Draft Findings of the Monterey County LCP Periodic Review

CHAPTER 2: Land Use and Public Works Infrastructure

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A. Coastal Act Policy Framework

The California Coastal Act includes several policies that address the location, type, and intensity of new development to ensure the protection of coastal resources. To protect rural lands, agriculture and open space, as well as limit urban sprawl, the Coastal Act requires the establishment of stable urban-rural boundaries (Section 30241a). New development also must be located within, contiguous to or in close proximity to existing developed areas with adequate public works facilities such as water supply and wastewater treatment (Section 30250a). Where such areas are not available, any approved development must be located where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. This includes protection of groundwater basins and sensitive habitats that may be affected by water withdrawals, wastewater disposal, and polluted runoff.

The Coastal Act also includes a specific policy that limits rural land divisions (Section 30250a). Another policy provides that and new or expanded public works facilities must be sized to serve planned development and not induce additional, unplanned development (Section 30254). Highway 1, however, must remain a two lane scenic road in rural areas. Where resources or services are limited, coastal dependent land uses, essential public services, basic industries, public and commercial recreation and visitor-serving land uses shall not be precluded by other development (Section 30222).

The Coastal Act also encourages the protection and development of facilities to support recreational boating and commercial fishing as priority uses (Section 30224 and Section 30234). And, pursuant to Section 30255, "Coastal-dependent developments shall have priority over other developments on or near the shoreline."

Agriculture is also a priority land use. The Coastal Act requires that the maximum amount of agricultural land be maintained in agricultural production and that conflicts between urban and agricultural land uses be minimized. The long-term viability of soils must also be protected and conversions of agricultural land to other uses are strictly limited (Sections 30241, 30241.5, 30242, and 30243).

Collectively, these requirements reflect a fundamental goal of the Coastal Act: protection of coastal resources by concentrating new development in existing developed areas able to accommodate it. The Coastal Act requires local governments to adopt local coastal programs that comprehensively reflect the sum total of these policies. The coastal land use plan (LUP) component must be

"sufficiently detailed to indicate the kinds, location, and intensity of land uses, the applicable resource protection and development policies…"(Section 30108.5).

In order for a jurisdiction to effectively implement its local coastal program in conformance with these Coastal Act provisions, it must have and follow policies that, for example:

- Designate boundaries between urban and rural land;
- Designate productive agricultural land for that use;
- Require buffers between agricultural land and adjacent uses;
- Have clear criteria to evaluate whether any agricultural land can be converted to non-agricultural uses;
- Provide for avoiding or mitigating indirect impacts on agricultural land;
- Designate appropriate lands for priority visitor-serving and coastal-dependent uses;
- Provide urban densities and uses that can be accommodated by public services;
- Allocate limited public service capacities according to Coastal Act priorities;
- Show densities and uses that can be accommodated by available groundwater and surface water supplies, without causing resource damage; and
- Limit Highway One in rural areas to only two-lanes.

B. Monterey County Certified Local Coastal Program

1. Background

Monterey County is situated along a topographically varied portion of the coast. While most of the County's larger urban areas within the coastal zone are included in separate municipalities (i.e., the cities of Marina, Sand City, Seaside, Monterey, Pacific Grove, and Carmel-by-the-Sea) each with their own LCP (or LCP in progress), the unincorporated County includes a number of smaller urban and rural areas that stretch along the coast away from these cities. Most of the remainder of the northern part of the County's coastal zone is agricultural and rural residential. In the south it is primarily grazing or forest service land.

In North County, the Castroville, Moss Landing, and Las Lomas areas all have community water and wastewater systems. The Cal-American Water Company and the Carmel Area Wastewater District serve the Del Monte Forest Planning Area and portions of the Carmel Area.

2. Summary of Local Coastal Program Provisions

Monterey County's land use provisions are most apparent in the land use maps, which show development patterns and densities similar to those that existed prior to certification. These maps are backed by explanatory text and other policies directing certain land uses to certain locations.

The *North County Land Use Plan* concentrates higher density development in Las Lomas, Oak Hills, and off Castroville Boulevard and Moss Landing. The coastal area is primarily designated for agriculture. Inland designations include some agriculture and rural residential development. Slough areas are designated resource conservation. Some specific directive policies include:

> *4.3.5.4: Where there is limited land, water, or public facilities to support development, coastal-dependent agriculture, recreation, commercial and industrial uses shall have priority over residential and other non-coastal-dependent uses.*
>
> *4.3.5.9: Development and use of the land, whether public or private, must conform to the policies of the plan, must be consistent with the availability of public services and with established urban service lines, and must meet resource protection standards set forth in the plan.*

The *Del Monte Forest Land Use Plan* designates most of the area as medium density residential. Undeveloped tracts have a resource constraint overlay which prevents subdivision until there are adequate public services available. Golf courses are designated Open Space Recreational. There is one designated commercial core by the Pebble Beach lodge. Coastal-dependent land use, recreation, and visitor-serving land uses have priority for limited public service capacities (Policy 72).

The *Carmel Area Land Use Plan* designates the area around the City of Carmel-by-the Sea as Medium Density Residential and Carmel Highlands neighborhoods as Low Density Residential. The uplands that were private when the LCP was certified are primarily designated Watershed and Scenic Conservation (1 dwelling unit per 40 or 80 acres) while public areas are designated Scenic and Natural Resource Recreation. In addition to having directive policies similar to those quoted above for North County, the *Carmel Area Land Use Plan* provides:

> *4.4.2.1: The Carmel River shall be considered the dividing line between the urban and rural areas of the Monterey Peninsula. The river shall provide the natural boundary between urban and higher intensity uses to the north and rural, lower intensity uses to the south.*
>
> *4.4.2.2: Agricultural activities, passive and low-intensity recreation and rural residential use of the Carmel area's large private landholdings are the most appropriate land uses for these areas.*
>
> *4.4.2.5: The provision of recreational opportunities and facilities shall be compatible with the preservation of sensitive coastal resources.*

4.4.2.7: …Where conflicts occur between one or more provisions of the plan, such conflicts shall be resolved in a manner which on the whole is the most protective of significant coastal resources.

4.4.2.9: Many types of land uses found in other locations in the County are inappropriate to the Carmel area and are in conflict with protection of the rural character and the scenic and natural resources of the area and are therefore not provided for in the plan. Among these uses are intensive recreational uses such as golf, cinemas, mechanized recreation other than non-motorized bicycling and scenic driving, boating facilities; industrial and energy development - offshore or onshore; large-scale mineral extraction and commercial timber harvesting; and manufacturing other than cottage industry or art production. In general, only land uses of a character, scale or level consistent with the goal of preserving the coast's natural beauty and tranquility will be permitted in the Carmel area.

The *Big Sur Coast Land Use Plan* designates the majority of private land Watershed and Scenic Conservation (1 dwelling unit per 40 to 320 acres) and the federal land as National Forest. The *Big Sur Coast Land Use Plan* has a policy similar to Carmel Area's 4.4.2.9 and also provides that:

5.4.2.4: Land divisions in general are discouraged and are especially inappropriate on large ranches.

Monterey County also encompasses Fort Ord. Because it has been federally owned, there is no land use plan for that area. Finally, there are also two uncertified areas in the Carmel Area at Yankee and Malpaso Beaches.

In terms of public services, much of the County is rural, and under the LCP these areas are to remain served by wells and septic systems. The LCP includes policies to ensure that they are installed in an environmentally appropriate manner. In North County strict urban service boundaries are in place around the urban areas and wastewater service is to be allocated under a priority system that follows Coastal Act priorities. In Del Monte Forest, urban level services are required and the LCP contains specific water and wastewater allocations. In the Carmel Area served by Cal-Am Water Company some capacity is reserved for priority uses. For wastewater collection, sewer service is limited to urban areas or rural enclaves. The Big Sur coast relies on on-site or small water or wastewater facilities and thus there are no LCP policies addressing service area boundaries or priority allocations.

C. Local Coastal Program Implementation Issues

1. Overview of Issues and Recommendations

The most significant LCP land use and infrastructure issues in Monterey County fall into three main areas: agriculture, public services, and land use designations. Of the three major public services, water supply is most significant, followed by road capacity. Of course, almost every issue has a land

use component, but the ones examined or referenced in this chapter are those that are multi-faceted. Land use designation changes to protect sensitive habitats are found in Chapter 3. In turn the land use issues discussed herein are based on coastal resource concerns. For example, the Cal-Am and Big Sur water issues derive from concerns about the adequacy of river water flows to maintain fish habitat. This section provides a summary overview of the issues covered in this Periodic Review.

a. Agricultural Issues

Productive agricultural land is concentrated in North Monterey County. Issue scoping revealed that Monterey County's prime coastal zone agriculture has not been faced with the development threat found in other California counties. The County has maintained fairly tight agricultural zoning. Few permits have raised issues of prime land conversion. One that did, a subdivision of the Triple M Ranch, was rendered moot when the Elkhorn Slough Foundation purchased the land (**Issue AG-2: Triple M Ranch**). Further review of an overlay of prime land onto the land use designations reveals several other instances of a residential designation, which could threaten the long-term viability of the agricultural land (**Issue AG-1: Prime Agricultural Land**). Recommendations for appropriate designations are shown on pages 121-124 of Appendix A. Also, two parcels of grazing land on the Armstrong Ranch at the border of Marina have an outdated industrial designation (see Issue LU-16 below). The biggest threat to agriculture in the Monterey coastal zone comes from an overdrafted water supply, both directly as wells near the coast salt up, and indirectly from proposals to fallow agriculture land to reduce water consumption.

b. Public Service Issues

(1) Water Supply

Coastal Monterey County is dependent on its own water sources, not imported water. Unfortunately, much of Monterey County's coastal zone has groundwater or surface water overdraft issues. For North Monterey County, information in several reports and initiatives needed review and updating in light of changed circumstances since LCP preparation (see Issue LU-8 below). Likewise, in the Cal-Am service area covering Del Monte Forest and part of the Carmel Area, since LCP certification the water situation had become much more critical, and assumptions that there would be additional water available to serve new development are currently obsolete (see Issue LU-9 below). Finally, in the Big Sur River and Sycamore Canyon watersheds, the designation of the steelhead that spawn in the river as endangered and the applications for major water withdrawals has heightened concerns with the impacts of low flows on the resources of the river. (See Issue LU-10 below).

(2) Road Capacity and Design

Highway One is the main coastal route through Monterey County. Capacity problems are most evident in the North County and Big Sur Coast segments where, in keeping with the Coastal Act Section 30254 directive, it remains a two-lane road. Given proposals for widening the highway through North Monterey County and some conflicting policy direction in the certified LCP, recommendations for policy updates are discussed below under Issue LU-11. For the Big Sur Coast, there is no disagreement that Highway One will remain two lanes; rather, the main concern is simply

keeping it open at all due to winter storms and resultant landslides. In response, the Coastal Commission and Caltrans have been engaged in a comprehensive planning effort for Highway One in Big Sur (see Issue LU-13 below).

(3) Wastewater Treatment

Monterey County has established firm urban service limits with regard to wastewater collection as a result of Coastal Commission permits issued in the early 1980's for each of the County's urban systems. Issue identification revealed no attempts to circumvent these decisions as the County has successfully followed its policies. One corollary is that rural areas are dependent on on-site solutions. Options to conventional treatment systems are desirable from a Coastal Act perspective as alternatives to requiring either hookup to sewer systems in rural areas or reduction in recreational opportunities (due to capacity limitations; see **Issue LU-7: Alternative Wastewater Treatment**). Since the certified LCP does not have policies allowing alternative wastewater systems, recommendations to add such provisions are found on pages 17-19 of Appendix A.

c. Land Use Designation and Density Issues

Monterey County's overall development pattern -- where more intensive development is concentrated in Las Lomas, Moss Landing, Castroville, and the Monterey Peninsula -- reflects Coastal Act directives. The LCP requires that this pattern be maintained, and the County has generally followed the LCP in its issuance of coastal permits. Nevertheless issue identification revealed two communities where general land use patterns warranted review: Moss Landing and Carmel Area Uplands. The changed location of Moss Landing Marine Lab in particular necessitates land use designation changes (**Issue LU-5: Moss Landing Marine Lab**). Elsewhere in Moss Landing much development has occurred since certification, some of an unanticipated nature, prompting a need to reexamine the area plan for this community (see Issue LU-11 below). Moss Landing also deserves attention given the opportunity to increase coordination among agencies with varying jurisdiction, especially in the Harbor. In the area above Point Lobos and Carmel Highlands, substantial land has come under public or non-profit land conservation organization ownership, while some private parcels have developed with large homes, prompting the need to reexame the land use designations and densities for these Carmel Area uplands (see Issue LU-12 below).

Some additional areas also were found in need of land use designation updates: Gorda, Oak Hills Open Space, Fort Ord, and Armstrong Ranch. Current LCP designations for intensive development and viewshed exceptions in Gorda were found to not match both aerial photo analysis indicating where development is concentrated and Coastal Act directives for scenic resource protection (**Issue LU-4: Gorda Rural Community Center**). Given the highly scenic and rural nature of this area and the purpose of the Rural Community Center to cover existing developed enclaves, applying that designation to other parcels is not consistent with Coastal Act scenic protection and concentration of development policies. Recommended redesignations are found on pages 13-15 of Appendix A. Around Oak Hills, land already slated for permanent protection was found to lack that guarantee in the *North County Land Use Plan* (**Issue LU-6: Oak Hills Open Space**). Recommended redesignations are found on pages 17-19 of Appendix A. When Fort Ord is no longer federally

owned, the LCP will have to cover it as well (see Issue LU-15 below). Also, unincorporated grazing land around Marina retains an Agricultural Industrial designation, which needs updating (see Issue LU-16 below).

d. Other Land Use Issues

Coastal Commission staff review and analysis of local coastal development permits through the post-certification monitoring process and this Periodic Review, as well as evaluation of the certified LCP, also revealed that provisions for three categories of development warranted updating. In order to render the Monterey County LCP consistent with current policy implementation and practices of the Commission, provisions for granting certificates of compliance [which establish parcel legality] need some revisions (**Issue LU-3: Certificates of Compliance**). Recommendations for revisions are found on pages 12-13 of Appendix A. Issue scoping yielded concerns in the Big Sur community with caretakers units (**Issue LU-1: Caretakers Units**) and workshop conversions (**Issue LU-2: Workshop Conversions**). Evaluation revealed that the caretaker issue was actually one of a lack of local employee housing and that workshop provisions included an outdated reference to use permits. Recommendations on these topics are found on pages 4 –11 of Appendix A.

2. Issues Analyzed in Detail

This section discusses those land use issues that were identified for more in-depth review due to their relative importance and complexity. They are Issues LU-8: North County Water Supply and Agricultural Use; LU-9: Water Supply in the California-American Water Company Service Area; LU-10: Big Sur Valley Water Supply; LU-11: Moss Landing Community Plan; LU-12: Carmel Area Uplands; and Issue LU-13: Big Sur Highway. An overview of each issue leads, followed by background information, applicable County LCP policies, a description of how the policies have been implemented, analysis, and, finally, corrective recommendations. There are then briefer discussions of Issues LU-14: Highway One and the Moss Landing Corridor; LU-15: Fort Ord; and LU-16: Armstrong Ranch.

a. Issue LU-8: Protection of North County Water Supply and Agriculture

(1) Overview

This subchapter addresses the following concern identified through issue scoping: **Ensure that the North Monterey County groundwater overdraft problem is not exacerbated and is eventually solved, while maintaining priority agricultural land uses.**

Groundwater is the source of all water use in North Monterey County and the aquifers it is found in are overdrafted. One study estimated a "sustainable yield" of 14,410 acre-feet per year (af/yr), with extraction at 26,110 af/yr, resulting in a deficit of 11,700 af/yr. Most of the groundwater is used for agricultural irrigation as North County has acres of prime farmland as well as acres in production. Agriculture is threatened by the water supply overdraft, resultant water quality problems such as salt-water intrusion, and suggested responses to curtail farming.

The certified Monterey County LCP recognizes the groundwater overdraft problem by recommending that new water sources be pursued. In the meantime, the LCP limits increased residential development (beyond one home per parcel) to only no more than half of what is maximum buildout until the water situation is rectified. The LCP favors continued agricultural use on agriculturally-designated land, with further reduction in new residential use if agricultural water supplies are imperiled. The LCP also supports and requires water conservation.

Since certification of the LCP, quantifiable estimates of groundwater overdraft have shown a continuing worsening situation, while at the same time new supply planning is underway. Increased water consumption is largely the result of increased agricultural demand. The only increased agricultural water use that can be controlled under LCP is from new cultivation on steep slopes. It is unknown how much of such new agriculture has occurred since LCP certification, but if it has, it has not received the required coastal permits. Meanwhile, new residential development has been permitted resulting in a further increase in water use. The County enacted a now-expired moratorium on new subdivisions for the maximum two years to forestall additional water consumption.

In light of the continuing, worsening groundwater overdraft, it is clear that a multi-pronged approach is needed to work toward achieving the Coastal Act objectives of preventing groundwater depletion and also giving priority to agricultural production on suitable soils. The County should clarify and implement the policy against further subdivision until there is an adequate water supply. Additionally, policy is also needed to address new development on vacant lots. If more development is to be approved, it should not further contribute to the overdraft.

In order to conserve agricultural water use, other entities that have been or could be working with farmers in this regard should continue and increase such efforts. The County should support such efforts where it has the resources and authority to do so. The County does need to adopt policy to govern any attempts to fallow agricultural land to ensure that such programs protect prime agricultural land and result in actual reductions in water use (not just offsets that allow for more subdivision).

Finally, and most significantly, continued and accelerated efforts are required to bring new supplies on line and/or reduce existing demand to achieve a groundwater balance without adverse impacts. Several agencies, including County departments are involved in such efforts and should coordinate their work. Each program needs to be accomplished in a manner that protects coastal resources.

Note that while this chapter focuses on ensuring that the groundwater safe yield is achieved and agriculture maintains its priority use status, these objectives do not diminish concerns about non-point source pollution and habitat protection that are raised by ongoing agricultural uses. These concerns are addressed in Chapters 3 and 4 as Issue SH-28: Protecting Central Maritime Chaparral Habitat and Issue WQ-8: North County Water Quality and Watershed Restoration. Also, while this chapter focuses on North County water supply issues, some of the analysis relating to overall

planning for water projects, including desalination facilities, is relevant elsewhere in the County's coastal zone where new projects are under consideration.

(2) Resource Background

Groundwater and Agriculture Characterization

North Monterey County has both depleted groundwater supplies and substantial agricultural land. The area is experiencing significant overdraft conditions resulting in depression of the water table and seawater intrusion into the underlying aquifers. At the same time, water withdrawals are increasing, due primarily to expanded agriculture.

North Monterey County includes different groundwater basins, some of which extend into the adjacent Santa Cruz or San Benito Counties. For the purpose of water planning, the groundwater system in North County is described as comprising portions of two sub-basins, each consisting of a number of smaller sub-areas: (1) the Pajaro Valley sub-basin (which extends north of Elkhorn Slough) consists of the Pajaro, Springfield Terrace and Highlands North hydrologic sub-areas; and (2) the Salinas Valley sub-basin (which extends southeast of Elkhorn Slough) consists of the Highlands South and Granite Ridge hydrologic sub-areas (See Map LU-8).[1] Table LU-8.1 shows what was calculated as "sustainable yield" for each of these sub-areas.[2] This Table also shows that much of the North County area is significantly over drafted and that significant reduction in pumping will be needed in order to eliminate overdraft conditions.

