2009 California Climate Adaptation Strategy identifies several potential impacts of sea level rise on biodiversity and habitat, along with habitat adaptation strategies that can be used to minimize and manage possible future impacts.

Suggested LCP guidance for addressing Sea Level Rise is being developed and when available it will be linked here.

For more information on climate change and sea level rise, check out:

- **2009 California Climate Adaptation Strategy**, at: http://www.climatechange.ca.gov/adaptation/

Especially useful for protecting sensitive coastal resources may be the sections:

- Biodiversity / Habitat
- Oceans / Coasts, and
- Water

Other informative websites include:

- **Third California Climate Change Assessment Reports**, at: http://climatechange.ca.gov/climate_action_team/reports/third_assessment/index.html
- **CalAdapt Website**, at: http://cal-adapt.org/
- **Ecosystem Based Management Tools Network Database**, at: http://www.ebmtoolsdatabase.org/resource/climate-change-vulnerability-assessment-and-adaptation-tools
- **Climate Ready Estuaries Coastal Toolkit**, at: http://www.epa.gov/climatereadyestuaries/

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LCP Update Guide

Section 5. Agricultural Resources

Review the principal Coastal Act policies concerning Agriculture in Sections 30113 30241, 30242, 30243, 30250 and 30222, at: http://www.coastal.ca.gov/coastact.pdf

The Coastal Act requires the protection of agricultural lands within the coastal zone. It does so by directly mandating that the maximum amount of prime agricultural land be maintained in production, and by supporting various techniques to limit threats to agricultural productivity. These include establishing stable urban-rural boundaries, agricultural buffers, development priority on lands not suitable for agriculture, subdivision restrictions and public service expansion controls.

Nine out of ten surveyed coastal counties have less agricultural land now than existed about 25 years ago, according to the California Department of Conservation:

- **Important Farmland Data Availability,** at: http://redirect.conservation.ca.gov/dlrp/fmmp/product_page.asp

Although this data does not distinguish land in the coastal zone, it does suggest that protection of agricultural land remains a significant issue. LCP updates should consider changed land uses, cropping patterns and the status of Williamson Act contracts to assess the status of agricultural lands. Even if your LCP already has strict agricultural zoning, a review of development that has occurred in or adjacent to agricultural areas may reveal potential threats to agricultural production that should be addressed. This includes ensuring that your jurisdiction is supporting and employing a range of techniques to ensure permanent protection of agricultural lands.

What should an updated Agricultural component include?

- Description of an area's agricultural economy and parameters to ensure its continued existence;
- Definitions of prime agricultural and non-prime agricultural land (see blue boxes on next page);
- Inventory and map of all prime and non-prime agricultural land within the coastal zone;
- Designation of stable boundaries that separate urban and rural areas;
- Land use designations and zoning districts that describe and map agricultural uses on agricultural land, and limit allowable uses to only those that are agricultural or that support agriculture;
- Standards for siting and designing any allowable structures to maximize

agricultural production and to prevent interference with agricultural operations;

- Minimum parcel sizes for economically viable agricultural uses and restrictions on divisions of land and lot line adjustments that would undermine agriculture;
- Mitigation measures for unavoidable loss of agricultural land, such as requirements for enhancing or restoring other land for agricultural uses;
- Measures to assure continued agricultural use on prime agricultural lands, such as easements and deed restrictions;
- Land use designations and standards for development adjacent to agricultural lands, including buffers, to ensure compatible uses that will protect agricultural activities;
- Criteria for considering conversions of agricultural land to other uses.

The definition of "Prime Agricultural Land" in the Coastal Act (§30113) references the first four elements of the definition in Government Code (Williamson Act) §51201 (c) "Prime agricultural land" means any of the following:
(1) All land that qualifies for rating as class I or class II in the Natural Resource Conservation Service land use capability classifications.
(2) Land which qualifies for rating 80 through 100 in the Storie Index Rating.
(3) Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.
(4) Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a non-bearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars ($200) per acre.

Where can I read some examples of updated agricultural policies?

To read a comprehensive suite of agricultural policies please see:

- **Santa Cruz County General Plan/ Local Coastal Program** Chapter 5 commencing on page -5-44,
  at: http://www.sccoplanning.com/pdf/policy/1994GeneralPlan/chapter5.pdf .

To see an example of a Coastal Commission recommendation for updated agricultural policies, please see:

- **San Luis Obispo Local Coastal Program Periodic Review**, July 12, 2001 and Exhibit A, pp. 185-244,
  at: http://www.coastal.ca.gov/recap/slo/slo-ag.pdf
  and http://www.coastal.ca.gov/recap/slo/slo-ch5.pdf.

"Non-prime Agricultural Land" means other coastal agricultural lands that are now in use for crops or grazing, or that are otherwise suitable for agriculture

In addition to the LCP examples noted, in May 2013 the Commission conducted a workshop on agricultural issues with various stakeholders and the public. The background report for this Workshop is a useful summary of how the Coastal Commission has addressed a range of agricultural issues. The report is found at:

- **Background Report for Workshop on Agriculture in the Coastal Zone: Implementation of Coastal Act Provisions Related To Agriculture**, April 2013,
  at: http://documents.coastal.ca.gov/reports/2013/5/W3-5-2013.pdf

To view the actual workshop, please see:

- **Coastal Commission video archive** for May 8, 2013 meeting, Item #3, at: http://www.cal-span.org/cgi-

bin/archive.php?owner=CCC&date=2013-05-08

What are some issues to address in an LCP update of agricultural policies?

♦ Uses in Agricultural Designations

Agricultural land use and zoning designations are the primary tools used to protect agricultural lands, provided the uses allowed within these designations promote and do not impact agricultural productivity. Careful attention needs to be paid to any structures and non-agricultural uses that may be allowed on agricultural lands. The kinds of structures and uses that are allowed on agricultural land may depend on how they are designed and sited. In terms of potential impacts, for example, allowing a residence as a principal permitted use on agriculturally zoned land without consideration of its relation to maintaining agricultural production may pose a greater risk than if residences were a conditional use and only allowed when the occupants were operators of a farm that was under a protective easement or deed restriction. And, any allowed structure and use should be compatible with maintaining the long-term productivity of agricultural soils, as in this example:

- **County of San Luis Obispo Coastal Plan Policies**, at: http://www.slocounty.ca.gov/Assets/PL/Elements/Coastal+Plan+Policies.pdf

  ***Policy 1…Permitted Uses on Prime Agricultural Lands**. Principal permitted and allowable uses on prime agricultural lands are designated on Coastal Table O - Allowable Use Chart in Framework for Planning Document. These uses may be permitted where it can be demonstrated that no alternative building site exists except on the prime agricultural soils, that the least amount of prime soil possible is converted and that the use will not conflict with surrounding agricultural lands and uses.*

Following are discussions of some specific categories of uses that may be considered for agricultural land use designations and zoning districts.

Residential Use

One of the more recent trends that threatens agricultural land viability is the development of residential uses not in direct support of agriculture, especially large "statement" homes. Non-agricultural residential development can change the real estate values in agricultural areas so as to negatively affect the viability of continuing agriculture. It also introduces residential use that may conflict with on-going surrounding agriculture, potentially placing pressure on agriculture to be reduced.

For an example of economic impacts of non-agricultural residential development, see the following report:

- Strong Associates for the Marin County Community Development Agency, **Marin County Agricultural Economic Analysis, Final Report** (November 2003), at: http://www.eacmarin.org/programs/pdfs/agriculture/strong_ag%20report.pdf.

To resist a trend to change the character of an agricultural area to a more residential setting, an LCP update should consider revising criteria for residential approval to ensure that it supports agriculture. For example, standards can require that any residential use:

- is a conditional (not principally permitted) use,
- is only for an agricultural owner or operator,
- is allowed only upon an analytic conclusion that it will not diminish the productivity or viability of agricultural land or the ability to keep agricultural land in production (see following section: "Agricultural Land Conversion Criteria"),
- is governed by size limits, placement on a parcel, and design criteria,
- is restricted to one home per parcel,
- does not lead to subdivision,
- is on a parcel protected for continued agricultural use (see following section: "Affirmative Agricultural Easements").

Residential Incentives

While state law has been revised to favor large day care centers, second units, and residential density bonuses in residential zones, they do not necessarily require that these uses be allowed in all agriculturally designated areas. Because of the Coastal Act policies to protect agricultural resources, the Commission has reviewed such proposed residential incentives closely and in many cases has restricted such incentives. You should consider in your LCP update whether such uses are appropriate in these areas. The following link is to an example where the Coastal Commission disallowed large family day care centers on agricultural land:

- **Santa Cruz County LCP Amendment No. 1-06 Part 2 (Large Family Childcare Homes in Non-Residential Zones)**, at: http://documents.coastal.ca.gov/reports/2007/5/W8c-5-2007.pdf

The following link provides an example where the Coastal Commission denied second units as a principal permitted use on most county agricultural lands:

- **Santa Cruz County LCP Amendment No. SCO-MAJ-3-03 Part 3**, at: http://documents.coastal.ca.gov/reports/2008/12/W10f-12-2008.pdf

An LCP update is an opportunity to re-evaluate and specify the limited types and amounts of residential uses, if any, that may be permitted on an

agricultural parcel and under what conditions. One consideration, as discussed in the "Residential Uses" section above, is to ensure that any of these uses that are approved do not interfere with or diminish agricultural production on the site in question. For example, second units are allowed in agricultural zoning districts only if they are not located on prime soils pursuant to the following LCP provision that is now in effect:

- **Santa Barbara County Local Coastal Program Amendment No. MAJ-2-03 (Residential Second Unit),** Suggested Modification #2 and "Prime Agricultural Soils" finding on page 21, at: http://www.coastal.ca.gov/ventura/3-2005-W14b.pdf

A related consideration is whether, cumulatively, allowable residential uses fit within the constraints of available land and services without diminishing agricultural productivity in the area in question. You could analyze this issue by performing an analysis consisting of determining the potential maximum parcel densities and service demands that may result from all allowable residential uses (e.g., primary homes, caretaker homes, farm labor homes, second units, mobile homes, farm labor or group quarters, etc.). Based on this analysis, you might consider revising your LCP to combine, delete or limit some types of residential units allowed on an agricultural parcel.

A final issue you might consider is for where some residentially related uses are appropriate, whether you should create preferences for those that are supportive of agricultural operations, such as those that house people who actually work on the property.

Land Divisions

Under the Coastal Act, divisions of land, including lot-line adjustments, are defined as "development" that require a coastal development permit. Your LCP may have agricultural land use designations and districts where minimum parcel size determines allowed residential density (e.g., AG-20 means 20-acre parcels can be created that can each have a house). If so, an LCP update offers an opportunity to decouple the two elements. As discussed above, housing on agricultural land needs to be considered based on its support of agricultural production and corresponding lack of adverse impacts on agriculture. It may be that some divisions of land could be allowed that are supportive of agricultural productivity without allowing more residences. Similarly, it may be that multiple dwellings on a single parcel (e.g., one for a farm owner/operator and one for his/her children's family that help operate the farm) would support agriculture whereas dividing the land to create a separate parcel for each house would lead to future losses of agricultural productivity through the eventual splitting up of the farm through sale of the parcels.

In developing policies that would require certain parcel sizes for future land divisions you should ensure that they are consistent with the Coastal Act policies that require protection of the area's agricultural economy and maintenance of existing average parcel size (see sections 30241 and 30250). In updating your LCP you should review existing rural parcel sizes to determine

if they generally match parcel sizes appropriate for the crops grown or animals raised. An updated inventory may document that there is already an appropriate range of parcel sizes so that any additional land divisions should be restricted. Such approach has been accomplished in the Marin County LCP, for example:

- **Marin County Local Coastal Program, LCP Policies on Agriculture:** 4. Development standards and requirements and 5. Conditions,
  at: http://www.co.marin.ca.us/depts/CD/main/pdf/planning/coastal/LCP_UNIT_II_amended.pdf

Alternatively, land division policies could address Coastal Act requirements by mandating only very large minimum parcel sizes, such as in the Sonoma County LCP, where a parcel would generally have to be at least 1,280 acres to be eligible for subdivision:

- **Sonoma County Zoning Regulations, Chapter 26C, Article 02. LIA CC Land Intensive Agriculture District,**
  at: http://www.sonoma-county.org/prmd/docs/zoning/index.htm

  Section 26C-23 b) Minimum lot size: The minimum lot size for creation of new parcels shall be six hundred forty (640) acres, unless a different area is permitted by any B combining district, provided that it shall also meet the criteria of General Plan Policy AR-8c.

Ideally, any required minimum parcel size should be commensurate with agricultural productivity needs. But because farming methods and crops, as well as the market, can change over time, it is challenging to establish such minimum parcel sizes. For example, the recent trend to establish small, specialty, organic farms suggests that some opportunities should be made available for new farmers who want land to engage in this type of agriculture. On the other hand, subdivision and minimum parcel sizes should not result in lots that are too small to be economical if different crops or practices become standard in the area. There also may be ways to provide for small scale agriculture without subdivision, such as through leasing arrangements.

Commission experience with minimum parcel size requirements in LCPs has revealed deficiencies in land division policies, especially for lot line adjustments, (which are defined as "development" that requires a coastal permit). As noted above, LUP land division policies must be consistent with Chapter 3 policies for protecting agricultural productivity. But LUP policies should also require that any proposal for a land division or lot line adjustment pursuant to the LCP be analyzed for consistency with agricultural and other resource protection policies, even in cases where one or more of the parcels in question is already below the minimum parcel size. An LCP update is an opportunity to review and revise, if necessary, criteria that are applied to land divisions and lot line adjustments to ensure that such analysis occurs and that agricultural productivity is protected. The Commission findings on the

following appeal are a good example of this level of analysis for a lot line adjustment:

- **Coastal Permit Appeal A-3-SLO-10-028 (Warren LLA)**, at: http://documents.coastal.ca.gov/reports/2010/11/Th14a-11-2010.pdf

This action is based in part on the following policy:

- **County of San Luis Obispo, Real Property Division Ordinance**, at: http://www.slocounty.ca.gov/Assets/PL/Ordinances/Title+21+-+Real+Property+Ordinance.pdf

  Section 21.02.030(c) Criteria to be considered. A lot-line adjustment shall not be approved or conditionally approved unless the new parcels resulting from the lot-line adjustment will conform with the county's zoning and building ordinances. The criteria to be considered includes, but is not limited to, standards relating to parcel design and minimum lot area. These criteria may be considered satisfied if the resulting parcels maintain a position with respect to said criteria which is equal to or better than such position prior to approval or conditional approval of the lot-line adjustment.

Supplemental Non-Agricultural Uses

The Commission has noted increasing number of proposals to develop non-agricultural uses, such as wedding event facilities and bed and breakfast inns, on agricultural lands. While such uses may provide supplementary income to farmers and ranchers, they can also diminish the long term productivity and viability of agricultural land by changing land use patterns, increasing conflicts between agriculture and other uses and making it difficult to keep agricultural land in production.