[1] Fugro West, Inc., *North Monterey County Hydrogeologic Study, Volume I: Water Resources*, October 1995. Prepared for Monterey County Water Resources Agency. Because of varied hydrogeologic conditions, the area has been divided into smaller hydrologic sub-basins and sub-areas to simplify hydrogeologic analysis

[2] Table LU-8.1 adapted from Table 11 in: *North Monterey County Hydrogeologic Study, Volume I*: Water Resources (see note 1 above). " Sustainable yield" is defined in this study as the amount of annual pumping not causing additional ground water declines from 1992 conditions and/or not causing additional seawater intrusion. Since there were already groundwater problems before 1992, this definition may not be adequate. A more useful definition in terms of Coastal Act concerns would be: "the amount of naturally occurring ground water that can be withdrawn from an aquifer on a sustained basis, economically and legally, without impairing the native ground-water quality or creating an undesirable effect such as environmental damage," from Fetter, C.W., *Applied Hydrogeology*, Fourth Edition, 2001, p. 447. Additionally, any water that is extracted from ground water (or intercepted before it can become ground water) will reduce the amount of ground water available. Even if the aquifer remains saturated to the same levels, ground water flow will change and the amount that is recharged (to streams, to marshes, to the ocean) will change as a result of any interception or extraction of ground water. Thus, from a Coastal Act perspective the amount of acceptable groundwater extraction may be less than what is calculated in this study as "sustainable yield."

Table LU-8.1. "Sustainable Yield" of North Monterey County Hydrogeologic Sub-Areas[a]

Sub Area	Sustainable Yield (AF/Y)	Historical Pumping (AF/Y)	Difference (AF/Y)	Percent Reduction Required to prevent overdraft conditions
Salinas Valley				
Highlands South	4,390	5,020	-630	13
Granite Ridge	610	610	0	0
Pajaro Valley				
Highlands North	2,920	4,780	-1,860	39
Pajaro	6,490	9,030	-2,540	28
Springfield	0	6,670	-6,670	100
Totals:	14,410	26,110	-11,700	45

[a] Table LU-8.1 adapted from Table 11 in: *North Monterey County Hydrogeologic Study, Volume I*: Water Resources (see note 1 and 2 above)

Agriculture has been and continues to be an important land use for the 54,000 acres comprising North County.[3] The Elkhorn Slough watershed comprises approximately 44,900 acres (or nearly 91 percent) of the North County planning area. As of 1993, 26,000 acres (or nearly 58 percent) of the Elkhorn Slough watershed were covered by native vegetation and 10,300 acres (23 percent) were under cultivation (for the production of field crops, orchards, bush berries, flowers and nurseries, artichokes, strawberries, and other crops).[4] The 1995 *North County Hydrogeologic Study* indicated that lands under irrigation cultivation in the entire North Monterey County were estimated at 13,532 acres (or nearly 25 percent of the North County planning area).[5] One year later, lands under cultivation were estimated at 14,513 acres, (or nearly 27 percent) an increase of 7%.[6] Cultivated lands that are irrigated are shown on Map LU-8.

[3] Monterey County Water Resources Agency and EDAW, Inc., *North Monterey County Comprehensive Water Resources Management Plan,* January 2002.

[4] *Watershed Plan and Environmental Assessment for Elkhorn Slough Watershed Project; Monterey and San Benito Counties, California,* April 1994. Sponsored by Monterey Coast Resource Conservation District, with assistance from U.S. Department of Agriculture Soil Conservation Service; April 1994.

[5] Fugro West, Inc., *North Monterey County Hydrogeologic Study, Vol. I, Water Resources,* October, 1995, page 83, "Table 13: North County Land Use by Sub Area." Prepared for Monterey County Water Resources Agency.

[6] Monterey County Water Resources Agency and EDAW, Inc., *North Monterey County Comprehensive Water Resources Management Plan*, January 2002, citing data from California Department of Water Resources, *Monterey County Land Use Survey*, 1996.

This agricultural use has made a very positive contribution to the local economy. The rich soils and mild climate of California's Central Coast support a $3 billion per year agricultural industry. Farmlands produce revenue at $12,000 - $25,000 per acre for North County farmers, many of who are local, multi-generational farming families. Over 200 types of crops are produced including nursery flowers, Brussels sprouts, row crops, berries and orchards. Monterey County produces over 80% of the nation's leaf lettuce, 70% of its artichokes, 55% of its broccoli and cauliflower and over a third of its celery, strawberries and mushrooms.[7] Agricultural products from the region are exported all over the world, providing both income to the region and jobs for County residents. Lands under production also provide a pleasing open space aesthetic in the area, which aids another cornerstone of the economy: tourism. The North Monterey County segment also supports approximately 2,212 acres of grazing lands, which produce revenues from local dairy and livestock industries, provide habitat for wildlife such as migratory birds, and maintain undeveloped areas for recharge of local water supplies.

In recent years, some of Monterey County's grazing land has been converted to vineyards because there was an open market for wine grapes. It is this willingness to respond to opportunity that keeps California at the top of the agricultural markets, and allows Monterey County to be the third most productive county in the United States.[8] However, there are inherent risks to rapid adaptation. The market is now saturated with respect to vineyard grapes, and farmers may be forced to switch to table grape varieties or alternate crops.

Threats to Groundwater Resource

Groundwater basins and the agriculture that they support are threatened by the continuing demand from existing and potential new uses. Also, groundwater supply issues are inextricably linked to water quality issues, such as seawater intrusion and high nitrate concentrations. The Pajaro Valley currently experiences extreme overdraft and is need of immediate attention. Overdraft in the Salinas Valley is not as severe at present, but will worsen in the future, if projections are correct. In 1977, about the time LCP planning was underway, general groundwater overdraft in North Monterey County was estimated by the Dept. of Water Resources at 15, 000 acre feet annually. In 1983, the U.S. Geologic Service (USGS) estimated the overdraft slightly higher at 15,500 acre-feet annually (af/y) which is also the figure reported in the LCP.[9] In 1995, the *North Monterey County Hydrogeologic Study, Volume I* reported an overdraft of 8,550 af/y. This figure is lower than previous estimates of North County overdraft because of better accounting of recharge using a groundwater model. However, in 2002, the *Comprehensive Water Resources Management Plan* reported current overdraft of 16,340 af/y, nearly twice the estimated overdraft of 1995.[10]

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[7] Monterey Bay National Marine Sanctuary, *Water Quality Protection Program for the Monterey Bay National Marine Sanctuary: Action Plan IV: Agriculture and Rural Lands*, October 1999, p. 2.

[8] Personal communication, Chris Bunn of Crown Packing in Salinas, November 7, 2002.

[9] Monterey County, *North County Land Use Plan*, April 1982, pg. 19.

[10] Monterey County Water Resources Agency and EDAW, Inc., *North Monterey County Comprehensive Water Resources Management Plan*, January 2002, pg. 2-7.

The conditions of the groundwater basins are likely to worsen given the increasing water demand of agricultural uses. Agricultural uses currently account for 85 % of the North Coast Area's water demand. The *North Monterey County Hydrogeologic Study, Volume I* reported overall agricultural water demand to be 19,695 af/y in 1995 but in January 2002, the *Comprehensive Water Resources Management Plan* estimated an increased agricultural water demand of 27, 367 af/yr. Additionally the 9,319 residential dwelling units accounted for a demand of 3,577 af/yr.

Continuing groundwater overdraft threatens the current level of agriculture in North Monterey County. In addition, the potential to increase cultivation in turn further threatens the groundwater supply and quality. Agricultural water demand is unlikely to decrease in the future, absent some major economic or policy shifts. Eight-five percent of overdraft within North County occurs in the Pajaro Valley sub-region. Although the Pajaro and Springfield Terrace areas are fully developed with respect to acreage used for agriculture, increased water demand could result from crop change. Land has been increasingly converted to profitable specialty crops, some of which require more water than other crops. For example, current agricultural production in the Pajaro sub-region includes 20% berry crops and 58% truck crops. Berry crops require approximately 70% more water than truck crops. If berry production were to double via conversion of truck crop acres, that would equate to an added 842 af/yr demand, or a 9% increase in total water demand for the Pajaro sub-region. Highlands North and South are zoned and suitable for agriculture and thus the demand for water in these areas is likely to increase by a substantial amount. Though not suitable for agricultural development, Granite Ridge would likely see an increase in residential water demand in future years if new subdivisions are permitted.

Responses to Protect Groundwater Resource

Water supply in North Monterey County has been studied a great deal, commencing with a 1953 State study and continuing with a California DWR report in 1977 and a USGS report in 1980, both recognizing the significant overdraft problem.[11] New studies are being undertaken by the Pajaro Valley Water Management Agency (PVWMA) and Monterey County.

The Pajaro Valley Water Management Agency was established in 1984. It produced a Basin Management Plan in 1993, after studying over 30 alternatives over several years. A revised *Basin Management Plan* was adopted in 2001.[12] It proposes the following:

1) Construct pipeline to import water from the Central Valley Project (CVP), to be supplemented with other purchased water supplies

2) Capture surface water using surface and aquifer storage elements

3) Construct a coastal distribution system to reduce/eliminate coastal pumping

[11] California Water Resources Board, *Santa Cruz-Monterey Counties Investigation, Bulletin 5,* 1953. California Department of Water Resources, *North Monterey County Water Resources Investigation*, 1977. Johnson, Michael, USGS Water Resources Division, *Review of Groundwater in Northern Monterey County, California,* 1980.

[12] Pajaro Valley Water Management Agency, *Revised Basin Management Plan*, 2001.

4) Deliver imported and local water to an inland distribution system to irrigate agricultural lands in wet years

5) Agricultural and urban conservation programs

6) Retire land from agricultural development.

Construction of the Harkins Slough diversion structure and recharge basin was completed in Fall 2001, and has been operational for the last two years. This diversion project supplies approximately 1,100 af/yr of water. It involves the seasonal percolation of diverted Harkins Slough water into a recharge basin for storage until the irrigation season, when it is extracted and delivered to agricultural producers via the coastal distribution system.

The PVWMA also recently reached an agreement to purchase the contract rights to 27,000 acre-feet per year (af/yr) of Central Valley Project (CVP) Water from the Broadview Water District.[13] Acquisition of this long term supply of water will allow the PVWMA to move ahead with final design and construction of the 17-mile import pipeline and other segments of the coastal distribution system, in order to provide water to coastal agricultural producers. The coastal distribution system will allow coastal agricultural water users to receive CVP water rather than pump from the groundwater basin, and will thus serve to recharge the groundwater basin and halt the spread of seawater intrusion.

Monterey County meanwhile contracted for a *North Monterey County Hydrogeologic Study*, which appeared in two parts: Volume I in 1995 and Volume II in 1996. *Volume I Water Resources* details water supply, demand, and quality. *Volume II Critical Issues Report and Interim Management Plan* suggests several possible actions for reducing water demand: zone for usage and population density, restrict/retire agricultural lands, and supplement water supply. This was followed by the *North County Action Plan* (July 1997). The Action Plan resulted in the County first moving forward with water quality (as opposed to supply) recommendations, regarding grading, erosion control, and septic systems, that have not yet been finalized as local coastal program amendments.

In January 2002, the County's Water Resources Agency released a *Comprehensive Water Resources Management Plan* to address water supply and quality issues in North Monterey County.[14] The comprehensive plan recommends following PVWMA's *Basin Management Plan* to address water supply and water quality issues in the Pajaro, Springfield Terrace and Highlands North regions and for the Salinas sub-basin recommends parallel pursuit of four alternatives:

1) Acquire agricultural parcels; do not allow additional agricultural or residential development.. Since this alternative does not include pursuit of a new water supply, existing agricultural

[13] The Broadview Water District is located east of Interstate 5, near Fresno, where, according to the PVWMA, drainage problems and economic issues have made farming increasingly difficult.

[14] Monterey County Water Resources Agency and EDAW, Inc., *North Monterey County Comprehensive Water Resources Management Plan*, January 2002.

and residential users must rely on sustained yield to meet water needs and 620 acres of existing agriculture needs to be retired.

2) Expand Salinas Valley Water Project, 15% conservation, 575 acres of future agriculture prevented from coming into production.

3) Drill new wells in the Salinas Valley and construct a pipeline to supply a potable water system for the Granite Ridge area.

4) Construct desalination plant at Moss Landing and install a pipeline from the plant to supply a potable water system for the Granite Ridge area; prevent 270 acres of future agricultural land from coming into production.

A Special Ad-Hoc North County Water Issues Advisory Committee continues to meet to select which alternative or alternatives to pursue.[15]

(3) Local Coastal Program Provisions

The local coastal program has provisions that address the groundwater overdraft issue as well as provisions to protect and give priority to agriculture.

Groundwater Overdraft

Overdraft was clearly recognized as a problem in the *North County Land Use Plan* written in 1982:

> *The groundwater of the area is currently being overdrafted, leading to saltwater intrusion along the coast and falling groundwater… In some areas, water shortages may occur. Additional information is urgently needed to help determine the long-term safe yield of North County aquifers.*

The Monterey County LCP also contains a variety of provisions addressing protection of water quality of the North County groundwater aquifers, and keeping new development at a level that can be served by identifiable, available, long term-water supplies (e.g., *North County LUP* policy 2.5.1).

North County LUP Policy 2.5.2.3 requires that

> *new development be phased so that the existing water supplies are not committed beyond their safe long-term yields, and that development levels that generate water demand exceeding safe yield of local aquifers only be allowed once additional water supplies are secured.*

North County LUP policy 2.5.3.A.1 states that

[15] Personal communication, Al Mulholland, Monterey County Water Resources Agency, July 2002.

> *...the County's policy shall be to protect groundwater supplies for coastal priority agricultural uses with emphasis on agricultural lands located in areas designated in the plan for exclusive agricultural use.*

North County LUP policy 2.5.3.A.2 states that

> *The County's long-term policy is to limit ground water use to the safe-yield level by limiting the first phase of new development to 50% of the remaining buildout as specified in the LUP (i.e., 1351 new lots or units created). [The County may further reduce this maximum] if such reductions appear necessary based on new information or if required in order to protect agricultural water supplies. Additional development will be permitted only after safe-yields have been established or other water supplies are made available by an approved LCP amendment.*

Water conservation measures are also required in all new development and Agricultural Management Plans. As required by *North County LUP* policy 2.5.3.A.4, water conservation measures

> *... should address siting, construction and landscaping of new development, emphasize retention of water on site in order to maximize groundwater recharge, and encourage water reclamation.*

Proof of water availability is required prior to an application being determined complete for "development of non-coastal dependent uses" (*County Code* Section 20.144.140.A.1). Also, the County subdivision ordinance requires submittal of proof of an assured, long-term water supply in terms of sustained yield and adequate quality for all lots that are proposed for development prior to finding the subdivision permit application complete (*County Code* Sections 19.03.015L, 19.05.040L and 19.07.020K).

Protection of Agriculture

The *North Monterey County LUP* requires that existing agricultural land remain in production, minimizing the conversion of agricultural lands to non-agricultural uses, and limiting division of agricultural lands. When non-agricultural uses are allowed to supplement continued agricultural uses, the remaining agricultural lands are required to be placed under protective easements. Parcels containing prime agricultural soils and lands having less than 10% average slope that are currently under cultivation are designated as Agricultural Preservation lands, with development limited to buildings and uses required for agricultural activities (*North County LUP* policy 2.6.3.1.a). Parcels designated as Agricultural Conservation lands and Rural Residential lands are restricted to development of a maximum one unit per 40 acres and one unit per 5 acres, respectively (*North County LUP* policy 2.6.3.1.b). The LCP also requires stable urban-rural boundaries to protect agricultural lands by limiting the spread of urban development to the identified communities of Las Lomas, Moss Landing and Castroville. *North County LUP* Policy 2.6.3.6 states that new development projects adjacent to agricultural areas require well-defined buffer zones extending the

length of the boundary. These are to consist of a minimum 200-foot open space easement for Agricultural Preservation and Conservation lands, and a minimum 50-foot buffer strip for other lands under cultivation.

The LCP also includes policies to manage agricultural impacts. *North County LUP* policy 2.6.3.8 requires approval of a use permit for bringing uncultivated lands into production on slopes greater than 25 percent or on parcels where at least 50% of the land has slopes greater than 10 percent. However, such use permit can only be approved only after submission of an acceptable Agricultural Management Plan, which details soil analyses, erosion potential and control, water demand and availability, water conservation and water quality protection provisions, protection of important habitat for vegetation and wildlife, rotation schedules, and other necessary information.

(4) Local Coastal Program Implementation

Permit Review: Subdivisions

A review of County permitting since LCP certification indicates that as of August 2000, 785 new lots or units had been approved within the North County coastal zone, out of the 1351 allowed.[16]

Coastal permits issued by the County since 1988 have reflected a progressive shift toward stricter water supply control. Permits issued in the years shortly after LCP approval allowed lot subdivision since they were within the 50% buildout level allowed. Water conservation measures were required. In subsequent years, subdivision was approved only with no net increase in water demand. No net increase was achieved in one of two ways: 1) the proposed project resulted in reduced agricultural land-use, and/or 2) the applicant was required to mitigate by taking other land out of production. Finally, in 2000 a subdivision moratorium was enacted.

For example, Monterey County approved two subdivisions for 365 new residential units for the Community Housing Improvement System and Planning Association (CHISPA) that required that land be taken out of agricultural production in order to offset water use for the approved development.[17] Condition 59 of the approval required that the applicant provide a future "water use mitigation plan" to offset the increased water use expected by the projects (which at the time was estimated to be 131 acre-feet per year). Review and approval were required from the Water Resources Agency, as was the "…appropriate mitigation measures implemented in the same hydrological area as the proposed project to completely offset the increased water use…". CHISPA

[16] Beyond the first single-family dwelling on a legal lot of record.

[17] County coastal permits SH93001 (3-MCO-94-132) and SH93002 (3-MCO-94-133); both were appealed to the Coastal Commission (A-3-MCO-95-02 and A-3-MCO-95-04, respectively) and found by the Commission to raise no substantial issue with regard to conformance with LCP requirements. The Moro Cojo Standard Subdivision included a land division of 125.6 acres into 175 single-family lots; two lots for multi-family rental units; eight open space parcels of 54.6 acres, a 21.1-acre wastewater spray field parcel, a community park parcel, a water storage tank parcel, a sanitary sewer lift station parcel and roadways; construction of 90 multi-family units, community center, sedimentation basin, and associated infrastructure and grading. The other subdivision for the Moro Cojo Senior Housing Development included a re-subdivision of 53.7 acres into one 7 acre housing parcel and three open space parcels and roadways; and the construction of 100 senior housing units, community building, roads, and sedimentation basin.

identified a pool of eight parcels from which they intended to satisfy the water offset requirements of Condition 59.[18] The eight parcels included a total of approximately 188 acres, and were all located in the same hydrologic area as the CHISPA site.

To date only the water offset for one subdivision (called the "standard subdivision") has been pursued, as the other project has yet to be constructed. The EIR noted that the standard subdivision site required 108.65 acre-feet of offset, which at a rate of 2.5 acre-feet per farmable acre requested by CHISPA would require fallowing 43.65 acres of farmland. However, based on proposed water conservation devices in the new subdivision, CHISPA indicated that only 27.12 acres would be needed from the identified properties for water offsets. According to a September 1997 County staff report on condition compliance, the Water Resources Agency approved the water use mitigation plan submitted by CHISPA on September 18, 1997, and noted:

> *In approving the plan, the [Water Resources] Agency has determined that the parcels identified in the Agreement are within the same hydrologic area as the project and will provide the required offset of the project's water demand. To provide further assurance that the required offset will be achieved, a deed restriction will be placed on the offset properties prohibiting agricultural uses, limiting residential density and limiting water use prior to any construction within the Moro Cojo subdivision. Further, the deed restriction provides that the subdivider shall not sell or in any way transfer any interest in any single family parcel within the subdivision, or let any contract for construction of any subdivision improvements or any single family dwelling until such time as the water use mitigation plan has been implemented and the required offset under Condition 59 is achieved.*
>
> *The Water Resources Agency agrees with the updated water use estimate for the project of 89.8 acre-feet per year. The plan sets forth eight potential parcels, which can be used to accomplish the required water use offset. The Water Resources Agency approves the potential parcels, which have been identified, as they are all within the Highlands subareas.*

On July 7, 1998 the Board of Supervisors gave final approval to the water mitigation plan by accepting two parcels to be retired by CHISPA from agricultural production to completely offset the Moro Cojo Standard Subdivision's projected water use. The Board's action authorized the recordation of deed restrictions prohibiting agricultural production and restricting residential uses on the subject parcels (to 8 and 4 residential units, respectively). The County has since received a five-lot subdivision application on one of the parcels.[19] This parcel is about 42 acres, in the Elkhorn Road viewshed, slopes fairly steeply up from Elkhorn Slough wetlands to some oak woodland, and was mostly in berry production. The other retired parcel is 21.24 acres, of which 16.5 were considered prime by the Department of Conservation, was in production, is fairly level, and is adjacent to Carneros Creek and wetlands.[20]

[18] Correspondence from CHISPA to the Monterey County Water Resources Agency, September 4, 1997.

[19] County coastal permit application 000136 for APN 129-211-001.

[20] APN 412-062-006.

In September 2000 the County passed an Interim Ordinance, No. 4083, imposing an 18-month urgency prohibition of new subdivisions and conversion of non-irrigated land to irrigated land in the North County Hydrogeologic Study Area. According to Interim Ordinance 4083 findings, it was put in place in order to avoid granting any permits that would be inconsistent with short-term strategies and long-term measures that the County might select for addressing water shortages, based in part on results of the Hydrogeologic Study. The 18-month interim ordinance extended from August 9, 2000 to February 9, 2002. Since state law limits interim ordinances to a total of 24 months, the County was able to approve only a one-time 6-month extension and consequently the ordinance expired on August 9, 2002.

Permit Review: Residential and Agricultural Permits

With regard to residential water use, in a sample of 10 County-issue coastal permits for single-family dwelling construction from years 1990 - 1999, all explicitly required water conservation measures including ultra-low flush toilets and low flow shower heads, hot water recirculating systems where appropriate, landscaping with native or drought-tolerant plants, and low-precipitation water delivery systems.[21]

In terms of agricultural water use, to determine whether any use limitations were imposed would require permit review of agricultural developments. However, a data base search for project descriptions containing the word "agriculture" yielded only four permits: two for small barn construction, one for a mobile home used as farm-worker housing, and one was for an undetermined project. The County did approve several emergency permits for replacement agricultural wells in North County, but these permits are routinely granted without any special conditions addressing water conservation. Permits are required to convert lands over 10% slope to crop lands under *North County Land Use Plan Policy* 2.6.3.8. . For these cases agricultural management plans, which must address water use among other factors, are required. But, there were no such agricultural management plans prepared to the Coastal Commission's knowledge, and, hence water use from expanded agricultural operations on steeper slopes was not addressed in County coastal permits (See Issue WQ-8: North County Water Quality and Watershed Restoration).

Funding Water Supply Planning

In 1990, the County passed Ordinance No. 3496 establishing a water impact fee for financing a study and management plans relating to the safe yield of the North Monterey County aquifers. The ordinance allowed the County to collect $1,000 per each new home or lot, which was used to finance the *North Monterey County Hydrogeologic Study*. The intent of the *Hydrogeologic Study* was to allow the County to determine the safe yield of the North Monterey County aquifers and then identify procedures to manage development in the area so as to minimize adverse effects on the aquifers and preserve them as viable sources of water for human consumption. Although the water impact fee ordinance was written to expire in 1994, it was extended to 2001 in order to assist in

[21] Random sample of County coastal permits reviewed included: PC07284; PC07364; PC07857; PC07812; PC94164; 965340; 970597; 980184; 980265; 965231 (3-MCO-90-82; 3-MCO-90-83; 3-MCO-91-155; 3-MCO-91-156; 3-MCO-95-116; 3-MCO-97-56; 3-MCO-98-53; 3-MCO-98-156; 3-MCO-98-158; and 3-MCO-99-003, respectively).

evaluating alternatives for resolving overdraft problems in North County. The water impact fee requirement of the original ordinance was incorporated into the LCP in 1995, but the extension was not. According to planning staff, the County stopped applying the water impact fee in January 2002, after alternatives had been evaluated and the ordinance expired. While the County Water Resource Agency continues to work on determining the preferred alternative (which could include importation of water from the Central Valley via a new water supply pipeline), no specific alternative has been selected.

Proof of Water Availability for New Subdivisions

The Board of Supervisors approved an amendment to the General Plan, LCP and Title 19 of the *County Code* (Subdivision Ordinance) regarding the timing and determination of proof of water for subdivisions on January 9, 1996.[22] The County staff report stated that these amendments would provide objective criteria for determining whether an assured, long-term water supply for specific project existed, as the amendments would:

1) *change the time at which proof of an assured, long-term water supply for a subdivision application is determined from the time of project application completeness to the time of project approval; and*

2) *vest the approving agency, such as the Planning commission and/or Board of Supervisors, the determination of an assured, long-term water supply for a subdivision project based upon the recommendation of the Health Officer and General Manager of the Water Resources Agency.*[23]

At the time, the Subdivision Ordinance required submittal of proof of an assured, long-term water supply prior to filing the subdivision application.[24] In 1999 the County reversed position favoring a return of review authority to the Environmental Health Director prior to deeming an application complete. On July 13, 1999 the Board of Supervisors approved recommendations from the Director of Environmental Health to reinstate the provision requiring proof of water before a development application can be deemed complete, and directed County staff to prepare appropriate amendments to its documents.[25] To date, the Coastal Commission has never received a complete LCP amendment package covering any of these actions, thus the certified LCP provisions, which require applicants to submit proof of an assured, long-term water supply prior to finding the subdivision application complete, are still in effect in the coastal zone.[26]

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[22] Monterey County Board of Supervisors Resolutions # 96-017, 96-018, and 96-019.

[23] Monterey County Planning & Building Inspection Department, "Report to Monterey County Board of Supervisors [on PC94182 Regarding the Timing of Proof of Water for Subdivision Applications]," for January 9, 1996.

[24] The Subdivision Ordinance is a component of Monterey County's certified *Coastal Implementation Plan*.

[25] Monterey County Board of Supervisors. "Resolution 99-274 …Regarding proof of Water Quality and Quantity for Subdivisions…," July 13, 1999.

[26] Although the County's 1999 action results in reverting back to the certified provisions before 1996, there are still some revisions to those provisions; therefore, submittal of an LCP amendment to the Coastal Commission is still required.

(5) Analysis of Coastal Act Conformance

Coastal Act Sections 30241, 30241.5 and 30242 require protection of prime agricultural lands and Section 30222 identifies agricultural uses as priority land uses. Since LCP certification agricultural operations have increased in the North County planning area, consistent with the agricultural protection policies of the Coastal Act. However, the continued overdraft of groundwater is not in conformity with Coastal Act Sections 30231 and 30250 that require the protection of groundwater supplies and require that new development not have significant individual or cumulative impacts on coastal resources. Continued overdraft of the groundwater also results in water quality problems such as salt-water intrusion and suggestions to curtail farming. These responses can further threaten agriculture. Only a small portion of the increased overdraft is attributable to new development authorized by County coastal permits; most is attributable to existing and expanded agricultural demand. Given the current overdraft condition of the groundwater supplies, LCP implementation must limit new development and address agricultural water consumption in order to conform with Coastal Act policies to protect continued agriculture as a priority use.

Implementation of Provisions to Allow New Development

The LCP allows for some increment of new development in anticipation of the County securing a new water supply, which it has yet to do. Meanwhile, although estimates differ somewhat, as noted in the previous section discussing threats, the most recent information shows that the overdraft is increasing. Estimates of future overdraft under current land use policy by the County's two consultants are comparable (22,116 af/yr by Fugro West and 22,200 af/yr in the CWRMP).

In this regard, the County has followed only that part of the *North County Land Use Plan* Policy 2.5.3.A.2, which limits new lot creation (and additional units on a parcel beyond the first) to less than 50% buildout until there is a new water source. The amount of new lots approved represents an increased water demand of approximately 260 acre-feet per year and, therefore, an increased groundwater overdraft, albeit a small increment of the total.[27] *North County LUP* Policy 2.5.3.A.2 also states that the 50% maximum residential buildout can be further reduced if it appears necessary to protect agricultural water supplies. Given the increasing overdraft, this necessity has become apparent. Indeed, the fact that the County has approved the removal of agricultural lands from production to offset new residential water demand highlights the need to further limit residential development. In response the County did impose a temporary moratorium on new subdivisions, but it is no longer in effect because such moratoria can only be imposed for two years. The County has not yet implemented any follow-up measures to further reduce buildout until a new water source is secured. Thus, Policy 2.5.3.A.2 is not being completely followed at present.

Additionally, Policy 2.5.3.A.2 is somewhat outdated in that it excludes the first single-family house on a vacant parcel from the maximum buildout calculation (that results in a cap on water use until a new supply is brought on line). Significant numbers of new homes have been approved in North Monterey County on vacant parcels since LCP certification. At the time of LCP certification it was

[27] Based on an estimate that each new lot equates to one-third of an acre-foot water demand per year.

thought that the limits of Policy 2.5.3.A.2 would result in sustainable levels of development and that a new water supply would be forthcoming. However, these have not occurred, and so the increased water demand from new residential development coupled with noted changes in agricultural production have exacerbated the situation. Given the known severity of the water problem, all intensifications must be of concern. For example, new homes on vacant lots are not being approved further south on the Monterey Peninsula due to a water shortage there (See next Issue LU-9: Water Supply in the California-American Water Company Service Area).

Implementation of Provisions for Agricultural Water Use

The County has also not yet implemented a comprehensive program to address agricultural water use. *North County LUP* Policy 2.5.3.A.4 states that water conservation measures should be included in all development, but agricultural operations are not required to apply for permits, unless a project includes developing on a slope of greater that 10%. There is adequate recognition of the problem of agricultural water demand within LCP policies. Agricultural management plans required by Policy 2.5.3.A.4 have the potential to address the issue and provide information to track it. However, since they are required in only limited circumstances (new operations on steeper slopes) and even in those cases have not been forthcoming (see Issue WQ-8: North County Water Quality and Watershed Restoration), they do not accomplish the goal of agricultural water conservation.

As noted, the County has been considering a program to fallow agricultural lands and in at least one instance did so through a permit. The CHISPA case reveals some promising aspects and some potential detriments. On the plus side, one steep parcel of marginal soil quality in berry production adjacent to the Slough system was removed from cultivation, a low-income housing project was allowed to proceed on sewered land planned for residential use, and the groundwater overdraft was not predicted to worsen. On the negative side, the decisions about which lands to fallow were made after the permit was issued and caused concern among some community members, one parcel removed from production had good soil on level land outside of the urban boundary (and, thus from a Coastal Act perspective would not be a priority for fallowing), the estimated off-set covered an estimated increase in residential water use so that there was no actual projected dent made in the overdraft problem, only estimates were used so that actual water saved or used could be less, and on the fallowed property describing future maximum residential development may conflict with what should occur on the sites to protect coastal resources. One lesson from this fallowing project is that such efforts should not occur in an after-the-fact manner to facilitate increased residential development, but rather should be part of a comprehensive program that is pre-approved consistent with the Coastal Act and incorporated into the local coastal program.

Although agriculture is a priority use, recent expansion of agricultural cultivation onto sloping, erodible lands may not be in the best interest of the soil resource and habitat protection (particularly chaparral, see Issues WQ-8: North County Water Quality and Watershed Restoration and SH-28: Protecting Central Maritime Chaparral Habitat). Therefore, a fallowing program targeting inappropriate agricultural land use is worth pursuing, if it will result in decreasing groundwater overdraft. The remaining agricultural land may also have potential to reduce groundwater use through conservation techniques (and possibly by cultivating different crops). Reducing irrigation

application may also have benefits to prevent non-point source pollution and such initiatives make sense to be implemented in combination with other strategies to reduce non-point source pollution at the same time.

Conclusion

Coastal Act Sections 30241, 30241.5 and 30242 require protection of prime agricultural lands and Section 30222 identifies agricultural uses as priority land uses. In addition, Coastal Act Section 30231 provides:

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

In implementing its LCP through coastal permitting, the County has controlled new development to minimize impacts to the groundwater resources as required by the Coastal Act. However, in light of current overdraft and projected future overdraft even without new development, continuing the status quo of allowing any further development that uses groundwater would not fulfill Coastal Act objectives. The County could further restrict new subdivision and second units under existing policy. But, since the policy has not been consistently interpreted in such a manner, more explicit language should be written, as shown in Recommendation LU-8.1.[28] Additionally, policy revisions are also needed to address new development on vacant lots. If more development is to be approved, it should not further contribute individually or cumulatively to the overdraft of groundwater in order to conform with Coastal Act Sections 20331 and 30250. Other localities in similar situations, such as Cambria in San Luis Obispo County, have instituted requirements and programs for no net increase in water use, by retrofit of and/or conservation from existing uses. The County should determine what are appropriate off-sets (see Recommendation LU-8.3). The County also needs to meter groundwater extraction in order to devise appropriate solutions, as called for in Recommendation LU-8.5. And, the County needs to ensure that a proliferation of individual wells does not occur in urban service areas that are served by community water systems so as not to undermine their efforts to manage water use (see Recommendation LU-8.6 and discussion about concerns with private wells in the following section: Issue LU-9 Water Supply in the California-American Water Company Service Area).

[28] To date, the proposed *21st Century Monterey County General Plan* (being prepared by the Monterey County Planning and Building Inspection Department in 2003/2004) would reduce buildout somewhat in the rural parts of North County, but may increase it in the urban periphery. There will be a new Environmental Impact Report on the *21st Century Monterey County General Plan* update that could address what the impact on the Plan's revised density and other provisions would have on the groundwater basin.

While such measures are necessary to stop further degradation of North Monterey County's agricultural resources, they alone will not begin to solve the overdraft problem. The County and other agencies have made progress in preparing plans to comprehensively address water supply issues. What is needed are continued and accelerated efforts to both find new supply and reduce existing demand that are accomplished in a manner that is consistent with the Coastal Act (see Recommendations LU-8.7—LU-8.12 for further coordination in this regard). This means that any attempts to reduce existing demand, which naturally would focus on agricultural water use, must account for Coastal Act priority uses policies (see Recommendation LU-8.2). This also means that development of any new projects must be consistent with resource protection policies (see Recommendation LU-8.4).

As discussed under issue LU-9: Water Supply in the California-American Water Company Service Area, desalination facilities are being considered as an option to increasing potable water supplies for the Monterey Peninsula. However, such plant facilities may physically be located in North County at Moss Landing and could possibly serve North County as well. The *North County LUP* does not contain explicit policies on the development of such facilities. As discussed under Issue LU-9, the LCP needs to be updated to incorporate policies to guide any future proposal for such desalination facilities in a manner consistent with Coastal Act policies.

b. Issue LU-9: Water Supply in the California-American Water Company Service Area

(1) Overview

This section addresses the following concern identified through issue scoping: **Ensure that the water withdrawals, including those from private wells, do not result in adverse impacts to groundwater resources, riparian habitats, and fisheries, and ensure that priority uses are accommodated by the limited water supply.**

Surface water from the Carmel River is the major source of water use within the California American Water Company (Cal-Am) service area, and the River withdrawals threaten the riparian habitat and the fish within. Thus, Cal-Am is under an order to extract no more than 11,285 af/yr from the River.

The lack of sufficient water supply to serve existing uses and new development in the Monterey Peninsula was a significant issue at the time of LCP certification. The LCP thus has a priority allocation system for Del Monte Forest. It has policies to support and require water conservation.

Since certification of the LCP, the Public Utilities Commission has imposed the noted upper limit on the amount of water that Cal-Am can produce and as a result all available water supplies for the Monterey Peninsula, including Del Monte Forest and part of the Carmel Area, are committed to serving existing development. Ideally, even less water should be taken from the River to support fish. And as the existing dams on the River silt up and residents do not support a new dam, finding another water source has become necessary. Most new development approved and built since

certification contributed to this situation; however, the PUC order and resultant Monterey Peninsula Water Management Agency (MPWMA) requirements have halted further development. For a time, the County continued approving coastal permits, placing applicants on a water waiting list, but more recently stopped deeming applications complete where water was lacking. As a result a few applicants have requested and received approval for individual on-site wells.

In light of the worsened water situation in the Cal-Am service area, it is clear that a multi-pronged approach is needed to work toward achieving the Coastal Act objectives of preventing groundwater depletion and also giving priority to agricultural production on suitable soils. The County should formalize its procedures regarding deeming when applications are complete with regard to water availability. It should clarify that individual private systems such as wells are not allowed in the Cal-Am service area of Carmel Area. It should review and update its water allocation priority list for Del Monte Forest.

Finally, and most significantly, continued and accelerated efforts are required to bring new supplies on line to reduce or eliminate dependence on Carmel River surface flows. Several agencies are involved in such efforts and should coordinate their work. Each program needs to be accomplished in a manner that protects coastal resources. The LCP needs to be updated to guarantee that any proposal to develop new water supplies will ensure that such development will be consistent with Coastal Act Section 30254 that governs new or expanded public works facilities as well as other Coastal Act policies.

(2) Resource Background

Monterey Peninsula Water Supply Characterization

There is currently not an identified public water supply adequate to serve the Monterey Peninsula without adversely impacting the Carmel River system. The existing water supply from the Carmel River is subject to dry seasons and periods of multiyear droughts.

The Monterey Peninsula Water Management District (MPWMD) regulates the collection, storage, distribution and delivery of water within the 170-square mile area of the water management district, which stretches from Seaside in the north to Los Padres Dam in the south. As of reporting year 2001, about 92% of the water produced in the District comes from the Monterey Peninsula Water Resource System (MPWRS). The System includes the Carmel River and its tributaries, Carmel Valley Alluvial Aquifer, and the Seaside Coastal Groundwater Basin Sub-areas. The remaining 8% comes from private wells and water distribution systems outside of the MPWMS. The overall Monterey Peninsula Water Management System has a production limit of 20, 687 AF per year.

The largest water distribution system in the Monterey Peninsula is operated by the California-American Water Company (Cal-Am), which provides water to nearly 95 percent of the residents in the MPWMD. The Cal-am service area within the coastal zone is shown on Map LU-9.