As an example, the Commission addressed the impacts of such uses in the following action to deny wedding events and similar gatherings on land designated for agriculture:

- **Coastal Permit Appeal No. A-3-98-25 (Scoggins),** at: http://www.coastal.ca.gov/la/lcpguide/T15a-12-1998%20A-3-SLO-98-025%20Scoggins%20revised%20findings.doc

An LCP update can ensure that any allowable supplemental uses do not result in unintended adverse impacts, by including, for example, a requirement that an applicant for such supplemental use submit an economic analysis of agricultural viability (for more information, see also the following section: "Agricultural Land Conversion Criteria").

Public Works Facilities

The Commission has been faced with proposals to construct or expand major public works facilities, such as water treatment plants, on agricultural lands (as

well as on public recreation, open space and other sensitive lands). Future proposed public works facilities may include, for example, roads, power plant expansion, desalination facilities or alternative energy facilities. Often such uses conflict with the Coastal Act mandate to protect agricultural lands. An LCP update should ensure that suitable locations for any anticipated new or upgraded public works facilities are established elsewhere in the jurisdiction so reliance on agricultural (or other sensitive) land is not required. The LCP can distinguish through definition, policy and conditional use standards those types of public works that, if authorized, would have no permanent impact on agricultural lands.

The following example addresses locating recycled water facilities on agricultural land:

- **Santa Cruz County LCP Amendment No. 2-05 (Part A),** at: http://documents.coastal.ca.gov/reports/2006/3/Th8a-3-2006.pdf

The following amendment addresses a highway on agricultural land:

- **Monterey County LCP Major Amendment Number 1-08 Part 1 (Highway One-Salinas Road intersection),** at: http://documents.coastal.ca.gov/reports/2008/8/Th27b-8-2008.pdf.

Agricultural Structures

In some cases, structures associated with agriculture, such as greenhouses, processing plants and farm labor housing can harm the long-term productivity of agricultural soils. The cumulative effect of these structures may encourage urbanization or industrialization of an area. Your LCP should have provisions that address potential adverse impacts from structural development on farmland such as locating the development on non-productive lands and specifying coverage limits.

The following example is an LCP amendment to govern greenhouse development:

- **Santa Barbara County Local Coastal Program Amendment No. MAJ-2-02 (Carpinteria Valley Greenhouse)**, at: http://www.coastal.ca.gov/la/lcpguide/Th23a-05-2004%20STB-MAJ-2-02%20Santa%20Barbara%20LCPA.doc

While some agriculturally-related structures can be allowed on agriculturally zoned land under appropriate criteria, an LCP update should also examine ways to locate such structures off agricultural lands. The LUP could, for example, incorporate incentives to site farm worker housing in residential areas, and develop agricultural industrial land use designations to accommodate agricultural processing facilities.

The following is an example of an Agricultural Industrial land use designation from the Monterey County LCP:

- **Monterey County North County Land Use Plan,** pp. 67, 69, 72 &

77,
at: http://www.co.monterey.ca.us/planning/docs/plans/NC_LUP_complete.PDF)

4.3.1.O: Agricultural Industrial: Areas which provide for activities necessary to support agricultural, aquacultural, and farming industries while also maintaining compatibility with the rural agricultural character of the coastal zone. A minimum parcel size of 2.5 acres is required.

♦ Urban-Rural Limit Lines and Buffers

The Coastal Act §30241 specifies that establishing stable boundaries that separate urban and rural areas, including clearly defined buffers, is one way to maintain agricultural productivity .

Urban-Rural Limit Lines

As part of an LCP update, you can review and if necessary improve upon the methods employed to establish and retain a stable boundary between rural areas containing agricultural lands and more urban areas. Such urban rural limit lines concentrate development and help to protect agricultural lands from the physical and economic impacts of adjacent urban growth. Any modification of such lines as part of an LCP update should only be considered based on updated assessments of projected growth and resource protection needs. Your updated LCP should assure that new subdivisions or extension of services serve to maintain a stable urban rural boundary and are authorized only if consistent with the agricultural protection and resource protection policies of the Coastal Act.

Policies intended to protect the boundary between urban and rural areas could include improved techniques to restrict the extension of urban services. For example, a stable line can be achieved if a strip of land at the urban boundary is legally restricted from containing urban service facilities (e.g., through easement or deed restriction) and/or placed in ownership of an agricultural land trust or similar organization.

The following link provides an example of an LCP amendment that includes such techniques:

- **Watsonville Major LCP Amendment 1-99**,
  at: http://www.coastal.ca.gov/sc/lcpawat1-99-rf.pdf.

Agricultural Buffers

LCP updates should ensure that agricultural buffer provisions are designed to ensure buffers that are adequate to protect against impacts from adjacent, non-agricultural development. Such impacts can include complaints about odor, dust, drifting pesticides and noise. An LCP update can evaluate the success of any existing buffer provisions and adjust the minimum width requirements, as needed. Adjustments can also address such factors as prevailing wind

direction, topographic and vegetative features and type of agriculture. However, when developing new or expanded buffer standards, you should anticipate that conditions or operations could change over time. For example, while current farmers may not apply pesticides, future farmers may, and buffers should allow for that change in operation.

The following is an example of a variable buffer width policy that takes into account the type of crop, adjacent use, site characteristics and other factors:

- **Agricultural Buffer Policies And Procedures**, at: http://www.slocounty.ca.gov/Assets/AG/assets/Buffer+Policy_2005.pdf

"Right to Farm" Ordinances

"Right to Farm" ordinances can complement buffer provisions. These ordinances can help ensure that neighboring residents cannot curtail agricultural operations. See, for example:

- **Santa Cruz County Code, Section 16.50.090 "Notification and disclosure statement requirements"**, at: http://www.codepublishing.com/ca/santacruzcounty/
- **Sonoma County Right to Farm Ordinance 5203**, at: http://www.sonoma-county.org/prmd/docs/lcp/lcp_apdx_d.pdf.

♦ Agricultural Land Conversion Criteria

As noted, there are continuing pressures to convert agricultural land. Coastal Act §§30241(b) and (c) and 30242, among others, govern the conversion of lands that are on the urban periphery, surrounded by urban uses, or that are not prime agricultural land. These standards would apply to Coastal Commission consideration of any LCP amendments that result -- or could result -- in the conversion of agricultural lands. An explanation of how these provisions would be followed could be incorporated into your LCP as direction for any future amendments you might initiate or to which you may have to respond. A proposed LCP amendment that allows or could allow conversion of agricultural land must include an economic evaluation of the gross revenue and operational costs, excluding land values, of the crops in the geographic areas of the proposed conversion. The following provides examples of economic analyses of land and crop values that were developed to support a request for conversion of agricultural land:

- **County Of Del Norte LCP Amendment No. DNC-MAJ-2-03**, suggested modifications in Ch. 21.55D on page 171 of Exhibit 2, at: http://documents.coastal.ca.gov/reports/2009/10/W17b-10-2009-a2.pdf

Section 30241.5's economic feasibility evaluation may also have utility in the consideration of certain coastal permit applications. If your LCP allows for development on agriculturally designated land that has the potential to result in

an adverse impact to continued production -- e.g., an allowed use such as residential or bed and breakfast in an agricultural zone – then an update may add a requirement that an economic analysis be provided with any permit request to undertake such development. For example, the Commission incorporated economic feasibility analysis in the following decision to allow a house on agricultural land:

- **Coastal Permit Appeal A-1-MEN-09-052 (Blue Port, LLC)**, at: http://documents.coastal.ca.gov/reports/2011/10/W10a-10-2011.pdf.

However, an economic feasibility evaluation should not be placed in your LCP as a tool to allow new agricultural conversions not explicitly allowed in your LCP. Rather, your LCP designations should be clear as to where non-agricultural uses are allowed pursuant to Coastal Act §§ 30241 and 30242; *any conversions of agricultural areas should only be sanctioned through specific LCP amendments.*

If you anticipate considering any such amendments, an LCP update can also incorporate certain standards to apply or identify necessary procedures.

For example, rezoning could be allowed only if:

- approved by a public vote;
- it is part of a broader project in partnership with agricultural preservation organizations;
- restrictions are place on the rezoned land (e.g., deed restrictions, easements);
- accompanied by a decision that the subject land no longer is agricultural.

The following is an example of the last bullet in the list above– where a local government has included ordinances, subsequently certified by the Commission, that describe the process and findings necessary to redesignate agricultural land to non-agricultural uses:

- **Santa Cruz County Code Section 16.50.050 "Amendment of Designations**," at: http://www.codepublishing.com/ca/santacruzcounty/

♦ Affirmative Agricultural Easements

One of the newer tools being pursued by the Commission and others involved in the protection of agricultural lands is the use of affirmative agricultural easements that go beyond the mere restriction of future use of agricultural lands. Such easements affirmatively require that property owners actively assure that their land is maintained in agricultural uses in perpetuity.

For further information on this subject, please see:

- **Affirmative Agricultural Easement Workshops: A Summary**,

at: http://www.coastal.ca.gov/la/docs/Affirmative_Easement_Workshops_Summary.pdf.

The summary also links to an actual affirmative agriculture easement document:

- **Deed of Agricultural Easement**, at: http://www.coastal.ca.gov/la/docs/Chan_Agricultural_easement.pdf.

For an example of an LCP policy for use of affirmative agricultural easements, see:

- **County of San Luis Obispo Estero Area Plan**, p. 4-4, at: http://www.slocounty.ca.gov/Assets/PL/Area+Plans/Estero+Area+Plan.pdf.

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LCP Update Guide

Section 6. Planning and Locating New Development and Archaeological/Cultural Resources

Review the principal Coastal Act policies concerning Development at Sections 30244, 30250, 30252, 30253. These statutes can be found at: http://www.coastal.ca.gov/coastact.pdf

After a decade or more of development authorized under a certified LCP, it is likely your LCP needs comprehensive revision. Most importantly, the background data and provisions of your LCP that affect new development and growth should reflect current land use and public facilities constraints and growth projections. In recent years there has been increased emphasis on planning that reflects smart growth principals and new legislation for Sustainable Communities has been enacted. An update should reexamine and revise the designation of the kinds, location and intensity of land uses to: 1) ensure consistency with all Coastal Act policies; 2) reflect current limits to the available capacity of public works facilities (e.g. water, wastewater and roads); 3) reflect protection of priority uses under the Coastal Act; and, 4) ensure Highway One remains a 2 lane scenic road in rural areas. The Coastal Act also requires mitigation for any adverse impacts on archaeological/cultural or paleontological resources.

What should updated Planning and Locating New Development and Archaeological Resources components include?

- Projected population, commercial, industrial and other growth;
- Current infrastructure capacity;
- Projected infrastructure capacity based on only those service improvements that are consistent with Coastal Act and LCP policies;
- Land use map designations and intensities for residential, commercial and industrial development in or adjacent to existing developed areas;
- Maximum density (e.g., homes per acre) for each residential land use designation in the coastal zone;
- Maximum intensity for each non-residential land use designation in the coastal zone, including roads and their rights of way and other public lands (e.g., maximum land coverage, floor area ratios, maximum number of rooms, maximum number of employees, minimum level of service);
- Land use designations and intensities commensurate with the level of available infrastructure (e.g. sewer, water and road or transit systems, with

Highway One limited to two lanes in rural areas);

- Designations in sufficient locations on the land use map for Coastal Act priority uses;
- Policies, incentives and zoning measures to ensure that Coastal Act priority land uses have priority allocations of any limited public services and are actually constructed;
- Minimum parcel sizes and other policies and zoning measures for any land divisions so as to concentrate development and to protect rural and agricultural areas;
- Policies and zoning standards for any allowed residential, visitor-serving, industrial or other structural developments outside of urban areas to ensure that they conform to and enhance their rural setting;
- Dedication or in-lieu fee requirements for recreation and open space to accompany new development and to mitigate the cumulative impacts of development;
- Inventory of archaeological, paleontological and other cultural resources;
- Policies and zoning measures to protect both known and discovered archaeological and paleontological sites and any recovered artifacts;
- Policies and standards to reflect statutory requirements for Native American consultation.

Additional guidance on some of these topics is discussed later in this section.

Where can I read some examples of updated planning and locating new development and cultural resources policies?

For an example of some updated LCP provisions for new development see:

- **City of Malibu Land Use Plan,** at: http://qcode.us/codes/malibu-coastal/

Some examples of certified LUP archaeological provisions are:

- **Carmel-by-the-Sea General Plan/ Coastal Land Use Plan**, Cultural Resources and Historic Preservation element, at: http://ci.carmel.ca.us/tasks/sites/carmel/assets/File/general_plan/Land_Use.pdf
- **City of Huntington Beach LCP Amendment No. 1-06 (Shea Homes/Parkside),** at: http://documents.coastal.ca.gov/reports/2007/5/Th14a-5-2007.pdf

- **City of Fort Bragg LCP Amendment No. FTB-MAJ-1-06 (LCP Update)**, especially page 36, at: http://documents.coastal.ca.gov/reports/2007/12/F6a-12-2007.pdf

What are some issues to address in an LCP update of planning and locating new development and cultural resources policies?

♦ Concentration of Development

Since LCPs were certified there has been new emphasis on furthering Smart Growth principles in planning and development. And, new requirements addressing impacts from land use and transportation were adopted in the Sustainable Communities and Climate Protection Act of 2008.

Coastal Act policies already reflect many Smart Growth principles by requiring, for example: that new development be concentrated in areas able to serve it (PRC 30250), that public works facilities shall be designed and limited to accommodate needs generated by development (30254), that urban-rural limit lines be established (PRC 30241) and that new development minimize energy consumption and vehicle miles travelled (PRC 30253d). However, other Coastal Act policies must also be addressed in new development and land use plans to further smart growth. For example, the conversion of visitor serving land uses to a higher density mixed use residential/visitor serving use maybe appropriate in limited circumstances where it can be demonstrated that priority visitor serving uses are adequately provided for within the local jurisdiction factoring in future demand for these uses.

An LUP update can reinforce measures to concentrate residential, commercial and related development. Urban designations on LCP land use maps can be reviewed for appropriateness and complemented with policies promoting techniques for maintaining urban limit lines, such as no access strips for urban services into adjacent rural areas (see "Urban-Rural Limit Lines" in Section 5 Agricultural Resources). Smart Growth tools to promote and incentivize sustainable urban development can be added to or strengthened in LCPs, provided that Coastal Act priority uses are accommodated (see Section 2: Recreation and Visitor Serving Facilities) and that public access and sensitive habitat, scenic, archaeological and other coastal resources remain protected (see "Density Bonuses and Other Incentives" below). And, within urban boundaries, planned development levels should not exceed available public services.