The Carmel River Basin, one of the major sources for the MPWMD water supply, contains significant natural resources. Two threatened species, the California red-legged frog (*Rana aurora*

draytonii) and the Steelhead (*Oncorhynchus mykiss*) can be adversely affected by water withdrawals, especially during dry conditions.[29] The Seaside Groundwater basin can be adversely affected by overdrafts as well.[30]

While limited water availability on the Peninsula was an issue at the time of LCP certification, resource impacts from continued water demand following certification resulted in significant changes affecting new development and resources of the Carmel River. In 1995, the State Water Resources Control Board (SWRCB) issued Order 95-10, which reduced the amount of water Cal-Am could lawfully take from the Carmel River by 20 percent in the near-term and up to 75 percent in the long-term. State Order 95-10 also mandates that Cal-Am stop diverting 10,730 acre-feet/year of water from the Carmel River and limit withdrawals from the river to 11,285 af/yr.[31] The MPWMD is required to monitor water use on a monthly and annual basis in order to ensure compliance with Order 95-10.[32]

Constraints also increased on the use the Seaside Groundwater Basin, the other major source of water. Prior to SWRCB Order 95-10, Cal-Am had wells in the Seaside Aquifer but because of low water table conditions and the expense of pumping the water, the Seaside Aquifer was only used during dry times. Prior to Order 95-10, Cal-Am's annual withdrawal from the Seaside Aquifer averaged 2,700 acre-feet per year.[33]

Since the issuance of Order 95-10, Cal-Am and the Seaside golf courses increased withdrawals from the Seaside Aquifer to help make up the shortfall due to Order 95-10. The MPWMD conducted hydrologic studies and determinations for the water level of the Seaside Aquifer. The studies indicated that that the aquifer was being depleted and was at risk for seawater intrusion. Based on the 1997 studies, the MPWMD best current estimate of safe yield from the Seaside Aquifer is 4,375 acre-feet per year. Currently, the MPWMD recommendation for Cal-Am withdrawals from the Seaside Aquifer is set at 3,500 AF per year. The MPWMD continues to implement a project to withdraw water from the Carmel River when river levels are high in winter and pipe it to Seaside for storage in the aquifer for use during dry months when the river is stressed.[34]

In 1998 the SWRCB issued an amendment to Order 95-10 (Order #98-04). This amended order is a seasonal constraint for Cal-Am regarding water withdrawal from the Carmel River to help avoid depleting the Seaside Aquifer. The order requires that Cal-Am minimize diversions from the

[29] U.S Fish and Wildlife Service, Species profiles; see <http://ecos.fws.gov/servlet/SpeciesProfile?spcode=E08D> and <http://pacific.fws.gov/news/2001/2001-43.htm.>

[30] Monterey Peninsula Water Management District, *Spring Report*, Spring 2003.

[31] This limit is for production from the Carmel River, which is one part of the overall MPWMS; Production from the System as a whole, including the Carmel River and its tributaries, the Carmel Valley Alluvial Aquifer and the Seaside Coastal Groundwater Basin Subareas, is limited, as noted previously, to 20,687 af/yr.

[32] Correspondence from E. Anton, State Water Resources Control Board to E. Avila, MPWMD, October 18, 2001.

[33] Personal communication, Darby Fuerst, MPWMD Senior Hydrologist; Joe Oliver, MPWMD Water Resources Manager, April 14, 2003.

[34] Monterey Peninsula Water Management District (MPWMD), "Spring Report Newsletter," Spring 2003.

Seaside Aquifer whenever flow in the Carmel River exceeds 40 cubic feet per second at the Highway One bridge from Nov 1 to April 30. This allows recharge of the Seaside Aquifer during the wet season. The MPWMD has also tested basin injection wells as a means to store water in the aquifer.

As a result of increased constraints on available water resources, new development was further restricted by the MPWMD. The MPWMD adopted a water allocation system for each jurisdiction in its service area. No new connections or expanded uses are allowed in a jurisdiction that has exceeded its water use allocation. Annual resolutions by the MPWMD confirm allotments for each water year. The MPWMD established procedures to administer a permitting process to track new and expanded water use. Each jurisdiction in the MPWMD was allocated a set amount of water to use for permitting. Each applicant for water must receive the County's authorization before applying for the District water permit.

Threats to Carmel River Resources

The Carmel River and its fish habitat are threatened by continued water withdrawals and the potential increased demand from new development. Presently, the total allocation for the Cal-Am service area in the County is 15,285 AF/year and all is allocated to existing development.[35] As a result, the County Water Resources Agency maintains a water wait list for new water hookups and residential remodels administered on a first come, first served basis.[36] As of April 15, 2003, there were 47 applicants on the wait list within the Cal-Am service area.[37] According to preliminary estimates of the MPWMD, about 1180 AF of water per year will be needed for construction on existing, buildable, legal lots of record as of January 1, 1997 and anticipated remodels through December 31, 2006.[38] Map LU-9 shows vacant parcels in the Cal-Am service area within the County's coastal zone.

In addition to a lack of available water for new development, the existing demand continues to raise concerns about the ability to sustain the resources of the Carmel River. Even with restrictions under Order 95-10, concern remains that this amount of river withdrawal is not sufficient to protect the

[35] Communication from Henrietta Stern of MPWMD 5/19/03; MPWMD Ordinance No. 92.

[36] The process for the water wait list occurs in the following manner: an applicant conceives of a project, identifies water uses associated with the project (e.g., number of bathroom fixtures, landscaping etc.) and applies for a coastal (or building) permit from the County's Planning and Building Inspection Department. The Planning and Building Inspection Department then forwards the permit application to the Monterey County Water Resources Agency which places the applicant on a wait list on a first-come, first-served basis. The County has determined that being on a wait list tolls any permit expiration dates.

[37] Personal communication, Mike Logsdon of Monterey County Water Resources Agency; April 15, 2003. Thirty-six names were removed from this list in 1998 when a water use audit identified available supply. But no major changes have taken place since then, except for removal of one applicant for an addition based on a 2001 ordinance allowing additions of 1 bathroom to existing, one-bathroom, single-family homes (based on an estimated demand of 0.01 af/yr). However, no changes have occurred to the list to authorize any new developments.

[38] Monterey Peninsula Water Management District, "Annual Report," 2001.

steelhead under dry conditions.[39] In a recent report on instream flow needs, the National Marine Fisheries Service noted:

> *Diversions of water from the Carmel Valley Aquifer have had a significant direct effect on surface flow in the Carmel River. During most years, the Carmel River goes dry downstream from approximately river-mile (RM) 6 or 7 by July. These reductions of flow and the dewatering of the lower river have substantially reduced available steelhead habitat in the lower river.*[40]

The report noted the importance of conserving and restoring both surface and subterranean flows and preserving the river's natural hydrograph to protect steelhead and the streams ecosystem function. The report finds that about 20% of all years are dry enough to the point that there is relatively little surplus flow (<1,000 acre-feet) is available for withdrawal without adversely affecting steelhead. Recent reports indicate that mitigation efforts by the MPWMD have helped to improve river conditions.[41] However, the diversions continue to affect conditions in the river, especially in dry periods.

Responses to Protect Carmel River Resources

Since certification of the LCP and in response to Order 95-10 increased efforts have been made to maximize water availability and thus reduce stress on Carmel River resources. These include reclamation projects, planning for new source development, and improved conservation.

Since 1994, the Carmel Area Wastewater District and the Pebble Beach Community Service District (PBCSD) have implemented a wastewater reclamation project to provide reclaimed water annually for use in irrigating golf courses and open spaces in the Del Monte Forest area.[42] An average of 618.4 af/yr of reclaimed water has been applied to golf courses, water that previously would have been supplied by Cal-Am. This represents 72.6% of all irrigation use, leaving an average of 248.2 af/yr of potable water still supplied by Cal-Am for use on public and private golf courses and other open spaces such as recreational playing fields. Under agreement with the MPWMD, the Pebble Beach Company, because of its financial participation in funding the reclamation project, was granted a water entitlement of 365 acre-feet per year of additional potable water for use on its properties.[43] This is estimated to be a sufficient amount to serve all of the new development shown in the LCP for Del Monte Forest. Since 1994, when the water reclamation project was completed, the Pebble Beach Company has used less than 10 af/year, leaving a balance of 355.7 af/yr

[39] Department of Fish and Game, *Steelhead Restoration and Management Plan for California,* February 1996, p. 186.

[40] National Marine Fisheries Service*, Instream Flow Needs for Steelhead in the Carmel River*, June 3, 2002, pgs. iii-v.

[41] Monterey Peninsula Water Management District, "Spring Report Newsletter," Spring 2003.

[42] Monterey Peninsula Water Management District, MPWMD Mitigation Program, *Water Allocation Program EIR, Executive Summary,* December 2001. See <http:///www.mpwmd.dst.ca.us/whatsnew/execsum0001.htm>

[43] Personal Communication, Darby Fuerst of MPWMD to Coastal Commission, October 9, 1997.

available.[44] The Pebble Beach Company entitlement was based on a projected offset of 800 af/yr that has rarely been reached due to lack of adequate storage. In November 2000, County voters approved Measure A that included an acknowledgement that based on the entitlement there in sufficient water for planned new development in Pebble Beach.[45]

Plans for development of new water sources for the Peninsula have progressed. The Monterey Peninsula Long Term Water Supply Contingency Plan (Plan B) proposes a Seaside Basin Storage and Recovery component to implement groundwater injection (e.g., storage of excess water from the Carmel River in the Seaside Coastal Basin during winter months), and a proposed desalination plant at Moss Landing.[46]

Water conservation efforts, including retrofitting or replacing water-using appliances and fixtures and installing drought resistant landscaping, continue to be part of the Peninsula's water management strategy.[47] According to MPWMD, conservation efforts have been successful in reducing water use. Throughout the district, the average water use has declined 29% since 1980 even while the number of water users has increased 23% in that time period. The District reports that in 1980 each connection used an average of 0.48 acre-feet (about 156,480 gallons), which declined to an average of 0.34 acre-feet (about 110,840 gallons) by 2002.[48]

(3) Local Coastal Program Provisions

The certified LCP as it applies to Carmel Area and Del Monte Forest addresses Coastal Act policies with regard to water supplies in slightly different ways.

Carmel Area Provisions

In the *Carmel Area Land Use Plan*, policies require that new development be approved only where it can be demonstrated by the applicant that adequate water is available (*Carmel Area Land Use Plan* policy 2.4.4.A.1). Proposed new water use or use intensification is not to adversely affect both the natural supply necessary to maintain the environment and the minimum needs of existing users during the driest year (*Carmel Area LUP* policy 2.4.4.A.2). Water conservation measures are also required in new development (policy 2.4.4.A.6).

Specific policies address maintaining stable urban boundaries. *Carmel Area Land Use Plan* policy 4.4.2.1 provides:

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[44] Letter from Cheryl Burrell, Pebble Beach Company, May 20, 2003; personal communication, Henrietta Stern of MPWMD, April 2003; MPWMD "Monthly Allocation Report," April 2003.

[45] Monterey County Planning and Building Inspection Department, "County of Monterey Staff Analysis Of Measure "A" The Del Monte Forest Initiative, September 2000." Measure A still needs the approval of the Coastal Commission before changes to the County's LCP shown in Measure A are in effect.

[46] California Public Utilities Commission, *Final Report, Carmel River Dam Alternative Plan B, Plan B Project Report,* July 2002, pg. ES-6.

[47] California Coastal Commission, *Revised Findings for Coastal Development Permit, A-3-MCO-01-100 (Boutique Hotel Group)*, adopted 7/12/02, pg. 7-9.

[48] Monterey Peninsula Water Management District, "Spring Report Newsletter," Spring 2003.

> *The Carmel River shall be considered the dividing line between the urban and rural areas of the Monterey Peninsula. The river shall provide the natural boundary between urban and higher intensity uses to the north and rural, lower intensity uses to the south.*

Policy 4.4.3.D.4 states in part: "… All proposals must demonstrate consistency with the land use plan… and environmental… constraints…" And, policy 4.4.3.E.2 directs medium density residential development "…to existing residential areas where urban services- water, sewers, roads, public transit fire protection, etc.- are available…" Additionally, Section 4.5 of the *Carmel Area LUP* describes Land Use Categories and notes that the *LUP* designations reflect levels of development that can be accommodated by public works systems such as water supplies.

Carmel Area Land Use Plan policies also specify allocation of limited services for priority land uses and protection of resources:

> 3.2.2: *The County should reserve from its allocated water supply a sufficient quantity to accommodate coastal priority land uses proposed in this plan.*
>
> 3.2.3.1: *The County shall reserve adequate water supply from its fair share allotment of Cal-Am water as approved by the Monterey Peninsula Water Management District to supply expansion of existing and development of new visitor-serving facilities permitted by the plan. Water must be first assured for coastal-priority visitor-serving facilities before allowing any new residential development...In addition, 0.056 acre-feet/year of water is reserved for each visitor-serving unit permissible under this Plan.*
>
> 4.4.1**:** *All future development within the Carmel coastal Segment must be clearly consistent with and subordinate to the foremost priority of protecting the area's scenic beauty and natural resource values.*
>
> 4.4.2.4**:** *Because there is limited suitable land or water to support new development and because the capacity of public facilities is limited, coastal-dependent recreation and visitor-serving uses shall have priority over residential and other non-coastal dependent uses.*

County Code Section 20.146.110.A.4 specifies that, "any new expanding water supply or distribution facilities or districts shall be limited to accommodate only the buildout permitted by the *Carmel Area Land Use Plan*. *Code* Section 20.146.110.A.3 appears to limit wells to those needed to monitor salt water intrusion, indicating, "Wells or other measures for monitoring salt-water intrusion are permitted."

Del Monte Forest Provisions

For Del Monte Forest, the *County Code* explicitly prohibits new private water wells and specifies that development shall utilize public water services (Section 20.147.110.A.4). Policies also reflect the limited capacity of public services that affect the amount, location, and timing of development in Del Monte Forest. They reflect the basic goal of encouraging coastal-dependent and coastal-related development over other development where services are limited (*Del Monte Forest LUP* Policies

109-114). The *Del Monte Forest Land Use Plan* identifies priority land uses (Table B, pg 111) for purposes of water allocation. All other uses not identified as priority other than existing lots of record are subject to an Open Space/Resource Constraint Overlay, to be removed only when capacity in certain public services including water becomes available (*Del Monte Forest LUP* Policy 113). The "B-8" zone implements the Resource Constraint designation and *LUP* policy 113. Implementation regulations restrict subdivision of properties through the "B-8" combined zoning district and allow removal of the Open Space/Resource Constraint overlay for further subdivision only when the applicant demonstrates that he has met minimum requirements in respect to a number of public service capacity factors, including water supply. Reclassification can be considered when all resource constraints are alleviated. (*County Code* Section.20.42.030.H.4)

Countywide Provisions

In addition, an implementing ordinance was enacted to control intensification of water consumption, to reduce the excessive use of water within the Cal-Am service area and to protect and insure the availability of water for domestic, development, and other purposes, for present as well as for future use. Intensification of land use is restricted.[49] (*County Code* Section 18.46.) New subdivisions can only occur if they result in a minimum of 10% overall decrease in water use. However, construction of the first single-family dwelling on a lot or additions to single-family dwellings is exempt from this Chapter. Additionally, Chapter 18.44 requires residential and commercial water conservation measures in the Cal-Am service area.

In contrast to North County and Big Sur Coast, the Del Monte Forest and Carmel Area segments have no general requirement to show proof of water before an application is filed. However, the *County Code* sections applying to subdivisions have such a requirement.[50]

(4) Local Coastal Program Implementation

Although the County has recognized that there is a limited water supply available for the Carmel Area and Del Monte Forest, it has continued to approve development that will use additional water. It has also approved a few private wells in the Cal-Am service area.

Development Authorizations

Since certification of the LCP, the County has considered numerous permits for new development that would require a new or intensified water source in the Cal-Am area. Review of actions indicates that approximately 62 new single-family residences were approved in the Carmel Area and 87 in Del Monte Forest segments within the Cal-Am service area.

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[49] With some exceptions, "intensification of land use" as used in the *Code* means any new development that would result in an increase in the use of water on a building site over that level of water use existing at the time the *Code* chapter was applied to the property.

[50] *Code* Sections 19.03.015L, 19.05.040L and 19.07.020K require submittal of proof of an assured, long-term water supply in terms of sustained yield and adequate quality for all lots that are proposed for development prior to deeming the subdivision permit application complete. For further discussion of these provisions see previous Issue LU-8: North County Water Supply and Agricultural Use above.

Many of these permits were approved prior to Order 95-10 in reliance on indications by Cal-Am that water was available. Even then, however, findings noted that the assignment of water under the permit does not assure available supply and is not a commitment of water to the project. A typical permit finding for a project approval in 1994 stated that the amount of water for the proposal was consistent with MPWMD Ordinance 70 and Monterey County Resolution #93-352.[51] Two major subdivisions were approved before 1995 after the B-8 overlay district was removed through LCP amendments.[52]

After Order 95-10 it has been apparent that water for new development is not available. However, the County has continued to approve permits for projects that would use additional water. Coastal permits findings indicate that development of properties located within the MPWMD depends in large part on water availability pursuant to the allotment system established by the MPWMD, and that current information indicates that County is unable to assure that property owners will be able to proceed with their development projects. Coastal permits thus have included conditions that require proof of water availability from the Monterey County Water Resources Agency in the form of a Water Release Form. However, applicants that are not able to obtain proof of water are then placed on the water waiting list. The County has also extended the life of permits beyond the standard two year expiration required by the LCP, by tolling the expiration of permits until two years after water becomes available.[53]

A sampling of 22 permits issued by the County from 1999 to 2001 in the Cal-Am service area demonstrates that approximately 66% of these permits contained findings, as mentioned above and specific conditions requiring proof of water for the development proposal before construction can occur. Additionally, four permits (roughly 18% of those sampled) did not contain specific conditions but had findings that development is subject to water availability. Finally, there were three permits that neither contained findings nor conditions requiring the applicant to secure water for the development proposal. In one instance, a second condition per recommendation of the County's Environmental Health Department required that the applicant provide evidence to this Department that there is an approved source of water that meets all County and state requirements and will serve the proposed dwelling immediately.[54] In all, approximately 89% of permits sampled

[51] For example, County coastal permit PC 94070 (3-MCO-94-075). MPWMD Ordinance 70 (adopted June 21, 1993) repealed and ended the moratorium and limit on the issuance of water connection permits, modified the resource system supply limit, and established jurisdictional allocations. The moratorium ended when Cal-Am received a use permit from the City of Seaside to treat water from the already constructed Paralta Well. Monterey County Resolution #93-352 established a Final Allocation Water Plan for the unincorporated areas of Monterey County within the jurisdiction of the MPWMD. The net water available for allocation is 63.71 AF/year. The resolution described the allocation process as a first come-first served basis and in a manner that allocates a percentage to remodels/additions; first units on existing residential & commercial lots of record; affordable housing; senior citizens/caretaker units; and special reserve.

[52] Local Coastal Program Major Amendment 1-94, Part 2 (Griffin property), approved as submitted 2/16/94; and Local Coastal Program Amendment 1-93, Part 6 (Macomber Estates/Lohr properties), approved as submitted 6/9/93.