Examples of LCP amendment approvals that reflect concentrated urban smart growth that also ensure accommodation of priority uses and coastal resource protection include:

- **City of San Buenaventura Local Coastal Program Amendment No. SBVMAJ- 2-08 [Downtown Specific Plan]**, at: http://documents.coastal.ca.gov/reports/2009/11/Th11b-11-2009.pdf
- **City of Huntington Beach LCP Amendment 1-10 (Downtown Specific Plan Update)**, at: http://documents.coastal.ca.gov/reports/2011/6/W9b-6-2011.pdf

If services are limited, it may be necessary to scale back development potential. If expansion of services is anticipated, the LUP should specify how authorizations for new development will be consistent with the timing and amount of available services. For example, the Commission addressed this issue in suggesting modifications to these LCP amendments:

- **County of San Mateo LCP Amendment No. SMC-MAJ-1-07 (Midcoast LCP Update**), at: http://documents.coastal.ca.gov/reports/2009/12/Th18a-12-2009.pdf
- **San Luis Obispo County Local Coastal Program Major Amendment No. 2-04 (Part 2) Estero Area Plan**, at: http://documents.coastal.ca.gov/reports/2008/7/Th16a-7-2008.pdf

♦ Second Units

Since 2002 there have been new requirements in place concerning development of second units on single family residential lots. While California Government Code revisions changed procedures for coastal development permits for second units (see LCP Update Guide Part II, Section II.E.1), they did not change development standards that apply in the coastal zone or the requirements of the Coastal Commission's appeal authorities. Many local governments have adopted ordinances through LCP amendments to address second units. Some examples include:

- **Humboldt County LCP Amendment No. HUM-MAJ-2-06 (Housing Element Resubmittal)**, at: http://documents.coastal.ca.gov/reports/2006/11/W7b-11-2006.pdf (see especially pp. 100- 109 of Exhibit B (original staff report for HUM-MAJ-1-99-B)
- **City of Fort Bragg LCP Amendment No. FTB-MAJ-1-06 (LCP Update),** at: http://documents.coastal.ca.gov/reports/2008/1/F7b-1-2008.pdf
- **City of Pismo Beach LCP Amendment No. 1-04 Part 1 (Second Units – AB 1866**), at: http://www.coastal.ca.gov/sc/W13a-5-2004.pdf
- **City of Redondo Beach LCP Amendment No. 1- 2003,** at: http://www.coastal.ca.gov/lb/W8b-2-2004.pdf

Other jurisdictions that have example ordinances include the counties of Santa Cruz, Santa Barbara and Ventura and the cities of San Diego, Santa Cruz, Carlsbad, Carpinteria and Port Hueneme.

♦ Density Bonuses and Other Incentives

State law allows for density bonuses for some affordable housing projects. Your updated LCP could incorporate such provisions, but be careful not to supersede the protective policies of the Coastal Act. For example, if part of a site is ESHA, the density bonus may not be used as an override to build in the restricted area. Rather, bonus density can be assigned to the non-ESHA developable portion of a site. See, for example:

- **Humboldt County LCP Amendment No. HUM-MAJ-2-06 (Housing Element Resubmittal)**, at: http://documents.coastal.ca.gov/reports/2006/11/W7b-11-2006.pdf

This same advice to factor in Coastal Act protections holds true when updating your LCP with other housing incentives that have been added to state law. Your goal should be to harmonize the state statutory requirements.

♦ Rural Land Divisions and Development

The Coastal Act along with other laws and best planning practice guidance support the concentration of development. Outside of urban areas, some tracks of land will not be faced with proposed development of structures because of resource or landform constraints, land preservation status, or direct use of the land for agriculture, mining or timber harvests. Nevertheless, most LCPs designate such lands for some amount of structural development on portions of non-urban areas. Updating the LCP offers an opportunity to review policies that govern permissible rural development to ensure that they are adequate and consistent with the Coastal Act.

One issue that the Commission has faced is ensuring that intensities of use be consistent with the character of the area, such as limits on special events at recreational and overnight facilities. For an example of LCP policies and how the Commission applied them see the appeal decision on a 7-unit inn project in Mendocino County:

- **Appeal No. A-1-MEN-07-028 (Jackson-Grube Family, Inc.),** at: http://documents.coastal.ca.gov/reports/2010/8/W8a-8-2010.pdf

Another issue before the Commission has involved combining or retiring lots to address potential cumulative impacts of building out remote small lot subdivisions. An example of a lot retirement program is:

- **City of Malibu Land Use Plan**, Chapter 5—New Development, C. 7 Lot Retirement Program, at: http://qcode.us/codes/malibu-coastal/

An example of a companion transfer of development credit program is:

- **City of Malibu Local Implementation Plan,** Chapter 7—Transfer Of Development Credits, at: http://qcode.us/codes/malibu-coastal/

♦ Cultural Resources Consultation

Measures were adopted in 2004 (Senate Bill 18) that amended sections of the Civil Code and Government Code to enact new intergovernmental consultation requirements with Native American tribes. The new provisions require cities and counties to contact, and consult with, California Native American tribes prior to amending or adopting a general plan or specific plan, or designating land as open space. In updating your LCP to be consistent with SB 18 you can consult:

- **Tribal Consultation Guidelines** (2005) by Office of Planning and Research, at: http://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

In addition, The California Natural Resources Agency in November 2012 adopted a Final Tribal Consultation Policy that further supports and emphasizes the need for tribal consultation:

- **California Natural Resources Agency Tribal Consultation Policy,** at: http://www.resources.ca.gov/docs/Final_Tribal_Policy.pdf

♦ Discovery and Preservation of Cultural Resources

Discovery of cultural resources can occur as part of a mandated pre-development reconnaissance or during excavation for an approved development. Your LCP should include policies that address both situations.

Pre-development reconnaissance can be required for known or likely sites, whether they are mapped or not. If your LCP ties such a requirement to listed or mapped sites (as opposed to just general cultural resource sensitivity zones), you should amend it consistent with more recent standards for maintaining site location confidentiality.

Qualified onsite monitors or workers can discover cultural artifacts during construction. Your LCP can provide criteria for when onsite monitors are required as a condition of development.

Regardless of the manner in which artifacts are discovered, the LUP should include policies to require that work is halted if artifacts are discovered until an evaluation occurs and mitigation actions implemented.

There are various methods to protect and preserve cultural resources and the appropriate method to be used in a given situation may depend on the nature of the resource (for example, if there are human remains). These measures may include, for example, leaving the materials in place undisturbed (e.g., by

prohibiting or resiting the development or establishing adequate buffers; by capping the site or recovering and removing artifacts to a secure archive). Your LCP could detail the criteria that an approved archaeological consultant would use to make such decisions.

It can often be a challenge to find a suitable repository for permanent archives of cultural artifacts. In many cases local governments can work with local institutions to establish a storage program and include requirements in the LUP for carrying out the program. If no specific program is established with a repository institution, the LUP should include provisions to assure resources are protected in each permitting action.

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LCP Update Guide

Section 7. Scenic and Visual Resources

Review the principal Coastal Act policies concerning scenic and visual resources *at Sections 30250, 30251 and 30253. These statutes can be found at: http://www.coastal.ca.gov/coastact.pdf*

Protection of the scenic resources of the coastal zone is a central part of local coastal programs. Section 30251 of the Coastal Act requires in part that the scenic and visual qualities of coastal areas be considered and protected as a resource of public importance. In most coastal areas, the scenic qualities of the coast have long been cherished by residents and visitors alike. Depending on site and surrounding area characteristics, scenic resources can include rocky promontories and headlands, rocky shorelines, sandy beaches, coastal bluffs, coastal lagoons and marshlands, rural farmlands and pasturelands, and open or forested slopes, hillsides, ridgelines and mountain tops, as well as more urbanized harbors, marinas and waterfront areas. Cultural features set in scenic areas and other historic or natural points of interest visible from public viewing areas or scenic corridors may also be considered scenic resources.

While certified local coastal plans were crafted to protect significant public views to and along the shoreline, the subsequent incremental approval of individual developments and variances, including minor additions and maintenance activities, may have resulted, over time, in the cumulative degradation of public views and scenic resources. It is therefore important that LCP updates reassess the critical views and scenic landscapes to be protected and refine measures necessary to ensure their protection.

What should an updated Scenic and Visual Resources component include?

- Identification of public scenic view corridors and viewsheds;
- Identification of highly scenic coastal areas;
- Identification of special communities and neighborhoods;
- Descriptions of any development encroachments on public views and scenic areas;
- Descriptions of scenic and visual characteristics to be protected;
- Coastal view and visual quality protection policies;
- Land use and zoning designations commensurate with protection of scenic and visual qualities;
- Measures to ensure that new development will not block views that should be preserved;

- Measures to ensure that new development shall be visually compatible with existing natural features and the character of surrounding areas;
- Measures to preserve the special values and character of the community;
- Historic preservation measures;
- Regulations to ensure that signs and billboards will not degrade significant coastal views;
- Lighting restrictions;
- Measures to restore and enhance scenic and visual qualities of the site and/or shoreline;
- Considerations for the Design Review process;
- Grading regulations to minimize alterations of natural landforms;
- Measures to permanently protect significant views and views required to stay unobstructed (e.g., open space or conservation easements);
- Development and design standards for highway and roadway corridors through scenic areas or areas of special character. (e.g. bridge rail/guard rail designs and landscaping standards that preserve views and the character of scenic or rural areas).

Where can I read some examples of updated scenic policies?

Examples of some updated Scenic Resource provisions are included in the following documents:

- **City of Malibu Land Use Plan**, Chapter 6—Scenic And Visual Resources, at: http://qcode.us/codes/malibu-coastal/
- **City of Malibu Local Implementation Plan,** Chapter 6 --Scenic, Visual, and Hillside Resource Protection Ordinance, at: http://qcode.us/codes/malibu-coastal/
- **San Luis Obispo County Local Coastal Program Major Amendment No. 2-04 (Part 3) Title 23 Coastal Zone Land Use Ordinance Amendment**, at: http://documents.coastal.ca.gov/reports/2008/7/Th16b-7-2008.pdf
- **County of San Mateo LCP Amendment No. SMC-MAJ-1-04-A (Midcoast Residential Design Standards)**, at: http://documents.coastal.ca.gov/reports/2009/12/Th18b-12-2009.pdf

What are some issues to address in an LCP update of scenic resource policies?

An LCP update should identify views that need protection and then ensure that policies and ordinances adequately provide the level of protection warranted. In some places a specific focus on special communities that are popular visitor destination points may be warranted. In order to apply policies and ordinances, an update can ensure that visual representations take advantage of new techniques while remaining accurate (e.g., visual simulations with computer-aided graphics, designed to show views from public viewpoints, and constructed at proper scale). An update can also incorporate the latest advances in addressing visual impacts from particular sources – e.g., lights, telecommunication facilities, signs and billboards. Finally, an update can review how landscape screening policies have worked and make any necessary adjustments.

♦ Protected View Identification

In order to adequately apply Coastal Act policies, local governments should identify public viewsheds and view corridors and their characteristics to be protected. LCPs may identify the public viewshed by vantage point (e.g., as what can be seen from major public use areas, scenic roads and highways and public recreation areas, such as parks, trails, and beaches), by what is seen (e.g., beaches, open water views, forests, hillsides, and historic buildings) or by a combination of these approaches. For an example of viewshed identifications, see:

- **Carmel Area Land Use Plan,** Section 2.2 Visual Resources, at: http://www.co.monterey.ca.us/planning/docs/plans/Carmel_Area_LUP_complete.PDF

  In the following policies, the term "viewshed" or "public viewshed" refers to the composite area visible from major public use areas including 17-Mile Drive views of Pescadero Canyon, Scenic Road, Highway 1 and Point Lobos Reserve as shown on Map A.

An LCP update can ensure that vantage points are specifically identified. For example, from which roads do views need protection? An update can also ensure that no significant vantage points or scenic areas have been missed. For example, if your jurisdiction has a new trail, roadway or park, then views from these locations may need to be added to the list of public viewing points. Similarly, buildings that are now recognized as having historic significance or shoreline views that have opened up through permitted demolitions or tree cutting can be added to the list of visual attractions. You may wish to identify some locations where visual restoration should occur, such as rehabilitating unsightly facilities or creating open view corridors as redevelopment occurs.

Correspondingly, these updated policies could indicate not only locations where views should be protected, but also the visual qualities to be protected. For some views, such as blue water views, keeping them unobstructed might be the goal. For example, Monterey County has designated the Big Sur coast as a critical viewshed that warrants the highest level of scenic preservation. See:

- **Big Sur Coast Land Use Plan,** p. 14, at: http://www.co.monterey.ca.us/planning/docs/plans/Big_Sur_LUP_complete.PDF

  Critical Viewshed (defined as) everything within sight of Highway 1 and major public viewing areas including turnouts, beaches and [a number of] specific locations [identified in the LCP]. .

Big Sur Critical Viewshed policies also require, among other things, that "…all new parcels must contain building sites outside the critical viewshed; …clustering of structures, sensitive site design, design control, transfer of development credits, and other techniques designed to allow development on such parcels outside the critical viewshed…; replacement of structures shall… encourage resiting or redesign in order to conform to the Key policy… [the key policy…] prohibits all future public or private development visible from Highway 1 and major public viewing areas (the critical viewshed), and conditions all new development in areas not visible from Highway 1 or major public viewing areas on the siting and development criteria of [other viewshed policies]..."

In other cases, appropriate viewshed protection could entail limiting the amount of human-made encroachment. For more urbanized pubic viewsheds, the parameters of the development (e.g., size, design, materials) can be specified. An example of an LCP amendment establishing view corridors between buildings is:

- **City of Malibu LCP Amendment No. MAJ-1-07 (Broad Beach),** at: http://documents.coastal.ca.gov/reports/2009/1/W14a-1-2009.pdf

Once an LCP update determines what views and scenic qualities are to be protected, development standards and how they are applied (e.g., through design review and variances) can be reviewed and, if necessary revised, to correspond to the policy objectives.

*Section 30253 (e) **requires** that new development… shall, where appropriate, protect special communities and neighborhoods that because of their unique characteristics, are popular visitor destination points for recreational uses.*

♦ Special Communities and Community Character

During the initial certification process, some LCPs identified popular destination points as special communities (see sidebar). Updates to LCPs provide a local government the opportunity to reexamine and adjust the boundaries of the scenic and special areas that warrant protection. Measures used to protect special communities already identified can also be strengthened during an update.

LCP updates also offer an opportunity to define and designate additional special communities, which because of their unique characteristics are popular visitor-destination points for recreational uses (consistent with Coastal Act 30253(e). The update process may include examining whether any of your local neighborhoods include a variety of characteristics that gives them a special character which in turn makes them popular visitor destinations. Depending on those characteristics, your LCP can include a series of policies designed to protect and preserve the special character of the area, such as residential design standards, height limits, landscape treatments, as well as street and public facility design standards.

One example of policies designed to protect special communities and community character is the City of Carmel-by-the-Sea LCP, which includes a comprehensive set of policies and ordinances designed to protect the special historic character of Carmel.

- **Carmel-by-the Sea General Plan/Coastal Land Use Plan**, Land Use and Community Character element, at: http://ci.carmel.ca.us/tasks/sites/carmel/assets/File/general_plan/Land_Use.pdf
- **Carmel-by-the-Sea Implementation Plan**, Title 17 Zoning, at: http://www.codepublishing.com/CA/carmel.html.

The Carmel example includes a number of policies designed to maintain city's community character, which is exhibited through many of its smaller cottages and its informal streetscape, and which is a draw for many visitors. Carmel's policies require, among other directives:

- assuring priority land uses, including a mix of commercial uses, that are compatible with the needs of visitors and the character of the area as a residential village;
- limiting the location of new commercial activity to present commercial and multi-family districts and protecting the established patterns of land use throughout the city while providing for a high-quality pedestrian oriented environment;
- adopting standards for development that retain the scale and character of the City including requiring design review for new homes and additions;
- requiring that new development on each site is compatible and sensitive to the surrounding natural features and built environment of the site and of surrounding areas and contributes to neighborhood character.
- allowing land uses that are compatible with local resources and the natural resources and scenic quality of the area, including preserving significant areas of vegetation and open space;

Other examples of a Special Community include the Town of Mendocino, in Mendocino County. The Mendocino County LCP designates the Town of Mendocino as a special community and significant coastal resource as defined by Coastal Act Section 30251. The Mendocino Town Plan (Chapter 4.13 of the Mendocino Coastal Element) recognizes Mendocino as a historic residential community with limited commercial services, and calls for the preservation of the town's character, while still allowing for orderly growth. In Mendocino, the special character is identified as a composite of historic value, natural setting, attractive community appearance, and unusual blend of cultural, educational and commercial facilities.

For a description of the Mendocino Town Plan, its planning process, issues, and policies, see:

- **Mendocino County LCP**, Land Use Section, Coastal Element, Chapter 4.13 – Mendocino Town Plan, at: http://www.co.mendocino.ca.us/planning/pdf/Chapter_4.13MTP.pdf
- **Mendocino County LCP – Mendocino Town Zoning Code,** (Division III of Title 20), at: http://www.co.mendocino.ca.us/planning/zoning/mendocino/index.htm

♦ Visual Assessments

LCPs should include requirements for permit applicants to use up-to-date techniques for identifying critical viewsheds and for assessing the visual impacts of any proposed development. An LCP update could strengthen requirements in the coastal permit process for documenting existing views, such as requirements for staking the location, height and extents of proposed structures to assess potential visual encroachment and requirements for detailing any proposed screening through the use of vegetation or building materials.

For an example of staking and flagging requirements, see:

- **Monterey County Staking and Flagging Criteria** (2009), at: http://www.co.monterey.ca.us/planning/docs/forms/RESBOS_09-360__Staking_and_Flagging_Criteria_072109.pdf

♦ Night Lighting

In rural coastal areas where the night sky is generally dark except for the light of distant stars, bright lights that shine over the ocean, on ridgelines, open hillsides, or along rural roads can intrude into the dark sky, contributing to light pollution which can detract from the scenic character of an area. Tall, overhead lights along coastal pathways can intrude into the viewshed and cause visual clutter in areas that may have previously offered undisturbed views of the coast. In sensitive habitat areas, bright lighting can also cause

adverse impacts to sensitive species if light is allowed to "leak" beyond the intended area or path. Bright lights used for residences and other structures located in rural landscapes can sometimes be seen from great distances if not directed downward and shielded to light only the intended area around the house. New and/or bright lights in previously undeveloped areas visible from the roadway can also create a distraction for motorists and the general public in the area.

Local governments should consider updating their Scenic Resource policies to protect night skies as part of protecting scenic and visual qualities of the coastal area. This can include such policies as prohibiting night lighting of certain development or requiring that if any night-time lighting is proposed, a lighting plan must be submitted along with demonstration of lights to be used onsite, so that an evaluation can be made that night lighting will not have significant visual impacts. For example, the City of Malibu LCP contains the following provisions to address lighting in environmentally sensitive overlay areas and in scenic, visual and hillside resource areas, respectively:

- **City of Malibu Local Implementation Plan**, at: http://www.coastal.ca.gov/ventura/malibu-lip-final.pdf.

  Section 4.6.2: *Exterior lighting (except traffic lights, navigational lights, and other similar safety lighting) shall be minimized, restricted to low intensity features, shielded, and directed away from ESHA to minimize impacts on wildlife. Night lighting for sports courts, sports fields, or other private recreational facilities in ESHA, ESHA buffer, or where night lighting would increase illumination in ESHA shall be prohibited.*

  Section 6.5.G *...Night lighting for sports courts, sports fields, or other private recreational facilities in scenic areas designated for residential use shall be prohibited.*

Malibu LCP sections 4.6.2 and 6.5.G both identify that permitted lighting must conform to certain standards that require, for example:

1. *The minimum necessary to light walkways used for entry and exit to the structures, including parking areas, on the site. This lighting shall be limited to fixtures that do not exceed two feet in height, are directed downward, and use bulbs that do not exceed 60 watts, or the equivalent, unless a higher wattage is authorized by the Planning Manager.*
2. *Security lighting attached to the residence that is controlled by motion detectors and is limited to 60 watts, or the equivalent.*

3. *The minimum lighting necessary for safe vehicular use of the driveway. The lighting shall be limited to 60 watts, or the equivalent.*
4. *A light, not to exceed 60 watts or the equivalent, at the entrance to the (identify non-residential accessory structures).*
5. *No lighting around the perimeter of the site, no lighting for sports courts or other private recreational facilities, and no lighting for aesthetic purposes is allowed.*
6. *Prior to issuance of Coastal Development Permit, the applicant shall be required to execute and record a deed restriction reflecting the above restrictions.*

While these two Malibu lighting policies were both amended to add provisions allowing night lighting for public sports activities at the Malibu High School (located outside of ESHA), the LCP amendment (MAL-MAJ-1-11-A) approved by the Commission restricts night lighting of sports fields to the main sports field of public high schools in the institutional zone (i.e., only Malibu High School) as a conditional use, and restricts night lighting after 7:30 p.m. PST, except for a maximum of 18 days in a 12-month period when lights at the main sports field can be used up to 10:30 p.m. PST. The Malibu LCP also requires that field lighting must be minimized, directed downward, and shielded using the best available visor technology and pole height and design that minimizes light spill, sky glow, and glare impacts to public views and wildlife to the maximum extent feasible. The LCP also requires that if night lighting is to be used during bird migration periods, an avian bird monitoring plan must be developed and implemented to determine if any significant adverse impacts to migratory and resident bird species result from the night time use of field lights.

To see more on the City of Malibu LCP Amendment for night lighting at Malibu High School, go to:

- **City of Malibu LCP Amendment MAL-MAJ-1-11 Part A**, at: http://documents.coastal.ca.gov/reports/2011/10/W13a-10-2011.pdf

The coastal permit amendment for Malibu High School is:

- **Coastal Development Permit Amendment 4-99-276-A4 (Malibu Unified School District)**, at: http://documents.coastal.ca.gov/reports/2011/10/W17a-10-2011.pdf

Another resource for guidance on night lighting ordinances can be found at:

- International Dark Skies Association, **Model Lighting Ordinance,** at: http://www.darksky.org/outdoorlighting/mlo

♦ Telecommunications Facilities

Telecommunications facilities, including cell towers and electrical supports, have become more common as the cellular industry has grown. Cell towers, which can reach heights of as much as 75 feet or more, can have significant visual impacts, especially in rural areas where tall buildings are not common place. Because many LCPs were originally written before cellular phones were in common use, some may still not include any policies to deal with this new type of development. There are both legal and policy considerations in addressing these in an LCP update. By virtue of the Federal Telecommunications Act of 1996 (FTA), the Coastal Commission and local governments are currently prohibited from regulating telecommunications facilities on the basis of the environmental effects of radio frequency emissions. The Commission may, however, regulate other aspects of telecommunication facilities to address effects of such facilities (e.g., siting and design to avoid visual impacts, particularly such impacts as they relate to more rural and undeveloped areas.) Local governments should research Federal law to ensure that its LCP provisions are consistent with applicable requirements related to siting of telecommunications facilities.

In most cases, significant visual impacts may be avoided if new cell towers or cellular equipment are co-located on or adjacent to existing structures (e.g., on top of large buildings, or attached to other industrial or energy towers). Where this may not be possible, the visual impact of cell towers might be reduced by using a constructed disguise, such as a palm or pine tree design, compatible with the surrounding development or natural character.

Examples of LCPs that have been updated with specific cell tower provisions include:

- **Monterey County Coastal Implementation Plan,** at: http://www.co.monterey.ca.us/planning/docs/ordinances/Title20/20.64.310.htm
- **Santa Cruz County Code,** Section 13.10.660--Regulations for the siting, design, and construction of wireless communication facilities**,** at: http://ordlink.com/codes/santacruzco/index.htm.

Other useful references include:

- National League of Cities and APA, **Siting Cellular Towers**, (1997), availability information, at: http://www2.nlc.org/nlc_org/site/inside_nlc/catalog2/showdetl.cfm?ID=98
- B. Blake Levitt, ed., **Cell Towers** (2000) New Century Publishing.

♦ Signs and Billboards

Roadside signs and billboards can create visual clutter, especially outside of urban areas. Local governments should review applicable state and federal laws, such as California Business and Professions Code Section 5412, before updating LUP policies related to signs and billboards. It is likely that new signs and billboards may be prohibited but there are limits on how existing signs and billboards may be treated.

For examples of policies related to signage, see for example:

- **City of Encinitas LCP Amendment ENC-MAJ-2-08,** at:
  http://documents.coastal.ca.gov/reports/2009/9/W38d-9-2009.pdf
  http://documents.coastal.ca.gov/reports/2010/5/Th14a-5-2010.pdf

These policies prohibit new billboards and allow non-commercial message substitution on existing legal signs without requiring additional approval or permits. They also require that City-authorized relocation of any existing legal billboard be located outside of the coastal zone.

♦ Landscape Screening

Since many of the LCPs were certified, the long term impact of landscaping and maintenance on scenic views has emerged as an issue of concern. LCPs often relied on landscape planting to mitigate scenic impacts of development. However, over time, the Commission has dealt with issues related to landscape screening that actually end up adversely impacting scenic views and in some cases public access (i.e., grows wider or taller than expected because of species selection or lack of maintenance). To address this, local governments could consider policies that ensure that impacts to scenic resources are avoided principally through site selection and design alternatives, such as reducing height and bulk of structures, instead of relying mainly on landscape screening. Where landscape screening is appropriate, provisions could be updated to protect public access and scenic views over the long term, such as:

- Requiring approval of landscaping plans that use only low growing species that will not obscure or block public views;
- Requiring that existing landscaping be maintained so as to not block any public views as vegetation matures while at the same time avoiding impacts to any existing environmentally sensitive habitat;
- Require that landscape plans be designed, planted and maintained to serve this purpose over the life of the development;
- Require periodic re-evaluation of how well the landscape design is working out, and to allow for revisions if changes are needed to fully comply with any screening requirements that have been applied to protect the scenic and visual resources of the area.

A source to consult is:

- Wendelyn Martz, **Preparing a Landscaping Ordinance** (1990), availability information, at: http://www.planning.org/apastore/Search/Default.aspx?p=2360

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LCP Update Guide

Section 8. Coastal Hazards

Managing development to respond to coastal hazards is a key component of a local coastal program. The Coastal Act policies direct new development to reduce risks to life and property and avoid substantial changes to natural landforms. Coastal Act section 30253 provides, in part, that new development shall do all of the following:

> (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
>
> (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The complete text of the California Coastal Act is available at the Coastal Commission's website, at: http://www.coastal.ca.gov/coastact.pdf. You'll find policies about coastal resources planning and management in Chapter 3.

The responses to coastal hazards in an LUP should provide for solutions that have the least impacts on coastal resources.

In updating your LCP, keep in mind that one of the primary approaches to minimizing hazards is to avoid locating new development in hazardous areas, wherever feasible. The LUP can achieve this through subdivision, siting and design standards. Also remember that your LCP can address hazards concerns by requiring that safety and stability to be assured for the life of a development. If it is not feasible to minimize risks through avoidance of a hazard, you can require avoidance to be maximized and development to be designed, through features such as elevation, to protect against the consequences of unavoidable hazards. However, development that is so hazardous that it constitutes a significant risk to the public should not be allowed. You can also consider providing incentives for locating development away from hazardous coastal areas. Note that issues specifically related to shoreline structures are addressed in Section 9 of this LUP guide.

The 2009 California Climate Adaptation Strategy can be found at: http://resources.ca.gov/climate_adaptation/docs/Statewide_Adaptation_Strategy.pdf

Hazard Components of LCPs should also be upgraded to address emerging issues related to adapting to climate change. Since this Guide was first published, government at all levels continues to address impacts from climate change pursuant to the requirements of AB 32, the Global Warming Solutions Act of 2006. Executive Order (EO) S-13-08 was issued on November 14, 2008. The EO called on state agencies to develop California's first strategy to identify and prepare for these expected climate impacts. In 2009, the California Department of Natural Resources published The California Climate Adaptation Strategy. The Adaptation Strategy includes consideration of hazards issues

such as sea level rise and identifies that, in the coastal zone the Local Coastal Programs are a key mechanism to implement the state's Adaptation Strategy. A first step for any LUP update may be a vulnerability analysis.

Additional information on this Adaptation Strategy is available at:

- **2009 California Climate Adaptation Strategy**, Chapter 6, at: http://www.climatechange.ca.gov/adaptation/documents/Statewide_Adaptation_Strategy_-_Chapter_6_-_Ocean_and_Coastal_Resources.pdf

And, for vulnerability assessments relevant to the LCP planning process, see the following two examples:

- **City of Santa Barbara Vulnerability Assessment** (2012), available at: http://www.energy.ca.gov/2012publications/CEC-500-2012-039/CEC-500-2012-039.pdf
- **City of Santa Cruz Climate Change Vulnerability Assessment** (2011), at: http://www.cityofsantacruz.com/Modules/ShowDocument.aspx?documentid=21198

What should an updated Coastal Hazards section include?

Certified LCPs all contain hazard policies or components that identify areas subject to coastal hazards and regulate new development to minimize risks to life and property consistent with other policies of the Coastal Act. LCPs address, where applicable, hazards from wave and storm surge, flood, fire, landslide, earthquake and tsunami. An update to the certified LUP policies will likely focus on updating information on the location and extent of any coastal hazard areas and revising policies to reflect any new scientific information on current or anticipated conditions that may affect the extent and impacts of coastal hazards.

To update an LUP it is important to assess changed conditions, present new data or new information for applicable areas of risk, and present updated land use designations, policies and maps for the following, as applicable:

- Beach or bluff areas subject to seasonal or long-term erosion
- Bluff retreat and beach erosion rates that take into account projected sea level rise, especially for areas subject to high waves, such as those from storms, surges and seiches
- Coastal or riverine flood hazard areas
- Tsunami inundation runup areas
- Geologic hazards, like landslide areas and areas of bluff and cliff instabilities

- Expansive or highly corrosive soils
- Subsidence areas
- Fire hazard areas (based on changes in development patterns and the urban/wildlands interface, and projected changes due to climate change)
- Seismic hazard areas, including areas of potential liquefaction (based on any new earthquake fault information)

You should consider updated LUP policies that incorporate any new techniques for avoiding or minimizing risks and mitigating impacts. Some such examples of mitigation measures recently considered by the Commission are linked in this section (or the Shoreline Erosion Section 9) and include:

- Beach nourishment, sand supply and recreation impact fees for beaches vulnerable to wave damage and erosion.
- Restricting future armoring for new development.
- Limiting grading and vegetation clearance on steep slopes
- Developing updated definitions and policies to ensure that redevelopment or reconstruction of existing development conforms to newer LCP setback standards

Where can I read some examples of updated hazards policies?

The many examples linked in this report offer a variety of hazard policy examples. There are some additional examples noted below. As with any examples, geologic conditions along the shoreline vary, so please consult applicable Commission District staff for application to your LUP update.