[53] Memorandum from Dale Ellis, Monterey County Planning and Building Inspection, December 2, 2002. Typically, coastal permits expire two years from the approval date, unless construction has commenced or an extension is granted, pursuant to *Code* section 20.70.070.

[54] County coastal permit PLN 990220 (3-MCO-00-369).

illustrate that the County has placed restrictions on development, which required applicants to provide proof and/or a secure source of water.

More recently, the County Planning & Building Inspection Department no longer deems applications complete for projects that need but do not have Cal-Am water available.[55]

Private Wells

Recently, given the worsened water situation in the Cal-Am service area, the County has processed two requests for private well authorizations in the Carmel area.[56] Felos was granted a County permit for a new house on a vacant lot with a new well.[57] The County had previously approved a permit for the applicant to drill a test well. The test confirmed that adequate water was available for the development proposal, but the coastal permit file did not contain an assessment of any cumulative effects on the groundwater aquifer. This permit was appealed to the Coastal Commission, but the appeal was subsequently withdrawn.

The County also issued a permit for the Carmel River Inn, an existing use that already had water service from Cal-Am, to drill a well for irrigation purposes.[58] The County conditioned the permit to limit water use for irrigation purposes only and not for potable water. The Coastal Commission approved this permit on appeal with conditions limiting the amount of the water that may be withdrawn for the life of the project to a maximum of 2.5 af/yr. The Commission found that generally approval of a private water supply well within the urban service area would undermine the public water management system by allowing incremental development to proceed prior to the comprehensive planning processes necessary to develop additional water supplies. But, it noted that the subject well was for non potable use, was limited to a certain amount of production, supported a visitor serving use and was located to avoid impacts to the groundwater resources.

The County also issued a permit for a residential conversion to a bed and breakfast at Point Lobos Ranch in the Carmel Area. In this case, the existing water use partly from an existing private well near San Jose Creek and partly from Cal-Am, although the site does not appear to be in the current Cal-Am service area boundary. The County approved the permit with conditions that there be no net increase in water use and that the private well supply all of the use (thus, resulting in no more water use from Cal-Am). The Commission approved the project on appeal adding a condition stating that the "limitation on water use shall not be utilized in any manner that would establish an on-site or off-site water credit for the purposes of intensification or expansion of other existing uses or for new uses."[59]

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[55] Personal communication, Ann Towner, Supervisor, Monterey County Planning and Building Inspection Department, July 21, 2003.

[56] In 1990 the County issued a permit PC07473 (3-MCO-90-210) for a well to a Spindrift Road parcel in the Cal-Am service area in the Carmel area, but made no findings as to the worsening water situation.

[57] County coastal permit PLN000160 (3-MCO-01-035).

[58] County Coastal permit PLN000400 (A-3-MCO-01-100).

[59] County coastal permit PLN970284 (A-3-MCO-99-092).

The County did deny one permit for a new well in Del Monte Forest and another application was eventually withdrawn.[60]

Del Monte Forest Area: Priority Uses for Water

Review of County actions for Del Monte Forest indicate that the permits authorized have followed the priorities established in the *LUP* for allocation of limited water supplies within the segment. Recreational visitor-serving uses that are shown as higher priority than residential development, such as Spanish Bay and the NCGA Golf Course, have been built.

(5) Analysis of Coastal Act Conformance

Continued reliance on Carmel River water runs counter to the Coastal Act objectives of preventing substantial interference with surface water flow and protecting habitat. Only a small portion of the increased Cal-Am water consumption is attributable to new development authorized by County coastal permits; most is attributable to development outside of the coastal zone or in the incorporated areas of the County. And, now new increased water consumption is not permitted by the Water Management Agency. Nevertheless, continued applications for new development in the service area, resultant expectation of water permits or demand for private wells, and use of the reclamation offset are factors that need to be addressed in conformance with Coastal Act policies.

Implementation of Policies Authorizing Additional Water Use

Section 30250 of the Coastal Act requires that new development have adequate public services in urban areas. The County's current practice of not deeming coastal permit applications complete if there is no approved water supply is consistent with the Coastal Act. However, this practice is not explicitly written in the LCP. Previous County actions to deem applications complete and continue to authorize new development when no water is available by maintaining a water wait list raise concerns, particularly when the permit expiration has been tolled. The LCP requires that new development be approved only where it can be demonstrated by the applicant that adequate water is available. And, while the MPWMD would not let construction commence, the County approval action may create an expectation that over time increases pressure on those on the water wait list to develop private wells.

[60] For example, County coastal permit PLN000424 (3-MCO-01-066). County coastal permit PLN 970461 (3-MCO-98-072) requesting a well on a vacant residential parcel in Del Monte Forest was initially denied; the applicant then requested a variance from the zoning standards; in part based on Coastal Commission advice, the County Planning Director determined that a variance was not appropriate, rather an LCP amendment was required. This decision was appealed to the Board of Supervisors and then withdrawn.

Implementation of Provisions to Allow Wells

The County has also authorized new private wells in the Cal-Am service area that have raised concerns. In a case in the Carmel Area, the Coastal Commission reviewed a County action on appeal to allow such a private well and found:

> *Land Use Plan Policy 4.4.2.1 cited above clearly establishes the Carmel River as the dividing line between urban and rural areas of the Monterey Peninsula. This policy derives from one of the most fundamental principles of the Coastal Act, as well as modern urban and environmental planning: the establishment and maintenance of stable urban/rural boundaries for the protection of sensitive resources and to provide for the rational planning of public services to support **new** urban development.*
>
> *In particular, the benefits of urban/rural boundaries include the prevention of urban sprawl, protection of agricultural land, efficient use of land, and the rational planning and construction of urban infrastructure (e.g., roads, utilities, and sanitation systems) to support urban intensities of land use. Urban-level intensity land uses are then directed to locate within urban areas, preserving rural lands for low intensity rural land uses. Certainly the services that are required to support urban uses (e.g., water supply and storage/conveyance/treatment systems, sewer connections, wastewater treatment plants, etc.) are greater and different than those needed for rural land uses (e.g., small wells and individual septic systems)….*
>
> *This policy provides that if an urban area lacks critical infrastructure - e.g., water, sewer, or road capacity – to support further urban development, then **new** development must be delayed until the capacity of the limited service can be increased, through a comprehensive urban planning process, in order to support it. It does not mean that new urban uses should proceed incrementally, using what are essentially rural-level services (e.g., private wells and septic systems). The proliferation of rural services within an urban area causes practical problems (e.g., wells run dry, lot sizes are too small to accommodate septic systems) and planning problems. Ultimately, incremental development without comprehensive planning may lead to serious environmental resource impacts such as groundwater overdraft, polluted groundwater, degraded riparian habitat, and so on.*

Thus, one of the functions of an LCP is to direct rural land uses to rural areas and urban-type development into more urban areas that have the public service infrastructure to support additional uses. The incorporation of this planning principle into the LCP allows denser levels of development in urban areas, where services such as water and sewer can accommodate them, and retains sparser levels of development in rural areas where these services do not exist. Various policies of the *Carmel Area LUP* when taken together incorporate this principle.

The demand continues for additional water supplies. In addition to the current water wait list, some vacant existing lots of record remain for development. Private wells may be seen as an alternative means to restrictions in place during droughts. Absent regional monitoring of the stream and groundwater resources, incremental authorization of individual private wells may result in

cumulative impacts. Authorization of private wells may then lead to the contention that given the approval of private wells, there is more Cal-Am water available for other users and that the overall water available for jurisdictions should be reallocated. Use of all the Cal-Am water in addition to the water used for private wells could result in overdrawing groundwater resources. Authorizations to permit individual users to draw on water from the basin independent of Cal-Am operations and limits could cumulatively decrease water available to the riparian resources and could undermine the policies to concentrate development in urban areas phased with availability of adequate services. This concern was noted in a letter from MPWMD concerning a well proposal in the Carmel Highlands:

> *...as more building permits are approved on the basis of potable water service supplied by individual domestic wells completed in consolidated rock, there is a significant risk that these well supplies could fail over time. It is imperative that property owners and Monterey County realize that water supply from the California-American Water Company System is not available to "bail out" homeowners without an adequate potable water supply due to loss of their individual well source.*[61]

The letter also mentions the need to consider any potential for seawater intrusion into the local groundwater system in considering impacts of wells. At a minimum this suggests that any new public or private water supply that is proposed to rely on groundwater in the area must be comprehensively studied (i.e., basin-wide) to determine how much water actually may be available (for the long-term) without causing any adverse environmental impact. Absent such studies, the lack of explicit policies in the *Carmel Area LUP*, similar to those of the *Del Monte Forest LUP*, that prohibit the incremental authorizations of private wells does not fully ensure that development will occur consistent with Coastal Act objectives.

Implementation of Reclamation Offset

The County has issued permits to Pebble Beach Company that involve increased water use, because of the aforementioned entitlement agreement between the Company and MPWMD. This agreement is based on two suppositions: that Pebble Beach Company will use less Cal-Am water because it is using reclaimed water instead and that the entitlement of 365 af/yr of Cal-Am water is available. Pebble Beach Company has greatly reduced its reliance on Cal-Am water for irrigation purposes, but in only one year so far reached the target of 800 af/yr saved, upon which the entitlement was based. The project is not able to meet peak irrigation demands because of inadequate storage facilities for reclaimed water.[62] Recently, the County approved a permit to develop a reclaimed storage reservoir outside of the coastal zone, which should enable Pebble Beach Company to use more reclaimed water.

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[61] Correspondence from Monterey Peninsula Water Management District to Monterey County Board of Supervisors, September 21, 1999, regarding development of domestic water wells in fractured bedrock formations within the District.

[62] Parsons Engineering Science Inc., *Phase II -CAWD/PBSCD Wastewater Reclamation Project* (Final Expanded Initial Study), February 23, 1996, pp 1-1 to 1-2.

Land use and water management policies should be updated to reflect changed conditions in allowable development, water availability and use. For example, if reclamation efforts are not yielding expected water savings, commitments to reserve water based on reclamation may no longer be appropriate. The MPWMD has authorized water permits for use of only 9.3 af/yr of the 365 af/yr allotment and indicates that the unused 355.7af/yr of the allotment is not produced by Cal-Am but remains in the system as Carmel River stream flow, reservoir or aquifer storage.[63] Yet, any increased withdrawals from the River system are cause for concern, even if they remain below the current SWRCB's imposed limit.[64] In addition, the Pebble Beach Company may not need to use all of its entitlement. If water use estimates in the LCP are correct, only about 290 af/yr of potable water is needed to serve the maximum potential development. If Measure A becomes part of the certified LCP, buildout and commensurate water demand would further be reduced. [65] Also, under Measure A, some potential residential buildout may be replaced by a new golf course, which could use reclaimed water rather than potatble water. And, if Monterey pine forest is protected pursuant to recommendations in this periodic review (see Issue SH-29), buildout would be further reduced, resulting in even less demand for new potable water. Finally, implementation of water quality protection measures to decrease irrigation and polluted runoff into Carmel Bay ASBS may potentially conserve more potable water (see Issue WQ-9: Carmel Bay Area of Special Biological Significance and Ecological Reserve). Given all of these factors and given that the Del Monte Forest LCP's detailed projected water use estimate and allocation program was prepared prior to the Pebble Beach Company-MPWMA agreement and the subsequent SWRCB orders, it is outdated.

Development of New Water Supplies

Planning has continued for development of new water supplies, including potential desalination facilities at Moss Landing, to serve the Cal-Am service area and possible other users. The LCP does not contain adequate policies to assure that such new facilities will be development in conformance with Coastal Act policies to support priority uses, protect coastal resources, concentrate development and not result in individual or cumulative impacts. The County's Health and Safety Code (*County Code* Chapter 10.72) does, however, include policies and regulations for permitting the construction and operation of desalination facilities. These include application requirements related to construction, financial capabilities, inspection and testing, and other issues. They also include a policy specifying that desalination facilities be owned and operated by public entities.

A recent draft report to the Coastal Commission identified concerns related to potential development of such facilities.[66] Desalination can have adverse impacts on marine resources through entrainment and brine discharges that may require mitigation through changes in design, siting, and operations.

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[63] Personal communication, Darby Fuerst, MPWMD, June 5, 2003. Also, see for example, Monterey Peninsula Water Management District, *Water Allocation Report,* March 31, 2003.

[64] See discussion above about concerns raised by National Marine Fisheries Service.

[65] Measure A, however, retained the current *Del Monte Forest Land Use Plan* Table B estimate of use of water; it did not revise it based on the different land uses and densities contained in the Measure.

[66] California Coastal Commission, *Presentation of Draft Report on Seawater Desalination and the California Coastal Act*, August, 2003.

It may also remove constraints to growth and substantially affect coastal resources. The report also noted that the Coastal Act is based on the coastal resources of California being public resources, and the consumptive use of seawater by private interests will require thorough evaluation and adequate assurances that public uses and values will be protected. Also, the report noted that each facility would need assessment on a case-by-case basis because each has unique design, siting, and operating characteristics. Thus, the LCP must contain updated policies consistent with Coastal Act policies requiring that new urban development be located in urban areas with adequate public services, and that give priority to certain types of development when public services are limited. This suggests that proposed desalination facilities should be part of a comprehensive regional planning effort based on other available water sources (e.g., imported water, groundwater, conservation, recycling, etc.) and adopted land use plans and growth projections. The Commission expressed similar policy concerns most recently in its review and action on the City of Monterey Land Use Plan resubmittal.[67] In addressing water supply policy in that LUP, the Commission found that public desalination facilities may be permitted where appropriate provided that adverse environmental impacts are avoided and/or fully mitigated.[68] Recommendation LU-9.4 is required to assure that the LCP policies will assure protection of coastal resources in development of new desalination facilities.

Conclusion

In conclusion, the County and other agencies are working on a number of fronts to address short-term and long-term water problems. Measures implemented by the County to carry out LUP policies to conserve and reclaim water will contribute to protecting water supplies and minimizing impacts to resources consistent with the Coastal Act. Such measures should be continued and additional measures to expand conservation pursued. However, in continuing to authorize new development and new wells in the face of limited water availability and lack of complete assessment of groundwater basins, LCP implementation is not assuring that new development is sustainable and consistent with Coastal Act policies.

In implementing the LCP, the County has not always followed policy requirements to authorize development only when water is available and in areas able to accommodate it. Although the County has generally conditioned coastal permits to require proof of water availability before issuance of a building permit and maintains a water wait list, these types of conditions do not address the fundamental issues surrounding the basic resource constraints, such as potential overdrafts to groundwater basins or whether those individual authorizations will have cumulative impacts on sensitive species and habitat. The "conditional approvals" create development expectations that cannot be reversed and which may ultimately lead to cumulative impacts. And, by prematurely approving development projects without available water to support them, the County is potentially committing future capacity for non-priority uses that otherwise may be needed for priority uses.

[67] California Coastal Commission, *City of Monterey: Harbor Segment Land Use Plan Resubmittal*, Report dated April 17, 2003.

[68] California's Desalination Task Force, convened pursuant to AB 2717, is expected to publish findings and recommendations soon, some of which may be appropriate to include in an LCP.

This would conflict with policies that protect allocation of limited public services to priority uses, (e.g. *Carmel Area Land Use Plan* policies 3.2.2 and 4.4.2.4) and project approval may therefore fail to adequately protect priority uses as required by the Coastal Act.

The LCP, when certified, was based on projections of water production that exceed current available supply. As demand for limited water supplies grows, it is essential that the LCP contain updated policies that reflect current water constraints and that adequately regulate development to protect resources. The current practice of interpreting the LCP to allow private wells in the Carmel Area does not fulfill Coastal Act objectives. It also results in conflicting responses to the same issue in Del Monte Forest, where wells are prohibited. To adequately carry out Coastal Act policies to ensure stable urban boundaries and protect environmentally sensitive resources the *Carmel Area LUP* policy should be revised to prohibit new private wells in the area served by Cal-Am (see Recommendation LU-9.2).

The LCP also needs to be updated to guarantee that any proposal to develop new water supplies will ensure that such development will be consistent with Coastal Act Section 30254 that governs new or expanded public works facilities as well as other Coastal Act policies. Many of the priority uses listed in the *Del Monte Forest LUP* have been developed. Given the changes in water availability since certification, the LCP may no longer reflect current conditions and should be updated to consider revised priorities for limited water supply (see Recommendation LU-9.3). It is also important that such an updating account for and emphasize continued conservation and reclamation, because the reclamation project is not yet producing its target amounts.[69]

Revised, regional priorities for scarce water need to be established if Coastal Act objectives are to be achieved. A strategy is currently being considered to develop additional water supplies.[70] This strategy identifies two key components: Additional storage in the Seaside Basin and Moss Landing desalinization.[71] Additional storage in the Seaside Basin would divert excess winter flows from the Carmel River, treat the water then convey it to the Seaside Basin where it would be injected and stored in the aquifer for use during dry periods, thus reducing stress on the resources of the Carmel River watershed during dry periods. Although the physical development of these components would occur outside of the coastal zone, there may be impacts on coastal zone resources that should be carefully addressed.[72] There is also a need for MPWMA to allocate scarce water in a manner consistent with the Coastal Act priorities at least as the coastal zone is affected. Although individual members such as Monterey County can allocate their shares in such a manner, all the member jurisdictions need to ensure the shares that they divvy up among themselves will be sufficient for this individual allocation to occur (see Recommendation LU-9.7).

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[69] Parsons Engineering Science Inc., *Phase II -CAWD/PBSCD Wastewater Reclamation Project* (Final Expanded Initial Study), February 23, 1996, pp 1-1 to 1-2.

[70] California Public Utilities Commission, *Final Report, Carmel River Dam Alternative Plan B,* July 2002.

[71] Monterey County, *Monterey County Draft Environmental Impact Report*, *Volume I*, March 27, 2002. pg 5.15-14 through 5.15-16. http://www.co.monterey.ca.us/gpu/DEIR/Volume%201%20USE/5.15_WaterSupplyDemand2.pdf.

[72] If these are federally funded or permitted, they may be subject to federal consistency requirements.

c. Issue LU-10: Big Sur Valley Water Supply

(1) Overview

This subchapter addresses the following concern identified through issue scoping: **Ensure that stream water withdrawals are adequate to serve all users and to sustain habitat for indigenous species in the Big Sur River and Sycamore Canyon watersheds.**

The Big Sur River supports threatened red-legged frogs and steelhead trout. Sycamore Canyon contains a small stream with very low to intermittent flows.

The certified Monterey County LCP recognizes the sensitivity of the water resources and the habitats dependent on them. Studies undertaken as background for the LCP revealed the low flows of Sycamore Canyon and Post Creek and tributaries of the Big Sur River. The LCP thus contains a series of policies written to ensure that new development will be served by an adequate water supply without adversely impacting riparian or other natural resources.

Since certification of the LCP, additional data has been collected for the Big Sur River and its tributary Post Creek, but none for Sycamore Canyon. Also, the species noted above were listed as threatened. The State and Federal governments are preparing habitat enhancement plans for the segments of the Big Sur River that they control. But definitive data is not available to draw a conclusion as to whether continued and future water withdrawals will have cumulative adverse resource impacts. This is mostly due to the County not fully implementing LCP provisions that call for more monitoring, studies, and planning for these two watersheds. New development approved and built in the 15 years since certification has resulted in more River water use, but whether there have been any adverse impacts on the streams as a result is unknown.