For a comprehensive suite of hazard policies see the following excerpt from the City of Newport Beach LUP:

- **City of Newport Local Coastal Program Land Use Plan**, Section 2.8 Hazards and Protective Device, starting at p. 2-49, at: http://www.newportbeachca.gov/PLN/LCP/Internet%20PDFs/CLUP_Part%202_Land%20Use%20and%20Development.pdf

This is part of the complete LUP:

- **City of Newport Local Coastal Program Land Use Plan**, at: http://www.newportbeachca.gov/index.aspx?page=1317

Some recent Commission LCP actions offer examples of the suggested modifications made to proposed LUP hazard policies. To review these Commission actions see:

- **Revised Findings On City of Solana Beach LCP Land Use Plan**, at: http://documents.coastal.ca.gov/reports/2012/6/Th24a-6-2012.pdf

- **City Of Laguna Beach Local Coastal Program Major Amendment LGB-MAJ-1-10 (Land Use Element Update)**, at: http://documents.coastal.ca.gov/reports/2011/12/W9c-12-2011.pdf

The resulting modified text of the Laguna Beach LUP is:

- **Laguna Beach General Plan Land Use Element,** at: http://documents.coastal.ca.gov/reports/2012/5/W13a-5-2012-a1.pdf

The most recent City of Laguna Beach update of its flood ordinance is:

- **Major Amendment Request No. 1-13-A (Flood) (LGB-MAJ-1-13A) to the City of Laguna Beach Certified Local Coastal Program**, at: http://documents.coastal.ca.gov/reports/2013/6/Th14a-6-2013.pdf

♦ Information Sources

Significant information is available from the California Geologic Survey. At this site you can access new mapping information and research on a range of hazards:

- **Welcome to the California Geological Survey,** at: http://www.conservation.ca.gov/CGS/Pages/Index.aspx

General hazards information to assist local government in hazard planning is available from the California Emergency Management Agency's website:

- **My Hazards** website, at: http://myhazards.calema.ca.gov

Note that on the My Hazards page is a link to a new way to access hazard information from the California Geologic Survey (a collaborative web service called MyPlan) that was developed by the California Emergency Management Agency and the California Natural Resources Agency (CNRA):

- **Hazard Mitigation** website, at: http://hazardmitigation.calema.ca.gov/myplan

High-resolution coastal elevation data sets to support the production of maps for coastal management applications such as assessment of vulnerability from severe storms, sea-level rise and coastal erosion are available from the California Ocean Protection Council (OPC):

- **Coastal Mapping (Lidar) Data,** at: http://www.opc.ca.gov/2012/03/coastal-mapping-lidar-data-available/

Sea Level Rise information is available using NOAA Coastal Services Center's Sea Level Rise and Coastal Flooding Impacts Viewer found at:

- **Digital Coast** website, at: http://www.csc.noaa.gov/digitalcoast/tools/slrviewer

For Central Coast communities, including San Francisco Bay shorelines and baylands, and the Bay Area coast, from Half Moon Bay to Bodega Head,

online maps and tools to help understand, visualize, and anticipate vulnerabilities to sea level rise and storms can be found at:

- **Our Coast Our Future**, at: http://data.prbo.org/apps/ocof/

For North Coast communities, the following report contains as assessment of existing shoreline conditions and a qualitative assessment of vulnerability to sea level rise:

- **Humboldt Bay Shoreline Inventory, Mapping, and Sea Level Rise Vulnerability Assessment**, at: http://scc.ca.gov/webmaster/ftp/pdf/humboldt-bay-shoreline.pdf

♦ Definitions

You should also consider updating applicable definitions in order to guide implementation of the LCP policies and ordinances. Some definitions are defined in regulations, (see box) such as coastal bluff (in section 13577(h)). Others may need to be added or updated to reflect emerging issues. Other definitions helpful when updating hazards policies could include, as applicable, beach, sea cliff, infill, and economic life of structure (usually recommended by the Commission to be at least 75 or 100 years unless otherwise specified and restricted for specific development proposals), and redevelopment, reconstruction or remodel.

The California Code of Regulations, Title 14, Division 5.5, Chapter 8, be found at: http://government.westlaw.com/linkedslice/default.asp?SP=CCR-1000

For examples of some definitions see the following LCPs:

- **Laguna Beach General Plan Land Use Element**, Appendix **-** Glossary**,** page A-2, at: http://documents.coastal.ca.gov/reports/2012/5/W13a-5-2012-a1.pdf
- **City of Malibu Local Implementation Plan**, Definitions section, at: http://qcode.us/codes/malibu-coastal/
- **Revised Findings on City of Solana Beach LCP Land Use Plan**, particularly the definition of Redevelopment, Suggested Modification #144, pg. 56, at: http://documents.coastal.ca.gov/reports/2012/6/Th24a-6-2012.pdf

What are some issues to address in an update of hazards management?

♦ Land Divisions

LUP land division policies should ensure that land divisions will result in new parcels that can be developed consistent with the Coastal Act requirement that new development not require shoreline structures, such as assuring that new parcels can be developed with structures that will not require shoreline protection during a 75 or 100 year economic life. In general land divisions that will result in new parcels which have no site where future structures can be located outside of high hazard areas would not address the Coastal Act

requirement to minimize hazards. You should consider policies where each new parcel would have at least the minimum developable area, consistent with the zone district, outside of any high hazard area. A sample policy, such as one from the adopted suggested modifications of the Solana Beach LUP, could be:

- **Revised Findings on City of Solana Beach LCP Land Use Plan**, pg. 29, at: http://documents.coastal.ca.gov/reports/2012/6/Th24a-6-2012.pdf

  Policy 4.10 *Land divisions, including lot line adjustments, shall be prohibited unless all proposed parcels can be demonstrated to be safe from flooding, erosion, fire and geologic hazards and will provide a safe, legal, all-weather access road(s), which can be constructed consistent with all policies of the LCP.*

♦ Siting Development to Avoid Hazards/Setbacks

A critical element of every LCP is the designation of appropriate review and setback criteria for bluff, cliff, and beach level development. Siting criteria help to carry out Coastal Act requirements in Section 30253. You should consider LUP policies that avoid locating new development in hazardous areas where feasible. Where locating development to completely avoid hazardous areas is not feasible, policies should provide siting standards to minimize the exposure of new development to geologic, flood and fire hazards. These policies should include any additional exposure to flooding and erosion due to sea level rise.

Your LCP should require a setback that assures that the structure will be stable for its economic life without the need for shoreline protective devices that alter the natural landform. The Commission in recent actions has generally defined the economic life of a structure as 75 to 100 years. This lifespan could potentially vary, though, if the development included specific provisions for its removal from the hazard zone at the end of the specified economic life or when it became endangered. For development along coastal bluffs or cliffs, both slope stability and erosion should be part of the analysis.

The relative stability of a slope can be calculated quantitatively by a slope stability analysis, in which the forces tending to resist a potential landslide are divided by the forces tending to drive a potential landslide. The industry standard for a "stable" site is that this quotient, called a factor of safety, be at least 1.5 in the static condition, and 1.1 to 1.2 under seismic conditions. The factor of safety generally increases with distance from the bluff edge, so the point at which the factor of safety reaches 1.5 constitutes a minimum setback for existing conditions and without considering erosion.

Most coastal bluffs are steadily retreating due to erosion, impacts from storm waves and effects from sea level rise. In order to assure that the site will still

have a 1.5 factor of safety at the end of its economic life, the amount of bluff retreat expected over its life must be added to the initial setback.

Sea level rise should be incorporated into the erosion rate used in the factor of safety analysis. It is clear that future erosion rates are likely to be higher than historic rates; but, there is no fully accepted approach for estimating future bluff erosion with sea level rise. One approach used in the past has been to use the high range of historic erosion rates to represent future erosion rates. A more process-based method is to correlate future erosion rates with the increased frequency of wave impacts. This approach was used in the Pacific Institute study of sea level rise and is documented as part of their report:

- **The Impacts of Sea-Level Rise on the California Coast**, at: http://www.pacinst.org/reports/sea_level_rise

Your LCP should require a site analysis for bluff-top development to determine the present-day setback needed to minimize hazards. The factor of safety against sliding that is typically used to show that a development is stable is 1.5. To find the total setback needed, add to that figure the predicted bluff retreat for the expected life of the project, such as 100 years of bluff erosion. The Coastal Commission's staff geologist presented a memo on the topic to the Coastal Commission:

- **Establishing development setbacks from coastal bluffs**, at: http://www.coastal.ca.gov/W-11.5-2mm3.pdf.

For examples of LUP policies on bluff setbacks, see the suggested modifications to the City of Solana Beach LUP, the City of Laguna Beach LUP and from the San Luis Obispo County LUP for the Estero Area:

- **Laguna Beach General Plan Land Use Element**, beginning on p. 7-20, at: http://documents.coastal.ca.gov/reports/2012/5/W13a-5-2012-a1.pdf
- **San Luis Obispo County Local Coastal Program Major Amendment No. 2-04 (Part 2) Estero Area Plan**, at: http://documents.coastal.ca.gov/reports/2008/7/Th16a-7-2008.pdf
- **County of San Luis Obispo Estero Area Plan**, Ch. 7 Planning Area Standards, at: http://www.slocounty.ca.gov/Assets/PL/Area+Plans/Estero+Area+Plan.pdf
- **Revised Findings on City of Solana Beach LCP Land Use Plan**, suggested modifications on Hazards beginning on p. 22, at: http://documents.coastal.ca.gov/reports/2012/6/Th24a-6-2012.pdf

The examples from the City of Solana Beach and the City of Laguna Beach include bluff setback policies that address sea level rise. For example this one from the City of Solana Beach:

> ***Policy 4.27****:…The predicted bluff retreat shall be evaluated considering not only historical bluff retreat data, but also*

> *acceleration of bluff retreat made possible by continued and accelerated sea level rise, future increase in storm or El Niño events, the presence of clean sands and their potential effect on the pattern of erosion at the site, and any known site-specific conditions…*

It is also important to include setback policies that distinguish accessory structures, to allow their easy removal or relocation.

Additional guidance specific to evaluating sea level rise may be considered by the Commission in the near future.

♦ Redevelopment, Reconstruction and Setbacks in Oceanfront and Blufftop Areas

An LUP Update provides an opportunity to review current geological assessment requirements and setback standards, in the face of permit applications to reconstruct or replace homes and other primary structures on bluff and shorefront areas. Requirements for siting oceanfront or blufftop structures should account for our latest knowledge of the adverse impacts of shoreline armoring on coastal resources and the threats from projected sea level rise. Applying such new information to your jurisdiction could result in updating LCP policies to develop a strategy for addressing redevelopment of shorefront areas and achieve, for example, the gradual relocation of development to minimize risks to life and property and to avoid permanent armoring of the shoreline and the adverse shoreline impacts typically associated with such armoring.

If not addressed, cumulative additions, significant alterations and remodels, redevelopment and repair and maintenance of existing blufftop and shorefront homes and other existing structures can extend their economic life and perpetuate development in a location that over time is exposed to greater hazards. Such development increases the likelihood of eventual proposals for shoreline protection with the associated impacts to public access, recreation, sand supply, and other coastal resources.

Coastal Act policy 30253 requires, in part, that new development neither create nor contribute significantly to erosion or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. To address this requirement, you can update definitions and policies in your LUP to clarify when and how redevelopment or reconstruction activities in shorefront and blufftop areas must comply with LUP geologic stability and erosion control policies.

Because geologic conditions can vary along the coast, an LUP should take an area-wide approach to avoiding and minimizing risks that addresses the specific geophysical and development patterns of the area. In addition, LUPs should address the following:

- Define the coastal bluff and bluff edge that is used as the basis for

establishing the geologic setback line in the manner found in the California Code of Regulations 13577(h);

- Establish the geologic setback line based on the latest erosion rates, factor of safety, sea level rise projections and other pertinent information for the specific area;
- Define "nonconforming" to encompass structures that are located seaward of what would be the current geologic setback;
- Require a thorough alternatives analysis and site reassessment to prohibit or limit additions and improvements to nonconforming structures that perpetuate an inappropriate line of development in a hazardous location;
- Define a threshold for changes to existing structures that requires that an entire redevelopment/major remodel project conform with current setbacks;
- Indicate what level of repair/maintenance activities can be performed on nonconforming oceanfront or blufftop structures and under what conditions;
- Incorporate the best scientific information on sea level rise projections and adaptation planning; develop policies and standards to address an overall strategy to respond to lots that are located completely in hazardous areas, including potential options for acquisition, restrictions on building envelopes, and design standards for constrained lots, etc.

Although there may be existing, legally authorized shoreline protection present on sites with existing development, any existing shoreline protective device has its own design life and, depending on conditions, it may not be appropriate for the geologic analysis to assume the permanence of such structure when assessing erosion rate and appropriate setback calculations for proposed development.

More information about Coastal Act policies related specifically to Shoreline Structures is discussed in Section 9 of this Guide (Shoreline Erosion and Protective Structures) and should be reviewed when revising setback policies.

In establishing or revising setback policies, the LCP should also account for various scenarios where both existing protective structures currently exist and where they do not, and where it is feasible to remove older shoreline protective structures. While existing development may be eligible to be considered for protective structures, the LCP should ensure that an addition or remodel does not: (1) accelerate the need for a shoreline structure (e.g., the addition should not be further seaward than the existing structure); or (2) increase the likelihood of a future seawall beyond the existing development's expected life (e.g., the existing structure is within the bluff top setback and nearing the end of its expected life and the addition is substantial and at the same location).

The Commission has been addressing these issues in recent updates. A recent action includes the approval with suggested modifications of the LUP for the City of Solana Beach:

- **Revised Findings on City of Solana Beach LCP Land Use Plan**, at: http://documents.coastal.ca.gov/reports/2012/6/Th24a-6-2012.pdf

♦ Sea Level Rise

It is also critical that siting, setback and other new development policies for shoreline or flood hazard areas consider and factor in projected rise of sea levels. Planning for shoreline development needs to evaluate risks from flooding, wave uprush, coastal erosion, and extreme events such as tsunamis. When determining the extent of all of these risks, the analysis should factor in the best scientific estimates of projected sea level rise. The current best available science on sea level rise projections is the 2012 National Research Council report, described below. Sea level rise may increase risks of flooding and the rates of coastal erosion during large storms and high tides. You should consider policies in your LCP update that ensure that these evaluations are required and provide guidelines for siting new development.

For tsunami assessments, refer to the discussion later in this section (page 12) for examples of addressing sea level rise in estimating wave runup.

Sea level projections will also factor into coastal erosion rates and determination of applicable setbacks.

At a minimum, wave up-rush studies should consider the consequences of a low-probability wave event (such as the 1% annual probability, also known as the 1 in 100 year event) with the following beach and water conditions:

- Seasonally eroded beach with long-term erosion comparable to what could be expected to occur over the life of the proposed development;
- High tide, water surface increases due to El Niño, Pacific Decadal Oscillation, and such combined with the increase in mean sea level expected to occur over the life of the proposed development.

Development should be sited to avoid the zone of wave run-up.