In light of the continuing information gaps, a definitive conclusion of whether the LCP has been implemented in a manner consistent with Coastal Act objectives cannot be made. Thus, it is clear that the further monitoring and studies called for in the LCP still need to be carried out.

Although the following analysis focuses on the Big Sur River and Sycamore Canyon with respect to implementation of the LCP, the substance of the recommendations are applicable to other Big Sur coast watersheds, especially those recognized as having relatively low stream flows.

(2) Resource Background

The Big Sur and Sycamore Canyon watersheds encompass rugged seacoast lands in the central part of Big Sur. Map LU-10 illustrates the extent of these two watersheds. A background report for the Big Sur Coast water resources was completed in 1980 around the time of LCP preparation.[73] This report assessed water resources and identified areas of historical water supply problems. It identified principal groundwater recharge areas and water deficient areas or watersheds and estimated water requirements for natural vegetation and minimum stream flows necessary to permanently maintain

[73] Black & Veatch Consulting Engineers, *Preliminary Plan and Policies for the Protection of the Big Sur Coast Water Resources*, Walnut Creek, CA; 1980.

wildlife resources. The study identified the Sycamore Canyon watershed and the Post Creek area of the Big Sur watershed as water deficient areas where there has been a history of water supply problems and conflicts among users.[74] At the time of LCP certification there were approximately 95 structures built within the coastal zone portions of the Big Sur River and Sycamore Canyon watersheds.[75] Development in these two watersheds acquires water primarily through two sources: groundwater accessed by wells and surface water accessed primarily by diversion from the Big Sur River. There is potential overlap between ground and surface water in that wells located close enough to the rivers access underflow of the river. Such access is considered river water subject to water rights granted by the State Water Resources Control Board (SWRCB), which regulates river diversions.

Sycamore Canyon Watershed Characterization

The Sycamore Canyon watershed area is 2.6 square miles. Sycamore Creek begins on the western edge of Highway 1 and travels the length of Sycamore Canyon to Pfeiffer Beach State Park. A road runs adjacent to the creek allowing access to private residences and the public beach. Sycamore Creek is approximately 2.5 miles in length with varied width and stream flows. The creek was formed by two canyon walls, which run in an east-west direction. Current land use within the canyon includes: agriculture, residential, public beach and undeveloped forest, chaparral and marsh.

At present the majority of water flowing in the stream corridor lies within a single channel carved out from previous heavy flows. This "entrenched" channel is approximately 3 feet wide and 3 feet deep. Most sections hold only a trickle of water with exposed cobblestones, where as other areas were observed to carry up to 2 feet of water. The entrenched channel gradually changes where it is less carved out. New vegetation is supported along side the low flow. At several points, sediment deposits may accumulate causing one flow to split into two or more branches. Braided streams have formed from multiple branches of water flow at a few areas along Sycamore Creek. These conditions are found in the forested reaches with denser understory of clover and fern, and in agricultural reaches with chaparral transitioning to cut grass field. These appear to have more uniform vegetation distribution and particularly low flow, as the water is spread out. There is a small wetland zone at the outlet consisting of cord grass and horsetail.

Sycamore Creek has a high potential for the buildup of woody debris, which may benefit the stream ecology through habitat formation of pools, riffles and runs. Intermittent shade may provide cover for fish and potential light for primary producers and invertebrates that feed on them. The varied channel morphology creates the opportunity for valuable habitat to fish breeding and feeding under heavier flow conditions. Increased flow would benefit the ecology tremendously. The outlet would

[74] There is also a small Deer Creek watershed (identified as Pfeiffer Ridge watershed in California Coastal Commission, *Big Sur Coast: A Subregional Analysis*, 1977) seaward of Sycamore Canyon (See Map LU-10) that contains some residential parcels which are also in the Clear Ridge mutual system and obtain water from the Big Sur River watershed. There are no known estimates of water flow in Deer Creek.

[75] Big Sur Land Trust, Map titled "Big Sur Coast Visual Sensitivity and Scenic Quality" in: *Protecting Scenic Lands of the Big Sur Coast*, June 1988.

allow passage of fish back up stream for spawning and create a transition zone from salt to fresh water. Riffles would form over cobble areas, providing good habitat for invertebrates and feeding for fish. Runs and glides would extend farther in length. The low flow channel may expand in width to include more of the bank full zone. This could create pools and backwater, aiding fish in energy conservation and breeding areas. Current flow conditions may not support fish along the length of the stream due to lack of depth and transition zone. However, the rich habitat potential with increased flows suggests that the area be examined for any water removal.

Field observations revealed activities adjacent to the creek which could affect water quality and quantity such as: lawns which could use fertilizers, septic tanks that could increase nutrient concentrations, rusting farm equipment polluting soil and water, carving of wood (if removed from the stream corridor could prevent natural habitat formation), and pipes possibly diverting flow for live stock or electricity. Clearly any water diversion along this stream, causing present low flows, would pose a significant impact on the stream ecology.

When measured in the drought year of 1976, Sycamore Canyon's flow was only 2.2 gallons per minute (gpm), which would translate into 3,168 gallons per day (gpd), assuming a consistent flow over the 24-hour period. A 1980 study concluded that the demand for water in the Sycamore Canyon watershed may have approached the limit of supply and that, in the future, restriction on water use in the stream may be required due to low flow rates.[76] Since that time, no water estimates have been made for Sycamore Creek.

It is also unknown how much water is directly or indirectly taken from the creek. There are a few small water system and possibly some individual wells that draw from the creek. However, the majority of homes in the watershed is supplied by water systems whose source is the Big Sur River watershed.

Big Sur River Watershed Characterization

The Big Sur watershed area is approximately 58 square miles. The upper portions of the Big Sur watershed are in Los Padres National Forest. The Big Sur River enters its lower basin at the eastern boundary of Pfeiffer-Big Sur State Park and flows generally north through the Big Sur Valley to the mouth at Andrew Molera State Park. Pfeiffer Ridge separates the Big Sur Valley from Sycamore Canyon. Several tributary creeks feed the Big Sur River, including Pfeiffer-Redwood Creek, Juan Higuera Creek, Pheneger Creek and Post Creek.[77] The watershed and these tributaries are shown on Map LU-10. Development in the watershed is a combination of rural residences on large lots and commercial and institutional facilities.

The Big Sur River supports anadramous fish, including steelhead trout and Coho salmon. Habitat for the California red-legged frog is found in the watershed as well. The status of the California red-

[76] Black & Veatch Consulting Engineers, "Appendix A, Estimate of Minimum Stream Flows" in: *Preliminary Plan and Policies for the Protection of the Big Sur Coast Water Resources*, Walnut Creek, CA; 1980.

[77] Monterey County Planning Department, *Big Sur River Protected Waterway Management Plan*, 1985, pg. 4.

legged frog (*Rana aurora draytonii*) and steelhead (*Oncorhynchus mykiss*) has changed since LCP certification. On May 23, 1996, the U.S. Fish & Wildlife Service designated the California red-legged frog as a threatened species listed under the Endangered Species Act (ESA). The Big Sur River steelhead trout were listed as a threatened species on August 18, 1997.[78]

Studies in support of the *Big Sur River Protected Waterway Management Plan* reported an average flow of 8,785 gpm for the summer months of June through October.[79] The average stream flows for each of the months ranged from a low of 5,837 gpm in September to a high of 14,862 gpm in June.[80] The average annual runoff of the Big Sur River for the 27-year period between 1950 and 1977 was 64,900 af/yr based on USGS stream gauge records.[81] However, more recent flow estimates for the Big Sur River report the average annual runoff rate for the Big Sur River is 171,590 af/yr, as measured peak flows indicate wetter years in the late-1980s and throughout the 1990s.[82]

No consumption figures are available for Big Sur River. Three large mutual water systems, whose members are mostly in the Sycamore Canyon watershed, are served by wells adjacent to the River and there are other smaller systems also serving development in the Big Sur watershed. Most commercial enterprises are located along the Big Sur River and are served by their own non-community water systems using wells. Post Inn draws water from wells not by the River. Actual water extraction figures are unavailable, either in total or by source.

The Big Sur River *Enhancement Plan* notes that the Department of Fish and Game suggested a minimum flow equal to the mean of the six month summer flows (May-October) over the past 20 years be used as a interim guideline for determining whether any additional water is available for human use. The *Waterway Plan* concludes that,

> *Adherence to the interim guideline suggested by the Department of Fish and Game for the minimum flow which should remain in the river at all times means that no additional water is available for diversion during the late summer and early fall.*[83]

Post Creek is the only tributary of the Big Sur River that supports steelhead, and is also the one with substantial development: The Post Creek watershed encompasses 960 acres of rugged steep topography covered with dense forest, meadow and chaparral including properties on the west and east side of Highway 1. Elevations range from 2610 feet above mean sea level on the eastern

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[78] U.S. Fish and Wildlife Service Species Profiles https://ecos.fws.gov/species_profile/SpeciesProfile?spcode=D02D has status details for the California red-legged frog (*Rana aurora draytonii*). U.S. NOAA and National Marine Fisheries Service Protected Resources <http://www.nwr.noaa.gov/1salmon/salmesa/stlhscc.htm> has status information on steelhead (*Oncorhynchus mykiss*).

[79] Monterey County Planning Department, *Big Sur River Protected Waterway Management Plan*, 1985, certified as part of the LCP in 1986.

[80] Monterey County Planning Department, *Big Sur River Protected Waterway Management Plan*, 1985, pg. 20.

[81] Monterey County Planning Department, *Big Sur River Protected Waterway Management Plan*, 1985; pg. 5.

[82] Denise Duffy & Associates, *Big Sur River Steelhead Enhancement Plan*, March 2003, prepared for the Department of Parks & Recreation; Figure 4 page 7.

[83] Monterey County, *Big Sur River Protected Waterway Management Plan*, 1985 pg. 20.

watershed boundary to 240 feet at the mouth of Post Creek at the Big Sur River in Pfeiffer-Big Sur State Park.

The *Big Sur River Steelhead Enhancement Plan* notes that adult steelheads have been observed spawning in the lower reach of Post Creek during the wet winter of 1992-93.[84] In addition, young of the year steelhead were observed in the lower 600 feet of the creek in June and August 2002. Juvenile steelhead have been documented in this portion of the creek in 1993.

The major development on Post Creek is the Ventana Inn complex with hotel units, campground, and restaurant. On the lowest reaches in Pfeiffer-Big Sur State Park a campground is located along the creek. The upper watershed is lightly populated with single-family residences. In 1986 the Coastal Commission conditionally required Ventana to permanently implement a Water Monitoring and Management Plan.[85] Water resources included Post Creek, McCarty Springs and two or more private wells, all within the watershed. The plan provided for variable diversions of water both seasonally and year to year. Specific limits are established so that no one source of water is over exploited. Sixty gallons of flow were to be maintained in the creek. Coastal Development Permit 3-82-171 required that the Ventana Inn construct, maintain, and operate a pipeline and pump from the Big Sur River to the Post Creek steelhead spawning area to protect the steelhead. The State Department of Parks and Recreation and the Department of Fish and Game raised concerns over the potential for loss of electrical power and the resulting fish die off. The program was not implemented and no alternative program has yet been approved.

Post Creek was measured in 1976 at 12 gallons per minute.[86] At the mouth of Post Creek, water flow fell below 60 gallons per minute 29 out of 52 weeks in 1991, twice in 1993, and 24 times in 1994. In 1995 45 measures were 300 gpm or more and none were less than 200 gpm. In 1996 all measurements were greater than 90 gpm and 43 were 300 or more.[87]

For the years from 1985 through 1996 Ventana Inn submitted Annual Water Resource reports to Monterey County, the California Coastal Commission and the State Department of Fish and Game.[88] A compilation of the water program measurements from 1984 through 1996 showed that the annual consumption was actually slightly higher in the 1980's than the 1990's. The Inn has a program of water conservation. Projected water use by the Inn in 1984 was 38,880 gpd; by the Commission

[84] Denise Duffy & Associates, *Big Sur River Steelhead Enhancement Plan*, March 2003, prepared for the Department of Parks & Recreation.

[85] Coastal Commission coastal permit 3-82-171 for the expansion of the Ventana Inn.

[86] California Coastal Commission, *Big Sur Coast: A Subregional Analysis*, February 1977.

[87] Ventana Inn Annual Report on Water Resources; individual reports for years 1991, 1993, 1994, 1995, 1996; submitted pursuant to permit 3-82-171 and 3-82-171A conditions. Post Creek water flows were measured weekly at collection points in the Ventana campground and at the mouth of the Creek at the State Park where the stream passes through culverts and facilitates measurement. The Ventana properties have been sold to Crescent Real Estate. The Commission has no record of receipt of annual reports after 1996. Commission staff has recently met with the current owners in an effort to resolve this issue.

[88] Water consumption for the Ventana Inn water system was monitored with a master water meter set directly below the main source of water storage and a number of submeters located at various points along the water supply system.

38,880 gpd. The actual daily consumption was reported in 1989 at 25,781 gpd; the lowest in 1992 at 22,349 gpd.

Threats to Watershed Resources

Assuming the possibility that future water withdrawals might have adverse impacts on the watersheds' resources, the potential for withdrawals comes from additional development and new diversions. Review of existing vacant lots and zoning indicates that in the Big Sur River watershed there is the potential to add approximately 33 new residences and 230 inn units. Development of these uses could increase water demand by an additional 48,830 gallons per day.[89]

Similarly, in the Sycamore Canyon watershed there is maximum potential for 83 new single-family residences, without factoring in any resource constraints. If all of these residences were authorized, this could increase the projected water demand by an additional 59,760 gallons per day (i.e., up to 41.5 gallons per minute). Increased demand, if extracted from the creek, could completely deplete it.

There have been two requests for water appropriations from the Big Sur River since LCP certification. One diversion application involves the Clear Ridge Mutual Water Company that serves portions of the Sycamore Canyon watershed. The original application was for a permit to divert 140 acre-feet of water per year from the Big Sur River.[90] Most of this water would be exported out of the Big Sur River watershed for residential development in the Sycamore Canyon watershed. In October 2002 the Company amended their application to only request a diversion of 42 acre-feet per year.[91]

Another application for water diversion involves the El Sur Ranch discussed previously.[92] Water pumped from two wells at the time the original permit was issued was thought to be from groundwater aquifers. However, it has since been documented that the diversion is actually occurring from the underflow of the Big Sur River. The El Sur Ranch was directed to submit an application to the SWRCB for this water diversion. The application is for appropriating 1800 acre-feet per year of Big Sur River underflow to continue irrigation of agricultural land.

Portions of the Big Sur River riparian habitat on Andrew Molera and Pfeiffer-Big Sur State Parks are identified as being degraded due to human recreational activities such as camping adjacent to the river's edge and disrupting access for fish by constructing mini-dams with rocks for use as swimming holes. The Environmental Assessment for the Big Sur River Management Plan also identifies impacts resulting from concentrated recreation and camping that might affect overall

[89] Based on water demand for residential uses at the required 0.5-gallon per minute minimum flow (720 gpd) and 109 gallons per day for each overnight visitor room.

[90] An acre-foot of water equals the volume of water that would occupy one acre, one foot deep, which is approximately equivalent to 326,000 gallons of water.

[91] State Water Resources Control Board Application #30946 for the Clear Ridge Mutual Water Company.

[92] State Water Resources Control Board Application # 30166 for the El Sur Ranch.

stream resources, such as damage to riparian resources from campers chopping trees, impacts to water quality from concentrated camping and impacts from invasive plants.[93]

Responses to Enhance Watershed Resources

Plans are underway to enhance publicly owned portions of the Big Sur River corridor while additional information on the conditions of the stream resources and the effect of development that draws from underflow of the rivers is being developed.

The aforementioned *Big Sur River Steelhead Enhancement Plan* covers portions of the River that flow through Andrew Molera and Pfeiffer Big Sur State Parks. The plan contains the following findings and recommendations for steelhead habitat enhancement and management of resources to benefit the species.[94] State Parks land represents approximately 75% of available steelhead habitat for the entire Big Sur watershed. The management of park visitors within the sensitive river and riparian habitats at Pfeiffer-Big Sur and Andrew Molera represent the greatest immediate opportunity for steelhead enhancement. The *Enhancement Plan* recommends keeping people, horses, and vehicles out of spawning habitats during every season but the fall; enforcement of DF&G Code prohibitions on streambed alterations and out-of-season and campground reach recreational angling by park visitors. Other recommendations include removal and restoration of two streamside campsites on Post Creek; exclusionary fencing and riparian habitat restoration within several picnic and campsites; natural recruitment of large woody debris; new pedestrian and light vehicle bridges; minimizing groundwater use from alluvial wells in the lagoon area of Andrew Molera State Park; instituting trail crossing closures at spawning areas; and conducting annual redd surveys among other management measures.

To date, the federal agencies responsible for listed species recovery have not prepared recovery plans aimed at identifying habitat needs to support steelhead and ensuring recovery of these listed species.[95]

The main stems of the South and North Forks of the Big Sur River and the main stem of the River itself from their confluence to the western boundary of the Ventana Wilderness were added to the National Wild and Scenic River System in 1992. The U.S. National Forest Service is undertaking:

> *Preparation of a comprehensive river management plan (CRMP) for the headwater portion of the Big Sur River which is a component of Wild and Scenic Rivers system. The plan will display strategies to protect and enhance the values for which the river was designated: free*

[93] U.S. Department of Agriculture, U.S. Forest Service, Pacific Southwest Region, *Environmental Assessment Big Sur Comprehensive River Management Plan*, June 2003. See <http://www.fs.fed.us/r5/lospadres/documents/crmp/big-sur.pdf>

[94] Denise Duffy & Associates, *Big Sur River Steelhead Enhancement Plan*, March 2003, prepared for Dept. of Parks and Recreation.

[95] National Marine Fisheries Service is responsible for conserving, protecting, and managing marine species including anadramous fish species, whereas the U.S. Fish and Wildlife Service is responsible for conserving, protecting and managing terrestrial species including non-marine aquatic fish species.

flowing condition, water quality and "outstandingly remarkable" values. The CRMP will provide a basis for comparing alternative management plans for the Big Sur River.[96]

The Environmental Assessment for this management plan recommends adaptive management measures, including various measures to support management activities prescribed for enhancement and recovery of threatened and endangered species.[97] These include managing stream segments containing anadramous fisheries to provide 90% or more of identified potential habitat capability based on models developed for steelhead trout, managing riparian habitat, specifying what types of structures might be allowed in the river, discouraging new utility lines, and siting utility lines in existing rights of way. Monitoring proposals include reviewing for overall river condition, trash, development of fire rings, cutting of live vegetation, invasive weeds, overcrowding of campsites, number of dogs off leash and other impacts.

The Coastal Commission and others filed protests on the aforementioned water diversion applications. Commission staff filed a protest on an application by the Clear Ridge Mutual Water Company, noting that such diversions may result in inadequate flows to protect fish resources and other beneficial uses, especially during low flow conditions. In addition, such diversions were seen to conflict with LCP policies that prohibit transfer of water outside of the watershed it comes from.