The National Academy of Sciences published a study *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* that makes independent projections of sea-level rise along California's coast for the years 2030, 2050, and 2100, taking into account regional factors that affect sea level. Such projections should be taken into account when requiring site specific engineering and site analysis for development subject to sea level rise. The information in this report may be superseded in the future by newer reports. The current report is available at:

- **Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future**, *at:* http://www.nap.edu/catalog.php?record_id=13389

There are other resources available to consult. For example, researchers have published this Handbook to assist local governments:

- **Adapting to Sea Level Rise: A Guide for California's Coastal Communities**, at: http://calost.org/pdf/announcements/Adapting%20to%20Sea%20Level%20Rise_N%20Russell_G%20Griggs_2012.pdf

The Ocean Protection Council adopted a resolution providing guidance to 16 state agencies that cooperated in development of the resolution. This guidance includes current estimates of projected sea level rise. LUP policies should assure that impact assessments include the best available science to guide setbacks and siting and design of development. The OPC information can be found here:

- **Memorandum: Update of the State of California Sea-Level Rise Guidance Document**, at: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/Memo_OPC_Council_2013meeting_FINAL.pdf
- **State Of California Sea-Level Rise Guidance Document**, March 2013 update, at: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf

The following are examples of some recent suggested modifications to LUP policies that reflect this approach:

- **Revised Findings on City of Solana Beach LCP Land Use Plan**, at: http://documents.coastal.ca.gov/reports/2012/6/Th24a-6-2012.pdf

  Policy 4.60*: Siting and design of new shoreline development and bluff retention devices shall take into account predicted future changes in sea level. In particular, an acceleration of the historic rate of sea level rise shall be considered and based upon up-to-date scientific papers and studies, agency guidance… and reports by national and international groups such as the National Research Council and the Intergovernmental Panel on Climate Change. Consistent with all provisions of the LCP, new structures shall be set back a sufficient distance landward to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected economic life of the structure.*

- **Marina Del Rey Land Use Plan** A component of the Los Angeles County Local Coastal Program, at: http://planning.lacounty.gov/assets/upl/data/pd_marina-del-rey-2012.pdf

  7. New Development shall be sited and designed to ensure that it is not adversely affected by impacts from climate change,

including the potential impacts from continued and accelerated sea level rise over the expected design life of the new development.

8. Applications for coastal development permits for major development shall include a report prepared by a certified civil engineer describing the hazards to the area from continued and accelerated sea level rise. Siting and design of new major shoreline development anywhere in Marina del Rey Harbor and the siting and design of new or replacement shoreline protective devices shall take into account anticipated future changes in sea level, based on the best available scientific information and projections or range of projections of future sea level. Replacement of a structure refers to more than 50% of the cumulative repair and maintenance. Due to the uncertainties about future sea level rise, a range of likely and extreme rises in sea level shall be used in the planning and permitting of development to assess project sensitivity to future water levels, identify possible adverse consequences to the development and the surrounding area if the anticipated sea level is exceeded, and determine the minimum acceptable amount of future sea level rise that can be used for design purposes.

10. Los Angeles County should study the potential impacts of continued and accelerated sea level rise and flooding of water ways on the existing or proposed structures within all development zones, including impacts to development zones, traffic flow, public access, natural areas and water quality. The County should delineate low lying areas which may be inundated by tsunamis, floods or unusually high tides and/or may be damaged by excessive wave action, and changes to inundation and high damage areas due to continued and accelerated sea level rise.

11. Periodically review tsunami preparation and response policies/practices to reflect current and predicted future sea level trends, development conditions, and available tools and information for preparedness and response.

- **City of Dana Point Harbor Revitalization Plan & District Regulations Land Use Plan Component**, at: http://documents.coastal.ca.gov/reports/2010/10/W13a-10-2010.pdf

8.6.5-1 Siting and design of new shoreline development anywhere in Dana Point Harbor and the siting and design of new or replacement shoreline protective devices shall take into account anticipated future changes in sea level, based on the best available scientific information and projections or range of projections of future sea level.

8.6.5-2 Due to the uncertainties about future sea level rise, a range of likely and extreme rises in sea level shall be used in the planning phase to assess project sensitivity to future water levels, identify possible consequences to the development and the surrounding area if the anticipated sea level is exceeded, and determine the minimum acceptable amount of future sea level rise that can be used for design purposes.

8.6.5-3 OC Dana Point Harbor shall study the potential impacts of sea level rise and flooding of San Juan Creek on the existing or proposed structures along the seawall.

Planning for Tsunamis

Update hazards maps.

Avoid developing in hazardous areas.

Site critical facilities outside of the hazardous zone.

Keep policies current and based on the latest science.

If avoidance is not possible, develop plans for evacuation and examine options to elevate or floodproof key development elements.

As additional information or guidance is available, the Coastal Commission will continue to make it available to local governments at the Commission's website:

- **Global Warming and Climate Change**, at: http://www.coastal.ca.gov/climate/climatechange.html

♦ Tsunami Hazards

Historically, LCP policies have not always adequately addressed hazards caused by certain natural disasters. Updating your LCP is an opportunity to ensure that the full range of possible natural disasters that could occur are addressed using the latest available information. It is important to realize that during the last 20 years, much more information, inundation models and science has become available. In addition recent impacts to coastal areas from the tsunami off Japan underscore the importance of regulating new development in a manner that avoids and minimizes risks from such disasters. Sea level rise will exacerbate the impacts of a tsunami so it is important to incorporate sea level rise estimates into tsunami wave impact analysis.

An example of a recent action addressing tsunami run up hazards and sea level rise is in the suggested modifications adopted for the Humboldt County LCPA No.HUM-MAJ-1-08 (Samoa).

- **Humboldt County LCP Amendment No. HUM-MAJ-1-08 (Samoa),** suggested modifications on pages 56, 62; 71; 87-92, at: http://documents.coastal.ca.gov/reports/2011/3/Th7a-3-2011.pdf

These modifications for example, assure that any new residential lot has a building site where the first habitable floor can be located above the tsunami run-up zone, adequate evacuation plans and building standards for tsunamis, and key infrastructure is located so that it can remain operational as sea level rises.

Additional examples of tsunami hazard policies are provided below:

- **City of Crescent City LCP Amendment No. CRC-MAJ-1-03 (LCP Update),** suggested modifications on pages 131-137 of Exhibit 1, at: http://documents.coastal.ca.gov/reports/2010/10/Th11a-10-2010.pdf

- **Major Amendment Request No. 2-08 to the City of Redondo Beach Certified Local Coastal Program**, in particular suggested modifications on page 11 for hazards, at: http://documents.coastal.ca.gov/reports/2009/7/Th11a-7-2009.pdf
- **The City of Newport Local Coastal Program Land Use Plan,** Section 2.8.2 beginning at p. 2-50, at: http://www.newportbeachca.gov/PLN/LCP/Internet%20PDFs/CLUP_Part%202_Land%20Use%20and%20Development.pdf
- **The County of Del Norte LCP Amendment No. DNC-MAJ-2-03 (LCP Update),** at: http://documents.coastal.ca.gov/reports/2009/10/W17b-10-2009.pdf
- **The City of Crescent City LCP Amendment No. CRC-MAJ-1-09 (Costa Norte),** at: http://documents.coastal.ca.gov/reports/2009/6/F4a-6-2009.pdf

For examples of tsunami policies that include sea level rise see the City of Dana Point's LCP update:

- **Revised Findings for Major Amendment No. 1-10 (Dana Point Harbor Implementation Plan),** especially suggested modifications on p. II-3.10, at: http://documents.coastal.ca.gov/reports/2011/4/W11a-4-2011-a1.pdf

Tsunami inundation maps for evacuation planning have been published by CAL EMA at the following site:

- **Tsunami Inundation Map**, at: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Pages/Statewide_Maps.aspx

The National Weather Service has developed a Tsunami Ready program to help communities plan for a tsunami, many agencies are working to improve our ocean observing systems and provide better information on oceanic and weather conditions, and FEMA is updating the coastal flood maps.

♦ Fire Hazards

Where feasible, development should be sited to avoid areas of very high fire hazard in order to minimize risk to life and property. But where such siting cannot be avoided, you should consider policies that minimize risk through other techniques including managing vegetation to create defensible space around structures. But such vegetation management (sometimes referred to as fuel modification or brush management) if in or adjacent to significant native or environmentally sensitive habitat areas or public parklands can adversely impact and significantly degrade the qualities of those areas.

LCPs can be updated to guide how State defensible space requirements can be applied in a manner that remains consistent with the Coastal Act. Public Resources Code § 4291 mandates two different fire-safe zones for structures in

fire hazard areas: (1) a 30 ft. firebreak zone immediately adjacent to the structure where all flammable vegetation must be removed, and (2) an additional 70 ft. fuel reduction zone. An LUP update should develop policies to clarify how such vegetation management can be conducted to ensure environmentally sensitive habitat (ESHA) and other coastal resource protection can be addressed in: (1) new subdivisions, and (2) new development or redevelopment of existing structures on existing lots. LCPs can also address coastal permit requirements and agency coordination for fuel modification activities.

Updating your LCP offers the opportunity to ensure that fire prevention rules covering your jurisdiction are integrated into the LCP and that there is internal consistence among fire, ESHA and other related resource protection provisions. It is also an opportunity to address issues related to climate change and fire hazards. More information about this can be found in:

- **California Adaptation Strategy**, at: http://resources.ca.gov/climate_adaptation/docs/Statewide_Adaptation_Strategy.pdf
- **Cal-Adapt: Wildfire: Fire Risk Map**, at: http://cal-adapt.org/fire/

Subdivisions

Minimizing hazards can first be addressed in policies on subdivisions and lot line adjustments. To avoid future conflict with resource protection policies, consider the following policies:

- No new lot should be created on which a subsequent dwelling with its necessary fuel modification would be inconsistent with ESHA or scenic and visual resource policies; and,
- No new lot should be created on which a subsequent dwelling with its necessary fuel modification would result in fuel modification encroachment on adjacent public park, recreation or protected open space lands.

An example is in the City of Laguna Beach LUP:

- **Laguna Beach General Plan Land Use Element**, at: http://documents.coastal.ca.gov/reports/2012/5/W13a-5-2012-a1.pdf

  Action 10.6.3 *No new division of land shall be allowed which would require new fuel modification (e.g. vegetation removal) or new fuel breaks in environmentally sensitive habitat areas or on public open space or park lands to protect new development within the resultant lots.*

Existing Lots

Risk and impacts from fire hazards can also be avoided or minimized through policies for siting new development on existing lots. It may be necessary to require design or siting modifications of a building in order for its defensible space zone to be accommodated consistent with ESHA and scenic resource policies.

An example of where this occurred is described in the staff report for:

- **Coastal Permit Appeal A-1-DNC-07-036 (Trask)** at http://documents.coastal.ca.gov/reports/2008/10/F7c-10-2008.pdf

You should consider a policy that ensures that any standards that apply to new structural development should generally apply to any required vegetation management for fire protection as well. For example, in permit review of proposed size and location, not only would the structural footprint be considered but the 100 foot fuel reduction zone around it would be considered as well. If an LCP's ESHA policies prohibit removal of certain vegetation that fuel reduction provisions dictate should be removed, then resizing or relocation of the structure should occur so the fuel reduction zone is modified to avoid the ESHA removal. Similarly, if a proposed expansion of an existing structure would result in a fuel reduction zone intruding into protected ESHA, the expansion would have to be scaled back, relocated and/or not approved. In cases where otherwise impermissible vegetation removal for fuel management purposes must be allowed to prevent a claim of unconstitutional takings of private property, some form of compensatory mitigation could be required. For example, the City of San Diego has a program to buy and place in open space additional land that serves as compensation.

For examples of LCP fuel modification policies see:

- **Laguna Beach General Plan Land Use Element**, policies 7.6 and 10.6 and associated Actions at pages 7-20 through 7-24, at: http://documents.coastal.ca.gov/reports/2012/5/W13a-5-2012-a1.pdf

The findings that the Commission adopted to support policies 7.6 and 10.6 are at:

- **City of Laguna Beach Amendment LGB-MAJ-1-10 Local Coastal Program – Land Use Element (LUE) Update/Land Use Changes**, at: http://documents.coastal.ca.gov/reports/2011/12/W9c-12-2011.pdf

Fire Hazard Management and ESHA

In evaluating fire prevention and potential impacts to ESHA, you should consider policies and implementation requirements that ensure that the evaluation identifies:

- What is the lateral and vertical extent of ESHA (i.e., is the canopy, or understory, or both affected by potential fuel modification or just certain

components ESHA?);

- Which, if any, ESHA species are considered flammable vegetation or combustible growth and under what circumstances;
- What typical fire reduction measures (e.g., limbing, thinning, understory clearance) can be undertaken without adversely impacting the ESHA; and,
- What non-combustible or non-flammable vegetation is compatible with the ESHA;
- What alternatives to ESHA vegetation removal may be available, such as modifying structural exteriors to be composed of non-flammable materials or adding sprinkler systems.

See, for example:

- **City of San Diego Municipal Code,** §142.0412, at: http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art02Division04.pdf

Permit Conditions and Procedures and Agency Coordination

Updating fire hazard management provisions in your LCP is also an opportunity for various departments and agencies, such as the fire, planning and parks, to coordinate. While "100 feet clearance for fire safety" is a typical slogan found on signs, actual application of the fuel modification rules can be much more nuanced. Input and discussion by fire and biological experts could hopefully lead to preparing more specific vegetation management guidance tailored to the ESHA(s) in question, rather than a general 100 foot clearance recommendation. Especially if your community has sensitive vegetation and scenic open spaces, it would be helpful for the various departments to agree on and provide common detailed guidance on which species need to be removed in what locations, which just need trimming and where, and what vegetation can be maintained or planted and where. Your LCP can offer permit conditions for fuel modification such as erosion control, revegetation with fire-resistant species and siting of any equipment access and staging areas out of sensitive areas. The City of San Diego LCP contains an example of this approach:

- **City of San Diego Municipal Code,** §142.0412 regarding brush management, at: http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art02Division04.pdf

Correspondingly, clarifying and coordinating review responsibilities can be helpful so that applicants are not given conflicting advice by planning and fire officials. The following LCP policy strives to achieve such coordination:

- **City of Malibu Land Use Plan,** page 71, at: http://malibucity.org/DocumentCenter/View/4422

4.54 Should the County of Los Angeles Fire Department policies regarding fuel management and fire protection conflict with the policies and provisions of the Malibu LCP, particularly those relating to the protection of ESHA, personnel from the Fire Department and the City of Malibu shall meet and agree on measures to balance the need for fire protection for structures with the need to protect environmental resources.

It also may help to clarify how permit requirements apply to vegetation clearance for fuel reduction purposes. Please see:

- **Section 1 -- Local Coastal Permit Requirements** of Part II of this Update Guide, at: http://www.coastal.ca.gov/la/lcpguide/lcp_ip_guide.pdf

♦ Climate Adaptation

The California Natural Resources Agency, in cooperation with other state agencies, boards, commissions and stakeholder groups, has prepared the 2009 California Climate Adaptation Strategy (CCAS); a 2013 update is in preparation. Since many coastal hazards will intensify with rising sea level and climate change, the recommendations in the CCAS can help plan for hazard avoidance and minimization for LCPs. Key strategies from the 2009 CCAS covered a state policy to avoid future hazards and protect critical habitat, guidance for protecting existing ecosystems, coastal development and future investments, preparation of sea-level rise and climate adaptation plans, support for regional and local planning to address sea-level rise impacts, a statewide sea-level rise vulnerability assessment, and support for essential data collection and information sharing. Details from the plan are at:

- **2009 California Climate Adaptation Strategy**, at: http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF
- **Coastal Conservancy Climate Ready Program**, at: http://scc.ca.gov/category/climate-change/
- **Caltrans Project Development/PIDs Guidance**, at: http://www.dot.ca.gov/ser/downloads/sealevel/guide_incorp_slr.pdf
- **Department of Water Resources (DWR) Integrated Regional Water Management (IRWM) Climate Change Document Clearing House**, at: http://www.water.ca.gov/climatechange/docs/IRWM-ClimateChangeClearinghouse.pdf
- **Department of Water Resources 2009 California Water Plan Update**, at: http://www.waterplan.water.ca.gov/
- **Department of Water Resources Climate Change Website**, at: http://www.water.ca.gov/climatechange/

♦ Multi-Hazard Approach

FEMA is now promoting an "all hazards approach" for hazards management. Rather than planning for each type of hazard separately, this approach looks at the whole environment, recognizes the positives and negative aspects of where to build, and then considers ways to mitigate for the various hazards. Community resilience is being emphasized. FEMA has published:

- **2010 State Hazard Mitigation Plan**, at: http://hazardmitigation.calema.ca.gov/plan/state_multi-hazard_mitigation_plan_shmp

LUP Update Guide

Section 9. Shoreline Erosion & Protective Devices

Deprecated in favor of the Adopted Sea Level Rise Policy Guidance

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LCP Update Guide

Section 10. Energy and Industrial Development

Review the principal Coastal Act policies concerning energy and industrial facilities at Sections 30255, 30260 through 30264, 30232, and 30250. These statutes can be found at: http://www.coastal.ca.gov/coastact.pdf

Many of the new trends in energy and industrial development concern new or expanded development of: oil and gas facilities, desalination, repowering of coastal power plants, telecommunications cables, and other new industrial technologies. While offshore development is regulated by the state, LCPs play a critical role in addressing onshore projects and onshore components of offshore projects, and should be updated to address these trends. However, regulating new facilities is only one aspect to consider. It is also important to address the abandonment or reuse of older facilities and assuring site restoration. At the same time, other industries, such as aquaculture, are also undergoing change.

There is also increased emphasis on developing alternative renewable energy (e.g. solar, wind, wave and tidal technologies) as a climate change adaptation strategy. As a result, it is important that LCPs contain updated land use designations, policies and ordinances capable of addressing changing demand for energy and coastal dependent industry and responding to emerging technologies and their potential impacts.

What should an updated Energy and Industrial Development component include?

An updated map and description of existing energy facilities and coastal dependent industries within the coastal zone, as well as land zoned for such uses,

A clear explanation of which agency regulates energy and industrial development. This should include the Commission's regulatory authority over tidelands and submerged lands and offshore development (refer to Coastal Act section 30519(b)), requirements regarding power plants (refer to Coastal Act sections 30413 and 30264), and requirements for coastal development permits,

An update of the allowable or conditional uses permitted in industrial (or other applicable) zones as well as designation of compatible land use categories adjacent to energy and industrial facilities and hazardous industries,

An update of land uses and zoning ordinances to specify where alternative energy facilities are permitted alone or in conjunction with other development, conditions to assure such facilities conform with and carry out Coastal Act policies, and conditions under which permits for such facilities may be streamlined,

Updated information on industrial and energy facility expansion plans and proposals,

Revised policies regarding the expansion and location of coastal dependent industrial facilities, multi-company use of existing facilities, the location of hazardous industrial development, and the expansion and location of non-coastal dependent industrial development, and

Revised policies and ordinances to address the abandonment of facilities to assure the materials and development are removed, and the site restored.

Where can I read some examples of current LCP energy components?

A couple of local jurisdictions that handle many coastal energy projects have examples of LCP policy and ordinances:

- **The County of Santa Barbara: Coastal Land Use Plan, Chapter 3.6 Energy and Industrial Development,** at: http://longrange.sbcountyplanning.org/programs/genplanreformat/PDFdocs/CoastalPlan.pdf
- **Santa Barbara County Article II: Coastal Zoning Ordinance, Division 9 Oil and Gas Facilities,** at: http://www.sbcountyplanning.org/pdf/A/Article%20II%20Coastal%20Zoning%20Ordinance%2007-2013%20update.pdf
- **The Ventura County General Plan Coastal Area Plan**, at: http://www.ventura.org/rma/planning/pdf/plans/coastal_area_plan_9-16-08.pdf
- **The Ventura County Coastal Zoning Ordinance**, at: http://www.ventura.org/rma/planning/pdf/ordinances/zoning/coastal_zone_ord.pdf

Some examples of policies and ordinances governing local permits for small scale solar and wind energy components or onshore components supporting aquaculture are noted later in this section.

What are some key issues in energy and industrial development?

The following subsections highlight some new information that should be considered in updating policies for onshore energy and coastal dependent industrial development and for alternative energy development.

♦ Directional Oil and Gas Drilling

Improvements in drilling technologies now make it easier to reach reservoirs through directional drilling from existing facilities, thus allowing access without development of new drilling sites. This can help to minimize site

disturbance yet can also raise new issues if such directional drilling extends the life of aging industrial sites. In addition, improvements in directional or "extended reach" drilling technology make possible extracting oil and gas from onshore sites in lieu of installing new offshore drilling platforms.

♦ Decommissioning/Abandonment of Facilities

If there are aging industrial and energy facilities more than 20 years old in a jurisdiction, the LCP may need to be updated to include policies to address the decommissioning, remediation and removal of such old facilities and infrastructure. LCP policies should address such things as timing of equipment removal, pipeline removal/abandonment, site contamination assessment, site restoration requirements, etc. Policies can require that such activities to assure removal and restoration be explicit as part of a development plan submittal. In some cases a special demolition and reclamation permit may be required to regulate abandonment and removal of development. The LUP policies should outline the standards to guide remediation and restoration. For examples of some such policies, refer to the sample LCP Energy Components policies of Santa Barbara and Ventura Counties linked above. For example of ordinances to regulate such activities see:

- **Santa Barbara County Article II: Coastal Zoning Ordinance,** Section 35-170, page 291, at: http://www.sbcountyplanning.org/pdf/A/Article%20II%20Coastal%20Zoning%20Ordinance%2005-2013%20update.pdf

♦ Onshore Components of Offshore Energy Development

LCP updates should consider overall industrial development policies to guide onshore components of any future offshore oil and gas or other energy development. Many of these energy facilities will be within the Commission's continuing permit jurisdiction, but some may result in onshore infrastructure. In addition, other energy development may occur in the local jurisdiction. The LCP should therefore include updated policies and ordinances to address, for example:

- Spill prevention and response provisions for any industrial or energy development,
- Land Use designations to locate onshore facilities in a manner that take into account best scientific estimates of projected sea level rise, that minimize risks to life and property, and will not require shoreline protective devices;
- Siting and design that will assure that public access will not be impacted;
- Minimizing and mitigating impacts from transmission lines, pipelines and pipeline landings,

- Minimizing and mitigating impacts of truck transportation,
- Avoiding, minimizing and mitigating impacts to water quality,
- Avoiding, minimizing and mitigating impacts to fishing and recreational boating, and
- Assuring multi-company consolidation of facilities and provisions for open or managed access to facilities.

♦ Power Plants

Since 2001 the Coastal Commission has reviewed at least six proposals to renovate and rebuild older power plant facilities to expand the life of the facilities and to increase electrical generating capacity. The Coastal Act requires the Coastal Commission to designate areas allowing reasonable expansion of existing power plants and areas where power plants may not be located due to impacts on coastal resources. Many LCPs developed in the 1980s reflect that guidance and, in some cases, specifically identify areas for power plant expansion. More recently, at least two State policies and one court decision could eliminate or reduce the use by coastal power plants of once-through cooling systems. In 2006, the Ocean Protection Council adopted a policy to reduce the adverse effects of these systems. In 2007, a federal court issued a decision that could eventually eliminate or significantly reduce the use of many once-through cooling systems. In 2010, the State Water Resource Control Board adopted a policy to phase out or reduce the adverse effects of these systems over the next decade or so. Existing LCPs should be reviewed to assure that policies and land use designations adequately address possible expansion and/or decommissioning of facilities, and address the likelihood that power plant once-through cooling systems will be phased out over the next several years and replaced with alternative cooling systems.

For background on power plant siting, see also:

- **Resolution of the California Ocean Protection Council Regarding the Use of Once-Through Cooling Technologies in Coastal Waters,** at: http://www.opc.ca.gov/2006/04/resolution-of-the-california-ocean-protection-council-regarding-the-use-of-once-through-cooling-technologies-in-coastal-waters/
- State Water Resource Control Board. **Once-Through Cooling Policy**, at: http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/
- California Energy Commission, **Issues and Environmental Impacts Associated With Once-Through Cooling At California's Coastal Power Plants**, at: http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013.PDF

- California Energy Commission, **Issues and Environmental Impacts Associated With Once-Through Cooling At California's Coastal Power Plants**, **Appendices**, at: http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013-AP-A.PDF
- U.S. Court of Appeals for the Second Circuit, **Riverkeeper, Inc. et. al vs. U.S. Environmental Protection Agency,** January 25, 2007 decision, at: http://www.catf.us/advocacy/legal/CWIS/RiverkeepervEPA%20P2%2004-6692-ag_opn.pdf

♦ Desalination

In the last decade, as technologies have developed, more jurisdictions are exploring development of desalination facilities. However, many older LCPs did not take into account this possible water source and did not incorporate the development standards needed to address the effects of increased availability of water supplies from this source.

Many Coastal Act policies must be considered in updating LUP industrial and public works designations, policies, and standards that may apply to development of future desalination projects. For example, you will need to address Coastal Act policies that require that marine resources and biological productivity be protected and the effect of entrainment be minimized. Policies to protect and provide public access must be addressed as well. In addition, Coastal Act policies related to potential cumulative impacts of growth resulting from the water supply created must be addressed. These include, for example, requirements to concentrate development (PRC 30250), minimize energy consumption and vehicle miles traveled (30253(d)) and size and design public works facilities to accommodate needs generated by the development and, if limited, to support certain priority uses (PRC 30254). This is especially important if the proposed water supply from desalination policy implementation will result in creating new supply capacity as opposed to replacing an existing water source.

The LCP should also include provisions that ensure that as part of project planning, information is gathered that documents the extent of local water conservation efforts and opportunities and whether a proposed desalination facility fits within the local water supply portfolio. LUP policies should require evaluation of alternatives that address desalination's relatively high energy use compared with other water sources, including conservation measures, water recycling and reclamation, and ways to reduce and mitigate that energy demand as required by Coastal Act section 30253(d). As noted above, the LCP should also address the impacts of growth and intensity of development should such water supplies become available and must tie the amount of water provided through such facilities to approved growth levels in the water service area. The Coastal Commission report referenced below

discusses these and other issues that will affect how a proposed desalination facility may or may not conform to Coastal Act requirements.

Past Commission actions on coastal development permits offer some examples of some of the unique issues raised by desalination, and how the Commission has addressed Coastal Act policies. For example, the Commission has adopted measures that ensure the use of subsurface intakes where feasible, that ensure public access to coastal water resources, and that provide for adequate protection of water quality and other environmental resources. LCP updates should consider similar measures.

For more information about Desalination issues under the Coastal Act see:

- California Coastal Commission, **Seawater Desalination and the California Coastal Act,** March 2004, at: http://www.coastal.ca.gov/energy/14a-3-2004-desalination.pdf

For some Commission actions on LCP Amendments see:

- **City of Sand City LCP Major Amendment No. 1-03**, at: http://www.coastal.ca.gov/sc/Th10b-3-2004.pdf

For some examples of recent CCC permit actions see permits for development of Pilot Desalination Facilities in the Cities of Santa Cruz, Long Beach and Sand City:

- **Coastal Development Permit 3-06-034 (City of Santa Cruz)**, at: http://documents.coastal.ca.gov/reports/2006/10/W11a-10-2006.pdf
- **Coastal Permit Appeal A-5-LOB-03-239 (City of Long Beach)**, at: http://www.coastal.ca.gov/energy/Th10a-10b-8-2003.pdf
- **Coastal Permit Appeal A-3-05-10 (City of Sand City)**, at: http://www.coastal.ca.gov/sc/5-2005-W8a.pdf

♦ Aquaculture

Strong consumer demand for seafood and the recent passage of state and national policies for the development of sustainable marine aquaculture is likely to promote the growth of this industry in coming years. While it is anticipated that most aquaculture facilities in coastal areas will continue to be located offshore within the Coastal Commission's retained permit jurisdiction, the potential also exists for new facilities to be developed within onshore areas within local permit jurisdiction. As a result, LCPs should clarify that such facilities require a coastal development permit and may be given priority under the Coastal Act as coastal dependent uses. Updated policies should reassess siting and design standards for onshore facilities (including support structures such as intake and outfall lines, office and storage buildings, any new road construction, etc.) to ensure that the LCP adequately addresses potential adverse impacts such as:

- The discharge of re-circulated water or effluent with high levels of organic enrichment, bacteria, virus, microorganisms and/or parasites to the environment;
- The entrainment and impingement of marine life associated with seawater intake;
- The use of chemicals, including the use of antibiotics and/or anti-fouling treatments;
- Public access, space and/or use conflicts with other coastal dependent uses and other adjacent land uses;
- Siting of facilities to avoid or minimizing exposure to coastal hazards such as erosion and sea level rise to avoid the need for future shoreline protective structures.

These facilities have been addressed in some LCPs through conditional uses in land use designations for light industrial, agricultural industrial or rural lands and associated zones. Examples of some LUP policies include:

- **County of San Luis Obispo: San Luis Bay Area Plan** (rev 2009), at: http://www.slocounty.ca.gov/Assets/PL/Area+Plans/San+Luis+Bay+Coastal+Area+Plan.pdf
- **County of San Luis Obispo: South County Coastal Area Plan**, at: http://www.slocounty.ca.gov/Assets/PL/Area+Plans/South+County+Coastal+Area+Plan.pdf

Example ordinance language includes:

- **County of San Luis Obispo: Coastal Zone Land Use Ordinance**, see page 8-16, at: http://www.slocounty.ca.gov/Assets/PL/Land+Use+Ordinances/Title+23+-+Coastal+Zone+Land+Use+Ordinance/Title+23+Coastal+Zone+Land+Use+Ordinance.pdf
- **Monterey County LCP: North County Land Use Plan**, see pages 15 and 49, at: http://www.co.monterey.ca.us/planning/docs/plans/NC_LUP_complete.PDF
- **Santa Barbara County Article II: Coastal Zoning Ordinance,** at: http://www.sbcountyplanning.org/pdf/A/Article%20II%20Coastal%20Zoning%20Ordinance%2005-2013%20update.pdf

Sec. 35-136. Aquaculture.

1. Aquaculture facilities located in areas designated as rural on the land use plan maps shall be sited and designed to be compatible with the natural surroundings.