The Coastal Commission also filed a protest on the El Sur Ranch application. The Commission's protest noted that the diversion might affect stream and habitat resources. For example, in response to the El Sur Ranch's water rights application to draw from river underflow, the SWRCB is evaluating the effects of groundwater use on streamflow and lagoon conditions of the Big Sur River. An environmental impact report that will further identify current conditions and habitat needs of wildlife dependent on sustained minimum water flows is being prepared. The Department of Fish and Game is concerned that in order to adequately assess the environmental effects of a proposed water appropriation, it is important to analyze the quantity and quality of water remaining in the stream after the proposed diversion as well as other diversions in the watershed that occur.[98]

(3) Local Coastal Program Provisions

The LCP for the Big Sur Coast recognizes the significance of water resources in this area and that "the protection and maintenance of Big Sur's water resources is a basic prerequisite to the protection of all other natural systems."[99] The LCP focuses on measures that will maintain, restore, and, if possible, enhance water resources. The LCP policies are structured so that the County may work in concert with the State Department of Water Resources Division of Water Rights and the Department

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[96] U.S. Department of Agriculture, U.S. Forest Service, Pacific Southwest Region, *Environmental Assessment Big Sur Comprehensive River Management Plan*, June 2003. See <http://www.fs.fed.us/r5/lospadres/documents/april-june-2003.pdf>

[97] U.S. Department of Agriculture, U.S. Forest Service, Pacific Southwest Region, *Environmental Assessment Big Sur Comprehensive River Management Plan*, June 2003. See < http://www.fs.fed.us/r5/lospadres/documents/crmp/big-sur.pdf>

[98] Correspondence from Robert Floerke, Regional Manager, Department of Fish and Game to Edward Anton, State Water Resources Control Board, April 21, 2003 regarding the Draft EIR for the El Sur Ranch application.

[99] *Big Sur Coast LUP* Key Policy 3.4.1; *Code* Section 20.145.050.

of Fish and Game to manage surface and groundwater supplies. There are both short-term regulatory provisions to apply to proposed new developments and longer-term action actions to pursue.

Water Supply and Use

The LCP requires all applicants for development of residential, commercial, and visitor-serving facilities to demonstrate (by appropriate seasonal testing) that there will be an adequate water supply for all beneficial uses and such water supply will be of good quantity and quality. Water supply flows for single-family dwellings are required to be a minimum of ½ gallon per minute year round.[100] Minimum flows for commercial or visitor-serving facilities are not specified, rather these facilities must demonstrate an adequate supply based on estimated water usage. The adequacy of source capacity is determined on a case-by-case basis, which considers engineering reports conducted for the site regarding available water onsite, including use of the latest textbook guidelines for maximum daily demand to serve such facilities.[101] This proof of water is required before an application can be filed. Hydrologic reports are required if the County Health Department determines more information is required of if there may significant impacts from using the water source (*County Code* Sections 20.145.050.A.1 and 20.145.050.B.1).

The LCP requires that where watersheds are affected by or are threatened by overuse of available water supplies, the County will limit development as necessary to protect the public health and welfare and to protect the natural values of the streams and watershed (*County Code* Section 20.145.050.B.1). Exporting water out of its source watershed is generally not permitted.

Rivers and Streams

The LCP requires that the effects of all new development proposals or intensification of land use activities on Big Sur Coast's rivers and streams be considered in all land use decisions.[102] LCP policy states that, where groundwater is available on site, it will be the priority means for obtaining water to serve the proposed project versus surface water diversion from perennial streams and springs that feed into perennial streams. Exceptions are allowed in certain instances; for example, if a development can be served by an existing water system, or where groundwater withdrawal would result in significantly depleting recharge areas

In order to protect water supply and riparian habitats, "land use development activities will not be permitted that will have the effect of diminishing surface flows in coastal streams to levels that will result in loss of plant or wildlife habitat."[103] The LCP states that wells or infiltration fields that are located within or near a stream channel so as to tap stream sub-flow rather than groundwater shall be considered surface water diversion.[104] The LCP requires that water quality and adequate year-round

[100] *Big Sur Coast LUP* 3.4.3.A.1; IP Section 20.145.050.A.1.

[101] Personal communication, Elizabeth Karis of Monterey County Environmental Health, March 27, 2003.

[102] *Big Sur Coast LUP* Policy 3.4.3.B.1; IP Section 20.145.050.B.1.

[103] *Big Sur Coast LUP* Policy 3.3.3A.3; IP Section 20.145.050.A.2, A.3.

[104] *Big Sur Coast LUP* Policy 3.4.3.B.6; IP Section 20.145.050.B.5.

flows be maintained for streams supporting rainbow and steelhead trout as well as avoiding the impairment of anadramous fish runs.[105] The LCP precludes development activities from being permitted that will have the effect of diminishing surface flows in coastal streams resulting in loss of plant or wildlife habitat. Intensification[106] of substantial water use is precluded without specific verification that adequate water supplies are available and that there will not be adverse impacts, individually or cumulatively, to riparian vegetation and anadramous fisheries, or supply needed by users during the driest expected year.[107] Additionally, the LCP contains policies that recognize the beneficial effects of increased winter flow rates of streams and the contribution to stream health and beach replenishment. *Big Sur Coast LUP* Policy 3.4.3.B.2 and corresponding *County Code* Section 20.145.050.B.2.c state that in general, winter stream discharges should not be interrupted. Water diversions are required to be carefully regulated to avoid diversions beyond the year-round entitlements and avoid impairment of beach sand supply and anadramous fish runs. The *LUP* recommends that the State DF&G undertake studies to determine appropriate in-stream flow requirements and file for necessary water rights to protect fisheries.[108]

The LCP identifies both Big Sur River and Sycamore Canyon watersheds as Water Resource Study Areas. This designation triggers policies that encourage restoration of streams through measures such as enhancing water flows or retaining water for in-stream uses.[109] A Community Water Resource Monitoring Program is also to be implemented for these areas. This program is to determine the extent of water supply problems and riparian habitat impacts in the study area and to detect water resource deficiencies that may arise.[110] In these study areas, permits for public and private water system expansion, new wells and new diversions require measuring extraction and retention of monthly monitoring records.[111] Priority in the study areas is to be given to consolidation of existing mutual water systems or development of a new community water system in the Sycamore Canyon watershed for the purpose of developing a water source other than Sycamore Canyon Stream or the Big Sur River.[112] To further these policies, the *Big Sur Coast Land Use Plan* contains the following recommendation:

> *5.4.3.O.1: The County recognizes that full development of vacant parcels in the rural residential areas may be undesirable or unfeasible because of various resource limitations. Detailed planning review of areas with known or anticipated problems should be completed within the*

[105] *Big Sur Coast LUP* Policies: 3.3.3.A.3, 3.4.3.B.2 & B.3; IP 20.145.040.C.1.c, 20.145.050.B.2 & B.3.

[106] For example: residential subdivision with potential to increase number of households; residential or inn development of more than one unit; restaurant, bar or other food service development expansion; recreational vehicle campground; and development for commercial irrigated agriculture.

[107] *Big Sur Coast LUP* Policy 3.4.3.B.7; IP Section 20.145.050.B.6.

[108] *Big Sur Coast LUP* Policy 3.4.4.

[109] *Big Sur Coast LUP* Policy 3.4.3.C(1).

[110] *Big Sur Coast LUP* Policy 3.4.3.C(2). The County intended to initiate the program within five years (i.e., by 1994) (IP Section 20.145.050.D.4). Permittees for single-family residences were required, by deed restriction, to agree to make $600 contributions to the County when the program commenced (*County Code* Section 20.145.050.D.3).

[111] *Big Sur Coast LUP* Policy 3.4.3.C(3).

[112] *Big Sur Coast LUP* Policy 3.4.3.C(4).

next few years in order to assist residents and property owners in finding acceptable solutions. Master environmental impact statements are one tool that could be used. In the Sycamore Canyon and Pfeiffer Ridge areas, for example, studies should be directed to resolving fire protection, water supply, and traffic congestion issues. Palo Colorado Canyon appears to contain more vacant parcels than the available water supply can serve.

The Big Sur River is also designated as part of the California Protected Waterways system and the resultant *Big Sur River Protected Waterway Management* Plan is part of the certified LCP. The Plan contains guidelines and management strategies for addressing protection of the resources of the river. Policy 3 of the *Management Plan* requires an annual monitoring report and a five-year streamflow evaluation and report to the Board of Supervisors.

(4) Local Coastal Program Implementation

Permit Review

Since LCP certification the County has authorized approximately 33 new residential structures in the subject watersheds (23 homes and 10 caretaker units). Twenty-seven of the 33 have been for developments in the Sycamore Canyon watershed. Some of these have been supported by individual wells and some by private water purveyors. At least 15% were noted to have connections to water systems that draw exclusively from the Big Sur River, but the actual percentage may be higher.

Forty-seven coastal permits for residential uses, caretakers' homes, and wells in the subject watersheds were reviewed. Of these 11 (23%) contained findings that adequate water was available. Twelve (26%) included findings that water was not transported out of the watershed. Only one of the 47 permits reviewed indicated that a hydrologic study was required. Eleven (23%) included conditions requiring the applicant to monitor water and retain monitoring records. Eighteen (38%) contained requirements for biological surveys. However, brief review indicates that many of these surveys focused only on terrestrial resources and did not directly address stream and anadramous fish resources. None contain measures to specify mitigation for impacts to stream resources from water use. Twenty-one (45%) of the 47 permits reviewed required deed restrictions agreeing to pay one-time fees to help fund the development of a water resources monitoring program once it was initiated.

Planning Experience

To date none of the programs called for in the *Big Sur Coast Land Use Plan* for the Big Sur River and Sycamore Canyon watersheds has been implemented. These include the water resources monitoring program, the plan for Sycamore Canyon, and the annual monitoring reports with five year streamflow evaluation mentioned in the *Big Sur River Protected Waterway Plan*.

(5) Analysis of Coastal Act Conformance

Coastal Act Section 30231 requires that the biological productivity and quality of coastal streams be protected through means such as preventing substantial interference with surface water flow. Coastal Act Section 30240 requires protection of environmentally sensitive habitat areas (ESHA). In

considering development that relies on water supplies from the Big Sur River and in Sycamore Canyon, not enough information is available to draw a definitive conclusion whether the LCP is being implemented in conformity with these Coastal Act policies. New development authorized by County coastal permits has increased water demand from these sources, but monitoring the effects of the development on the water quality and habitat of the Big Sur River has not occurred. Absent a comprehensive monitoring framework, allowing additional development in these watersheds may not protect resources consistent with the Coastal Act.

Implementation of Provisions to Address Water Use Comprehensively

Permit review revealed several instances where the LCP policies concerning water supply were applied, but in some cases, application of the policies was not evident. It is apparent, however, that the County has not yet completed a comprehensive examination of effects of water use in these watersheds. Therefore, it appears adequate consideration has not been given to the cumulative impact of water use in these watersheds. There has been no overall assessment of minimum water flows needed to protect the fish resources in these watersheds and no updated assessment of current and projected water use. Thus, there is no way to accurately assess whether individual project approvals adequately considered minimum water needs to protect habitat and species in the streams, especially during low flow conditions. Such evaluation is important to determine if the resources are being protected.

The LCP policies do not mention coordination with National Marine Fisheries Service and the U.S. Fish and Wildlife Service, the agencies with prime responsibility, respectively, for the now threatened steelhead trout and California red-legged frog. The LCP should be updated to reflect more recent scientific knowledge and management measures and to increase coordination with the various responsible agencies as provided for under Recommendation LU-10.1 (see also recommendations under Issue SH-15: Public Agency Coordination). The increased demand for water use as a result of development authorized by the County since certification along with projected buildout may place additional demands on the resources of the Big Sur River and Sycamore Canyon in a manner that would conflict with Coastal Act policies.

Conclusion

In conclusion, if the County had carried out its intentions to take the actions in the LCP, more information could have been available to render more definitive Periodic Review conclusions. Thus, the LCP policies to institute a community water resource monitoring program and water resource study areas remain timely, especially given the species listings that have occurred since LCP certification. The noted recent responses (*Big Sur River Enhancement Plan* for State Parks and the comprehensive river management plan for federal land) are encouraging and suggest that the County has willing partners to improve the watershed. There are still gaps in these efforts as the two plans cover only the portions of the Big Sur River within public ownership; two segments are not covered, nor are all the Big Sur River tributaries nor is Sycamore Canyon watershed. These plans focus on physical improvements that can be made to the river to improve its condition.

Information on the minimum flow needed to sustain the resources and whether flow deficiencies exist in the two subject waterways is still needed. This will require data on water use (which the County could obtain from the monitoring program) and instream flow requirements for steelhead and other species (which Department and Fish and Game should undertake). Recommendations LU-10.3 and LU-10.4 suggest measures that could result in providing needed information to enable evaluation to occur. If there are flow deficiencies, then policies are in place in which to incorporate corrective measures. And, if flows are not deficient, improvements to the overall stream corridors and watersheds are still needed (see also Recommendations for Issues SH-10: Streambank Protection, SH-11: Stream Buffers, and SH-20: Steelhead Streams). The State Parks has embarked upon such efforts for the reach of river under their jurisdiction and as envisioned in various *Big Sur Coast Land Use Plan* policies, including 4.3.C.1. To effectively manage the river and its resources, all appropriate parties, including private individuals and water purveyors, need to be involved. Their cooperation and coordination is needed, especially in the pursuit and judicious use of funding for restoration efforts. Updating the *Big Sur River Protected Waterway Plan* can provide the framework for these efforts (see Recommendation LU-10.2). And involving citizens through watershed coordinating councils is also important (see Recommendation LU-10.5 and recommendations for Issue WQ-6: Watershed Planning).

d. Issue LU-11: Moss Landing Community Plan

(1) Overview

This subchapter addresses the following concern identified through issue scoping: **Ensure that Coastal Act priority uses are being accommodated, consistent with habitat, visual, and special community character resource protection, in the Moss Landing area.**

Moss Landing is a special community containing recreational boating facilities and coastal-dependent industries. Competition for scarce land and water threatens the ability of the County to protect priority uses and to maintain the community fabric and its visual and natural resources.

The certified Monterey County LCP recognizes the historic, scenic, harbor, and, to some extent, environmentally sensitive habitat resources of Moss Landing. The LCP has a separate chapter

devoted to the community with a series of policies to guide additional harbor development, provide access, and protect resources. In a nutshell, priority uses are each assigned different locations in Moss Landing, such as coastal-dependent, light industrial uses on the Island and visitor-serving commercial uses along portions of the west side of Highway One.

Since certification of the LCP there have been substantial changes in the Moss Landing area, the primary change being the expansion of coastal-dependent marine research facilities on the Island (MBARI) and off of Moss Landing Road (relocated Moss Landing Marine laboratory). Other developments approved by the County have included a convenience market, four retail shops, a bed and breakfast, fish processing, bait and tackle, a restroom at the harbor, and power plant improvements. In all cases the approved projects were allowed uses and many incorporated mitigation measures to protect resources. But in some cases, they did not adhere to the general vision articulated in the *North County Land Use Plan*. Recent proposals and planning exercises have revealed the immediate need to accommodate dredge spoils, address erosion in the harbor, provide drainage and other infrastructure improvements, and improve harbor facilities. One planned facility that will not occur is expansion of the Harbor south of Sandholdt Road bridge.

In light of what has occurred, available opportunity sites, and projected development, it is clear that updated planning is needed for the Moss Landing area to protect community character and prevent resource damage. For some sites, updated designations are apparent to accommodate the priority uses that have occurred. But, there is a need for further analysis to determine the appropriate locations and densities for other priority uses.

Additionally, the County's land use authority is limited in this area and other agencies have significant roles to play. Thus there is a needed for coordinated planning and regulation by all the relevant agencies.

(2) Resource Background

Moss Landing Community Characterization

Moss Landing west of Highway One is a special community centered around a harbor in North Monterey County. Map IN-1 and LU-11 shows the location of the Moss Landing Community. It contains a mix of uses, including commercial fishing and recreational boating related public and private facilities, historic buildings with visitor-serving commercial uses, and coastal research institutions. The combination of man-made and natural features (e.g., marshes, mudflats, sand dunes, and sloughs), the nautical character of the area and the harbor itself, and the generally small scale of development together, "define Moss Landing's status as a special coastal community with a variety of visually unique sub-communities."[113] These include the North and South Harbor areas, the "Island" west of Sandholdt Bridge, the row of antique shops along Moss Landing Road, roadside commercial along Highway One, and a residential subdivision at the southern end of the area along

[113] Jefferson Associates, Inc for Monterey County Planning and Building Inspection Department, "Visual Resources and Special Communities: Moss Landing Community Plan Background Report," August 1980, p. 16.

Potrero Road. The Moss Landing Community is on the Monterey County Historical Inventory.[114] The area also contains many publicly accessible locations from which to view the scenery, including coastal access points and trails along the Harbor, the Old Salinas River Channel, Salinas River State Beach, Elkhorn Slough, and Moro Cojo Slough.

Moss Landing Harbor is among the most important commercial fishing ports in California. It recently ranked third in the state in terms of pounds landed and fourth in ex-vessel revenues.[115] Nine Moss Landing businesses serve the fishing industry, in addition to the Harbor.[116] As noted,

> *The economic vitality of the commercial fishing industry at Moss Landing depends on several factors including a healthy marine environment and fish stocks, fishery and environmental management that protects those resources while allowing for their use, and infrastructure that enables and promotes safe, cost-effective and productive operations.*[117]

Although this chapter focuses on Moss Landing west of Highway One, the portion east of the Highway has undergone change that has a bearing on the area's future. The former Kaiser/National Refractories site, south of Dolan Road, is currently for sale. While the site remains covered with industrial facilities, they are no longer in much use. Additionally, the sale and expansion of the Moss Landing Power Plant, north of Dolan Road, has resulted in the construction of two new power-generating units, and the removal of a number of towers and massive fuel tanks.

At the time of Local Coastal Program preparation around 1980, the Harbor and County had adopted plans showing Harbor expansion southward into the Old Salinas River channel all the way to Potrero Road, if the Sandholdt Bridge were ever removed. However, since that time, the County and the Coastal Commission approved reconstruction of the Sandholdt Bridge approximately 75 feet south of its current location, removing the option for harbor expansion further southward.

In 1980, the Coastal Commission approved a permit for the Moss Landing Wastewater District to sewer the area that had previously experienced septic problems.[118] Wastewater is now pumped and piped to the Monterey Peninsula regional treatment plant. Capacity of the Moss Landing system is limited to 105,000 gallons of wastewater per day. Thus, Commission approval required an allocation plan based on Coastal Act priorities and prohibition against assessing dune, wetlands or agricultural parcels for sewer service fees.

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[114] *Monterey County Historical Inventory*, adopted by the Board of Supervisors, February 23, 1971.

[115] Pomeroy, Caroline and Michael Dalton, "Socio-Economics of the Moss Landing Commercial Fishing Industry: Executive Summary," June 2003.

[116] Pomeroy, Caroline and Michael Dalton, "Socio-Economics of the Moss Landing Commercial Fishing Industry: Executive Summary," June 2003. Summary notes the following businesses serve the fishing industry at Moss Landing: fuel dock/small marine supply store; boatyard; marine covers shop; electrical, diesel, hydraulic, metalwork and other service providers; and a dry storage facility.

[117] Pomeroy, Caroline and Michael Dalton, "Socio-Economics of the Moss Landing Commercial Fishing Industry: Executive Summary," June 2003. p. iv.

[118] Coastal Commission coastal permit P-78-772.