2. To minimize impacts on coastal visual resources, structures shall be well-screened, and depressed below grade when feasible.

3. Intake and outfall lines for ocean water shall be underground unless not feasible for a particular operation, i.e., salmon culture.

4. If above-ground channels or pipes are necessary, adequate provisions for lateral beach access shall be required.

♦ Emerging Technologies to Provide Renewable Energy

Commercial technologies to produce energy from wind, waves and tides have advanced. While most wave energy proposals are offshore within the Commission's regulatory jurisdiction, local governments may see more proposals for onshore support facilities in conjunctions with large industrial offshore proposals or proposals for development of other alternative energy facilities onshore, such as wind and solar energy facilities. Renewable energy facilities can be proposed as large scale commercial operations, small scale freestanding accessory structures or attached additions to other buildings, and standards for regulating such facilities will differ. For example, wind turbines or other alternative energy structures proposed on a large agricultural parcel may need to consider siting and intensity issues and impacts to agricultural land protection. Small scale attached additions may need to address height limits. Because the potential coastal planning issues may differ, the updated LUP land use designations and policies should consider the range of possible type, siting and scale of facilities and should differentiate appropriate policy standards.

An update of the LUP can provide the opportunity to develop policies that encourage and protect the ability to use alternative energy consistent with the Coastal Act, including Section 30253(d) that provides that new development minimize energy consumption.

There are other state provisions which pertain to the review of solar energy systems (for example, see Section 714 of the Civil Code and Section 65850.5 of the Government Code.) These other codes provide that it is the policy of the state to promote and encourage the use of solar energy systems and to remove obstacles to their installation and use including minimizing the costs of permitting such systems.

However, the Coastal Act standards still apply to approval of solar energy systems. Therefore, LCPs should be updated to encourage and facilitate development of renewable energy in a manner that meets requirements of Chapter 3 policies of the Coastal Act in the siting and design of such facilities, and in considering ways to avoid and to mitigate potential resource impacts.

Updated LCPs should anticipate impacts from such emerging technologies and ensure that updated policies are adequate to address, for example,

- Protection of the scenic and visual qualities of coastal areas and compatibility with the character of the surrounding areas,
- Protection of wildlife such as birds and bats from turbine impacts, through design modifications, alternative technologies and monitoring,
- Siting to protect sensitive coastal resources,
- Conflicts with other users of the coast such as recreational users,
- Protection of marine life, water quality and public access in the siting and design of any shore-based energy devices.
- Siting of on-shore components of offshore communication/transmission cables (such as connections and facilities),
- Requirements for coastal development permits consistent with the Coastal Act and California Code of Regulations, including any measures under which permits for small scale renewable energy facilities would be streamlined.

The Commission has acted on a number of small projects for additions of solar panels to existing structures and has, in many cases, streamlined review of these applications. The Commission has reviewed only a few proposals for freestanding solar arrays or wind turbines and in some cases denied or conditioned them for inconsistencies with policies of the Coastal Act or certified LCP, as applicable. It may be useful to review these cases noted below to better understand some of the specific coastal zone issues addressed by the Commission.

The Commission approved facilities for a solar panel, wind turbine, and associated skid-mounted sensors onto the roof of an existing building at Santa Cruz Municipal Wharf. The permit was limited to one year as part of a research project designed to evaluate the efficacy of these alternative energy sources. These types of pilot projects will help further identify ways the Commission can encourage renewable energy projects while protecting sensitive coastal resources. See the staff report at:

- **Coastal Development Permit No. 3-10-061 (City of Santa Cruz & UCSC, Santa Cruz),** March 9, 2011, at: http://documents.coastal.ca.gov/reports/2011/3/F11a-3-2011.pdf

Information about how to consider Coastal Act policy concerns is available by reviewing other Commission actions that may have denied or conditioned such development, for example, at:

- **Coastal Permit Appeal A-3-SCO-05-073-A1 (Porter SFD Modifications),** January 2010, at: http://documents.coastal.ca.gov/reports/2010/1/Th9a-1-2010.pdf

For a proposal for wind generating turbines by the Los Angeles Unified School District, the Commission did not authorize the portion of the original project to

allow construction of 36 electric generating wind turbines, but approved other modifications. The original permit approval for a high school was conditioned for a one year avian survey before the District could submit an amendment for proposed wind turbines. Commission action on subsequent amendments approved 6 vertical axis wind turbines with conditions to mitigate potential adverse impacts to birds and bats and modifications for solar energy canopies over previously approved parking lots. See the Commission report at:

- **Coastal Development Permit 5-08-251 (Los Angeles Unified School District)**, January 2009 and as amended July 2012, at: http://documents.coastal.ca.gov/reports/2012/7/Th17a-7-2012.pdf

Another appeal was a partial denial of a proposed permit amendment for a 60-ft.-high, 3 kw. wind turbine mounted on a 60 ft. high, 1 sq. ft. lattice structure stabilized with guy wires on a site west of Highway One, in an area designated "highly scenic" in the County's LCP .

- **Coastal Development Permit No. A-1-MEN-94-105-A3 (Garrison, Mendocino Co.),** September 2006, at: http://documents.coastal.ca.gov/reports/2006/9/F10a-9-2006.pdf

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LCP Update Guide

Section 11. Timberlands

Forests containing timber resources are prevalent in parts of the rural coastal zone. The long-term productivity of timberlands is to be protected under the Coastal Act. Land divisions of timberlands into parcel sizes that are not economically viable should not be approved.

Updating the LCP offers an opportunity to undertake a current inventory of timber resources and to research what is an economically viable parcel size in your county. If necessary, land use designations and densities and development standards can then be revised to maintain consistency with Coastal Act policies. You can also ensure that provisions related to timber harvest are consistent with recent legal decisions on the subject.

***For Coastal Act policy regarding timberlands**, -- Please see Section 30243, at: http://www.coastal.ca.gov/coastact.pdf*

What should an updated Timberlands component include?

- Inventory of commercial timber species;
- Land use and zoning designations to allow for timber harvesting in appropriate locations;
- Land use and zoning designations that do not allow for conversion of commercial timberlands to other uses;
- Land use intensities and corresponding zoning district regulations that ensure minimum parcel sizes in timberlands that are economically viable;
- Land use and zoning locations, permitted uses and regulations that allow for adequate support facilities for any permitted timber harvesting;
- Land use and zoning measures that do not preempt State regulation of timber harvesting by the Department of Forestry and Fire Protection;
- Procedures for coordinating with State timber harvest reviews;
- Land use and zoning regulations that address timber harvesting and other tree cutting that is not covered by other state law (see Section 4 Environmentally Sensitive Habitats and Other Natural Resources).

See **Guide to the Forest Practice Act and Related Laws: Regulation of Timber Harvesting on Private Lands in California,** *(Sharon E. Duggan and Tara Mueller. Solano Press 2005) for a comprehensive discussion of state law on timber harvesting, at: http://www.solano.com/pdf/FP_contents_preface.pdf*

Where can I read some examples of updated timberland sections?

Santa Cruz County updated its timber harvest provisions to be in compliance with the California Supreme Court decision *Big Creek Lumber Co. v. County of Santa Cruz (2006) 38 Cal. 4th 1139*:

- **Santa Cruz County LCP Amendment No. SCO-MAJ-1-07 Part 1 (Timber Production Zones),** at: http://documents.coastal.ca.gov/reports/2007/6/W13a-6-2007.pdf

What are some issues to address in an LCP update of timberland policies?

An LCP update should result in clarity as to where timber harvesting is allowed and where it is prohibited based on a current inventory of timberlands. The update can also ensure that other allowed uses in and adjacent to timberlands are compatible with, and supportive of, any allowable timber harvesting. An LCP update offers the opportunity to establish policies and procedures for participating in State timber harvest reviews. For any allowed timber harvesting that is not regulated by the State, an LCP update should ensure that the activity is permitted consistent with other LCP policies that carry out the Coastal Act (see Section 4 Environmentally Sensitive Habitats (ESHA) and Other Natural Resources).

♦ Timber Harvest Locations

Please see ***California Timberland Productivity Act of 1982****, at: http://leginfo.ca.gov/calaw.html Checkmark Government Code and search for "51100"*

Updating your LCP offers a chance to review the current location of any timberlands and whether they are designated appropriately in your land use plan and zoning ordinance.

Under the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 and the subsequent California Timberland Productivity Act of 1982, identified timberlands must be zoned TPZ (Timberland Production Zone). Therefore, the TPZ district regulations and zoning map locations will be part of your coastal implementation plan. Correspondingly, your coastal land use plan should have a land use designation or designations where timber harvesting is allowed in order for the TPZ zoning to be consistent with and adequate to carry out the land use plan.

If a landowner requests TPZ zoning for any non-TPZ zoned land, and it meets the criteria for commercial timberlands, then the rezoning process would occur pursuant to Government Code § 51113. You can specify a minimum parcel size to be eligible for a rezoning to TPZ:

- **Santa Cruz County LCP Major Amendment Number 1-08 Part 2 (Minimum Parcel Size in Timber Production Zoning District),** at:

http://documents.coastal.ca.gov/reports/2008/11/W11e-11-2008.pdf

Although it is highly desirable for you to amend your LCP to show any zoning changes to TPZ so that the LCP zoning maps remain current, the court ruled in the *Big Creek* decision that this is not mandatory.

If a current inventory reveals additional timberlands beyond those zoned for or eligible for TPZ, additional steps can be taken. You can first make a determination whether the lands are suitable for harvesting and, if so, you can then determine an appropriate land use designation for the lands. While your LCP could allow for timber harvesting in a district other than TPZ, this is not mandatory. A landowner always has the option of requesting a rezoning to TPZ in order to pursue the right to harvest defined commercial timber on his/her property under established procedures. The California Supreme Court in *Big Creek* ruled that local government retains the authority to establish the land use designations and zoning districts in which timber harvesting is allowed.

An LUP update can evaluate whether to allow (or retain allowance for) timber harvesting in any land use designations and zoning districts other than TPZs. This evaluation should consider, from a Coastal Act perspective, all potential impacts that might be caused by harvesting, although the harvesting itself will be regulated by the California Department of Forestry and Fire Protection (CALFIRE). Impacts on any adjacent non-forested lands are important to address, especially if the adjacent lands are designated for uses and resources protected as priorities under the Coastal Act, including agricultural lands, environmentally sensitive habitat area or visitor-serving uses. For example, timber harvesting operations could disrupt adjacent farming operations because of increased equipment transportation. Timber harvesting that increases erosion and noise may also impact adjacent ESHA or discourage visitor use.

Please see details of ***CALFIRE's review process for timber operation applications,*** *at: http://www.fire.ca.gov/resource_mgt/resource_mgt_forestpractice_thpreviewprocess.php for.*

♦ Compatible and Supporting Uses

In updating your LCP, you should also review whether other uses allowed in or near timberlands are compatible with harvesting and whether facilities to support the timber harvesting are adequately provided for in the LUP.

Under the Coastal Act, the long-term productivity of timberlands shall be protected and conversion of commercially viable stands of timberland shall not occur (except for necessary timber processing and related facilities). Thus, your LCP should contain policies to reflect these mandates. Related, under the California Timberland Productivity Act, any other allowable uses in the TPZ district must be compatible with timber harvesting. Thus, in the TPZ district other uses should be limited to those that will not impinge on and that can co-exist with timbering activities

such as the operation of heavy equipment (and its resultant noise and traffic). Some uses could be considered compatible if they were restricted to times when harvesting was not occurring, such as recreation. For both the TPZ district and any non-TPZ districts where timber harvesting is permitted other allowable uses should be governed by siting and design criteria to assure that the timberlands remain intact and harvestable. For example, approval of other uses should not preclude logging equipment storage or access to timberlands. Residences in or adjacent to timberlands can be buffered from timberlands. An example of a provision for a buffer zone between legal residences and commercial timber harvest operations is:

- **San Mateo County Implementation Plan Major Amendment No. 2-00 Timber Harvest Buffer**, at: http://www.coastal.ca.gov/nca/lcpa-smc-2-00.pdf

This ordinance was upheld in *Big Creek Lumber v. County of San Mateo (1995) 31 Cal. App. 4th 418.* Under Government Code § 51119.5, the minimum parcel size that TPZ lands can be divided into is 160 acres. If your jurisdiction allows for timber harvesting in non-TPZ districts that have other allowed uses (e.g., single family residences), then consider policies defining minimum parcel sizes to ensure that timberlands do not become rural residential enclaves where viability of timber harvesting becomes problematic. The following includes a comparison of minimum parcel sizes for timber production for various counties:

- County of Santa Cruz Planning Department, **Minimum Parcel Size to Qualify for TP Zoning**, Figure 2, at: http://sccounty01.co.santa-cruz.ca.us/bds/Govstream/BDSvData/non_legacy/agendas/2007/20070424/PDF/032.pdf

Land use designations and zoning districts should also provide for appropriate support facilities for any timber harvesting that is allowed. These could include helicopter pads, storage areas or sawmills. Often these uses would be appropriately located within timber harvest districts. In other cases, these uses may be more appropriately located in accessible commercial and industrial areas, depending on available utilities, transportation corridors and public services. Not every possible support facility needs to be accommodated within the coastal zone, provided that restrictions do not result in the inability to harvest timber that otherwise would be permissible to harvest under the Forest Practices Act. Any such restrictions should be based on consistency with Coastal Act policies (e.g., requirements to site a sawmill to avoid environmentally sensitive habitat areas) and the consideration of other available alternatives for transporting and processing timber.

♦ Timber Harvest Reviews

Please see ***Z'berg-Nejedly Forest Practice Act of 1973*** *(Chapter 8 of Part 2 of Division 4 of the Public Resources Code, commencing with Section 4511), at: http://leginfo.ca.gov/calaw.html Checkmark Public Resources Code and search for "4511"*

Coastal Act considerations have been incorporated into the Forest Practices Act rules *for certain special treatment areas. Descriptions of these areas and their rules can be found in Title 14, California Code of Regulations, Chapter 4, Subchapters 4, 5 & 6 Forest District Rules. Article 11 Coastal Commission Special Treatment Areas, at: http://www.fire.ca.gov/resource_mgt/downloads/2007FPRulebook_wDiagrams.pdf#page2 or at: http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome.*

Under the Coastal Act, timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 do not require a coastal development permit (see sidebar and Coastal Act Section 30106). Thus, it is not necessary for an LCP to contain policies that govern these timber harvests, as such provisions could not be implemented through any local discretionary action. However, local governments are typically invited to participate in review teams that undertake Pre-Harvest Inspections of proposed logging sites, may submit comments on proposed timber harvest plans to the CALFIRE director, and may request that a public hearing on a timber harvest application be conducted. Therefore, your LCP could contain policies that guide your participation in CALFIRE's process, as long as they are clearly described as advisory. They cannot confer regulatory authority on timber harvests.

Likewise, you can institute procedures to formalize your city's or county's participation in timber harvest plan consultations addressing such matters as:

- How and when local input is gathered and submitted;
- Criteria for deciding when to participate in the timber review teams;
- Who is authorized to be a team member and to comment on your jurisdiction's behalf;
- How and when you might request a public hearing; and,
- How you would coordinate with the Coastal Commission as to the Commission's comments and participation on the timber review teams.