Threats to Community Resources

Continued development, erosion, and sedimentation threaten Moss Landing's resources and coastal-dependent functions. Proposed development on remaining vacant parcels on the Island west of Sandholdt Road could impact dune habitat, while new development along the Old Salinas River Channel could impact wetland habitat. Any major new construction has the potential to be an added visual intrusion. Redevelopment of the large, vacant National Refractories could especially have impacts on sensitive habitats, traffic circulation and infrastructure capacity.

As development occurs, competition for limited land and water space continues among the various users of the harbor. The gist of a recent front-page feature newspaper article, "Sea Change: Moss Landing casts of fishing for lure of science," is that fishing is a dying industry that will disappear, while marine research is burgeoning.[119] University researchers who have noted increased fish landings over the years and the resulting positive impact on the local economy and employment situation disputed this assessment.[120] They do not identify the need for additional facilities, except perhaps, a centralized fish market.[121] They do note the need for infrastructure maintenance (e.g., dredging, bulkhead maintenance and repair, erosion control, dock repair) and the challenges to undertake these activities due to regulatory requirements. Obviously, if the existing fishing support facilities were converted to other uses, the industry would be further threatened.

Continued shoreline erosion, especially around the jetties that flank the harbor entrance, is occurring. Besides increasing the potential for shoreline armoring, the material eroded in these areas creates depositional problems on adjacent properties, interfering with boating uses and impacting the harbor's main channel and berthing areas.[122] Deposition of sediment within the northern and southern portions of the Harbor also continues to occur due to agricultural runoff and erosion from the Salinas River and Elkhorn Slough watersheds. As a result, the Harbor requires annual maintenance dredging to maintain navigational depths. Disposal of these sediments is also problematic, requiring rehandling and disposal on land, because some may be contaminated with pesticides or heavy metals from boatyard activities. Of the total 245,974 cubic yards of material dredged since 1973, approximately 25% or 62,870 cubic yards required confined upland disposal.[123]

Responses to Improve Moss Landing Community

Several agencies have management, development, and regulatory responsibilities in Moss Landing and some have been formulating improvement programs.

Moss Landing Harbor District manages the harbor and the land that it owns. It conducts dredging of the North Harbor channel and berthing areas in the North and South Harbor in order to maintain

[119] Townsend, Peggy, "Sea Change: Moss Landing Casts Off Fishing for Lure of Science," *Santa Cruz Sentinel*, May 4, 2003, p.1.

[120] Pomeroy, Caroline and Michael Dalton, Letters to the Editor, *Santa Cruz Sentinel*, May 10, 2003.

[121] Pomeroy, Caroline and Michael Dalton, "Socio-Economics of the Moss Landing Commercial Fishing Industry: Executive Summary," June 2003. p. iv.

[122] Coastal Commission coastal permit 3-01-102, which was withdrawn.

[123] Coastal Commission coastal permit 3-01-049.

navigable depths for commercial and recreational vessels. In 1996 the Coastal Conservancy gave the Harbor District $20,000 to prepare a restoration plan for land the District acquired between Elkhorn Slough and Jetty Road in the North Harbor.[124] The proposed Moss Landing North Harbor Restoration Plan was to include: biological analyses of the mudflat and intertidal habitat along the site's shoreline; alternatives to decrease bank and mudflat erosion caused by increased tidal flushing from the adjacent Bennett's slough; environmentally-sensitive public access design; and conceptual and site design of an interpretive center.

The State Lands Commission owns title to submerged lands in the public trust, and has transferred title to some of the submerged lands within the Harbor, and along the ocean shoreline, to the Harbor District. The U.S. Army Corps of Engineers are responsible for maintenance of the jetties as well as for maintaining navigable depths in the federal channel, which is the main channel located in the harbor mouth and south harbor area. Moss Landing Harbor District, their consultants, USCOE, DFG, Coastal Commission staff, State Parks, ESNERR, and others have recently met to discuss erosion problems in and around the Moss Landing Harbor and potential funding sources to study solutions to these problems.[125]

Monterey County Department of Public Works has prepared a Storm Drain Master Plan to improve water quality in the area by requiring storm drains, filtration, and curb and gutters along Moss Landing Road and Sandholdt Road.[126] Monterey County has proposed forming a redevelopment agency in order to obtain funds for various infrastructure improvements.

The County and the Coastal Commission both have responsibility for coastal permitting within portions of the Moss Landing Community. The Coastal Commission retains permit authority over public trust lands, which include areas below mean high tide, and historic wetlands, while the County has been given jurisdiction of all lands above mean high tide. These dual jurisdictions sometimes result in two coastal permits being required for different portions of the same project: one from the Coastal Commission and one from the County. The Coastal Act only returns permit authority to four ports in southern California. And the Act exempts from coastal permit requirements, "maintenance dredging of existing navigation channels or moving dredged material from those channels to a disposal area outside the coastal zone, pursuant to a permit from the United States Army Corps of Engineers." The Corps has approved several dredging permits for the Moss Landing Harbor Channel. Also, permit authority over the Moss Landing Power Plant resides with the California Energy Resources Conservation and Development Commission, not the Coastal Commission.

(3) Local Coastal Program Provisions

Monterey County's LCP includes provisions to protect and provide for priority and coastal dependent land uses, especially commercial fishing, and to protect the visual resources and character

[124] Coastal Conservancy, *Project Summary: Moss Landing North Harbor Restoration Plan,* File No. 96-010, June 20, 1996.

[125] Moss Landing Harbor, "Preliminary Meeting Minutes- Draft," July 1, 2003.

[126] Schaaf & Wheeler, *Community of Moss Landing Storm Drain Master Plan*, April 2000.

of the Moss Landing special community. The LCP emphasizes different categories of land use for different neighborhoods, including: coastal-dependent light industry on the Island; general commercial along Moss Landing Road; visitor-serving in four locations; public-quasi public, and heavy industry *(North County Land Use Plan* Figure 2 land use map and Section 4.3.1 descriptions of land use categories). Map LU-11 shows the land use plan designations for Moss Landing.

Coastal-Dependent Uses

Coastal-dependent, light industrial uses are given priority on Moss Landing Island. The intent of the *North County Land Use Plan* is that "coastal dependent industrial facilities shall be encourage to expand within existing sites and shall be allowed reasonable growth consistent with the protection of the area's natural resources." Coastal-dependent light industries include canneries and fish processing companies, boat storage and repair facilities, marine supply stores, and other related facilities (i.e., fueling stations, private launching ramps, used boat sales businesses).

The zoning for this area is "Light Industrial" or "LI(CZ)." Uses allowed pursuant to *County Code* Sections 20.26.050 and .060 include manufacturing, picture framing, craft shops, mini-warehouses, incidental retail sales, boat storage, auto repair shops, service stations, offices, animal hospitals, hotels, restaurants, public and quasi public uses, marine related research facilities, aquaculture labs, and many more.

General Commercial Uses

The LCP provides for general commercial use along the northern part of Moss Landing Road. According to *North County Land Use Plan* policy 5.2.1.B.2:

> *This designation provides the opportunity to combine commercial and residential uses. Antique shops, the Moss Landing Post Office and historical buildings such as the Pacific Coast Steamship Company, lend a special character to this area and should be preserved and upgraded. Opportunities for providing a motel, a small neighborhood grocery store and low-cost rental housing units exist on undeveloped or underdeveloped parcels in this area. Appropriate design and setback standards should be applied as a means of providing relief from "strip" development that can be an aesthetic nuisance to the community...*

This area is zoned "Moss Landing Commercial" or "MLC(CZ)." Among the allowed uses specified in *County Code* Sections 20.20.050 and .060 are offices, retail stores, mini-warehouse storage facilities, banks, antique shops, service stations, restaurants, second story dwellings, bed and breakfasts, zoos, public and quasi public uses, and research laboratories.

Recreational and Visitor-Serving Uses

The LCP provides for recreation and visitor-serving commercial use as follows:

> *The plan designates four areas strictly for visitor-serving commercial uses. In the north harbor, visitor-serving commercial uses are shown north of the Elkhorn Yacht Club and harbor office. Appropriate uses for this area could include restaurants and/or motels, with*

adequate on-site parking, controlled access from Highway One, and appropriate design controls to ensure that public views of the north harbor are not obstructed. The plan permits up to 150 hotel/motel units based on available land and wastewater collection system capacity. These shall generally be provided by several smaller establishments not exceeding 30 units each. The area from what is now known as Skipper's Seafood and the Harbor Inn north to Little Baja is also designated for visitor-serving commercial uses, with controlled access from Highway One and a frontage road.

In the South Harbor area, three visitor-serving commercial areas are shown. The currently undeveloped area south of the antique shops on the east side of Moss Landing Road is designated visitor-serving commercial. The area at the corner of Potrero Road and Moss Landing Road, which includes a restaurant, antique shop, liquor store and fishermen's supply store, and the property fronting on Highway One between Moss Landing Road and Moro Cojo Slough are also designated for visitor-serving commercial use.

These areas are zoned "Visitor-Serving Commercial" or "VSC(CZ)." Uses allowed pursuant to *County Code* Section 20.22.060 include hotels, motels, restaurants, service stations, RV parks, single family residences, public and quasi-public uses, zoos, and retail stores and offices accessory to visitor-serving uses.

Public/Quasi-Public Uses

The *North County Land Use Plan* provisions for Harbor uses are a compromise between previous plans for expansion into the Old Salinas River channel and wetland resource protection concerns, as follows:

5.2.1.H.3: This designation applies to the Harbor District office area, land south of the Sandholdt Bridge, and land in the North Harbor proposed for harbor support facilities. Facilities in the South Harbor adjacent to the new berths would include a parking lot, restrooms and staging areas. If enough space exists, a harbor maintenance facility would be developed in this area. Unused lands near the Harbor District office would be used for additional dry storage, possible overnight parking, and the harbor maintenance facility if space constraints prohibit its development in the harbor support area south of the bridge. Public facilities in the North Harbor would include a boat launching ramp, additional dry storage areas, and restroom facilities for non-yacht club members.

The LCP has a phased approach to maximizing berths in the north harbor prior to any expansion into the Old Salinas River channel.

These areas are zoned Public-Quasi Public or PQP(CZ). Uses allowed pursuant to Section 20.40.050 include public recreational uses, public utilities, and public/quasi-public uses such as churches, cemeteries, parks, and schools.

Heavy Industry

The Moss Landing Power Plant and National Refractories sites east of Highway One are both designated Heavy Industry.

General Development Plans

General development plans are required for projects on lots greater than one acre, that are multi-use, or that include subdivision in all of the noted zoning districts, except Public Quasi-Public. General development plans are to address the long-range development and operation of the site's facilities, transportation, and environmental concerns.

Other Relevant Land Use Policies

Other *North County Land Use Plan* policies addressing the kind, location, and intensity of use ensure that commercial fishing facilities are protected and are given priority for expansion in South Harbor and the Island. Recreation and Visitor facilities are given priority in the North Harbor as follows:

5.3.1 The County encourages the maximum development of commercial fishing and recreational boating facilities at Moss Landing; consistent with the conservation of the area's wetlands, dunes and other natural resources.

5.3.2.1 Commercial fishing facilities shall be protected and, where feasible, upgraded. Commercial fishing shall have priority for berthing space in the South Harbor, and recreational boating facilities shall not interfere with the needs of the commercial fishing industry.

5.3.2.3 Due to limited capacity of Highway One and Sandholdt Road, priority should be given on the island to expansion of commercial fishing industries and facilities that generate low volumes of traffic. Some flexibility should be maintained for other development on the island that directly serves people engaged in those above industries and would not be suitably located in other areas of Moss Landing.

5.3.3.1 Encourage the conversion of underutilized or unused parcels on the island to land uses that are supportive of the commercial fishing industry and aquaculture.

5.3.3.4 The capacity of dry dock storage areas should be increased when needed and new dry storage areas should be developed. Measures should be taken to ensure that grading and surfacing work performed to provide additional capacity will not adversely affect water quality in the harbor.

5.3.3.11 Priority shall be given to developing recreation and visitor-serving commercial uses in the North Harbor area and improving public recreational boating facilities.

5.5.2.1. Coastal dependent industrial facilities should be encouraged to expand within existing sites before off-site expansion is considered. Commercial fishing activities and

aquaculture shall have priority over other types of coastal dependent industrial uses in Industrial areas.

5.6.3.1 The highest priority should be given to preserving and maintaining all fish handling and processing facilities on the island.

Available wastewater treatment capacity is allocated pursuant to conditions on a coastal permit authorized by the Commission to uses as follows:

(1) Existing uses within the service area;

(2) Moss Landing Beach, Salinas River Beach, and the Moss Landing Harbor District pumpout

(3) New or expanded coastal-dependent industries within the service area;

(4) New or expanded essential public services, basic industries or recreational uses,

(5) All other uses.[127]

The Moss Landing County Sanitation District Allocation Plan identifies five service areas and allocates the 105,000 gpd of wastewater flows among them, in accordance with the above priorities and coastal development permit requirements.

Design Provisions

North County Land Use Plan calls for protection of scenic resources, in part, through the following policy:

5.6.3.6 Views of the Moss Landing community, harbor and dunes from Highway 1 should be protected through regulation of landscaping and siting of new development adjacent to the highway to minimize the loss of visual access.

The *North County Land Use Plan* calls for design standards to be developed for different areas based on the following guidance:

North Harbor Area

LUP Policy 5.6.3.7.a: Recreational Boating/Visitor-Serving - Design standards should enhance the recreational boating/visitor serving/restaurant character of the North Harbor area. To maximize views of the harbor, building heights should be single and two story. Structures should be small scale; the use of horizontal natural or painted wood siding should be encouraged; if soil conditions permit, utility lines for new structures should be placed underground; unsightly storage areas should be adequately screened and set back from the

[127] Coastal Commission coastal permit P-78-772 reflected in Appendix 3 of Part 6 of Monterey County's *Coastal Implementation Plan*.

roadway; one restricted point of access from Highway 1 should be developed with a frontage road between the Highway and commercial/restaurant facilities in this area; parking areas should be upgraded.

The zoning for this area is either "Public/Quasi-Public" (PQP-CZ) with a 30-foot height limit or "Visitor Serving Commercial" (VSC-CZ) with a 35-foot height limit.

The Island

LUP Policy 5.6.3.7.b: The Island - Design standards should enhance the commercial fishing and historical cannery character of this area. Building and bulk controls consistent with the low-lying vertical character (1 and 2 stories) and small scale of most of the buildings along the Island should be developed. Wall material should be limited to the use of natural wood for building facades near the cannery buildings. The "HR" Zoning District should be applied to the canneries where feasible, and other guidelines for preservation, should be applied as long as they do not conflict with the use of the buildings for commercial fishing purposes. Rehabilitation of existing structures and new development should include amenities for visitors such as pathways or boardwalks to the shoreline; removal or screening of unsightly storage areas. An off-street parking lot should be considered at the end of the Island, and new development proposals should provide off-street parking.

The zoning for this area is "Light Industrial" (LI-CZ) with a 35-foot height limit.

Moss Landing Road

LUP Policy 5.6.3.7.c: Moss Landing Road - Design standards should enhance the antique shop and historical building character of the Moss Landing Road area. Height and bulk controls should be consistent with low vertical height (1 and 2 stories) and small scale of existing buildings. Wall material should be limited to wood siding, and design of new buildings should conform to the early American character of existing buildings. Historical preservation status should be applied to the Pacific Coast Steamship Company office. Utility lines should be placed underground where feasible. Opportunities to combine visitor serving commercial and residential development (first floor commercial and second floor residential) should be encouraged. Appropriate setback standards should also be developed.

This latter area is zoned "Moss Landing Commercial" (MLC-CZ) with a 24-foot height limit. Design criteria for this district are:[128]

1. Building and structural design shall conform to the early American style, reflecting the early port and commercial fishing and Western character of Moss Landing Road. Appropriate design features include: a) small scale structures; b) low vertical height; c) wide covered porches extending the length of the building's frontage; d) wooden posts framing the front covered porch; e) false front on the second story of the building; f) wood

[128] *County Code* Section 20.20.070.h.

frames around doors and windows; g) multi-paned windows; and, h) double-entry front doors

2. Buildings shall be of a one-story or two-story design.

3. Exterior wall material shall be composed of wood siding.

4. Exterior walls and trim shall either be natural wood, wood stain, or painted a natural-tone color.

5. Exterior doors shall be of a wood panel or wood frame construction…

(4) Local Coastal Program Implementation

Monterey County has approved several coastal permits in the Moss Landing area that have a bearing on the future shape of the community; with some approved developments adhering more closely to the vision articulated in the *North County Land Use Plan* than others.

Permit Review: Maintaining Existing Land Uses

Since certification, Monterey County has approved several coastal permits for projects that harmonize with land use patterns of the Moss Landing Community Plan. These include a new convenience market, four retail shops, a bed and breakfast, fish processing, bait and tackle, restroom, and power plant improvements.

The County authorized reconstruction of a retail market/produce stand at the former Johnny Boy's site designated Commercial Recreation and Visitor Serving. Visual impacts were mitigated through design review, reduction of structure height, and removal of poles and wire support cables. Parking adjacent to Moro Cojo Slough was modified to minimize runoff from the site, and a dedicated area was provided for trail access paralleling the Slough.[129] However, while the site is greater than one acre, the permit does not make any reference to an existing or required general development plan, as required by *County Code* Section 20.22.030.

The County also approved four new or expanded antique and related retail shops along Moss Landing Road, three of which included second story residential uses.[130] All four projects, located in the Moss Landing Commercial zone, obtained recommendations for design approval from the Moss Landing Advisory Committee. . Design drawings and material and color specifications showed the proposed structures as generally meeting the design criteria, landscaping, utility undergrounding, and lighting requirements of *County Code* Section 20.20.070 to ensure the preservation of neighborhood character. However, one project was given an exemption to height limits consistent

[129] County coastal permit PC95086 (3-MCO-96-003) first approved in 1996, reapproved for a modified project as County coastal permit PLN000468 (3-MCO-02-120) after the original permit expired. The project also includes a dedicated area where the LCP requires access in the form or a 10-foot wide trail paralleling the Moro Cojo Open Space Conservation Easement, as required by County C*ode* Section 20.70.050.B.4.c.i and ii.

[130] County coastal permits ZA93032 (3-MCO-93-105), ZA93033 (3-MCO-93-106), 970248 (3-MCO-01-206), and PLN965275 (3-MCO-97-091).

with exemption provisions provided in Section 20.62.030.C.[131] In addition, three of the four permits were conditioned to provide improved pedestrian access. One permit was required to install "a pedestrian facility" along the frontage of Moss Landing and Sandholdt Roads, while the other two were required to install curb gutter and sidewalks along the frontage of Moss Landing Road.

The County also approved renovating the Pacific Coast Steamship Company Building on the west side of Moss Landing Road from an existing residence to a combined residence/10-room bed and breakfast.[132] The project was designed to preserve the integrity and major architectural elements of the historical structure. The project provided off-street parking, landscaping, lighting, underground utilities, curb, gutter, and sidewalks.

The County also supported commercial fishing by permitting fish processing facilities, bait and tackle sales, and restroom and shower facilities for harbor users. In approving these development the County also included measures to protect the community character. The County approved a Harbor District permit for the remodel of an existing historic commercial fishing cannery building on the east side of Sandholdt Road on the island to provide for an ice making and fish processing facility; additional Harbor District offices and other facilities related to marine research and commercial fishing.[133] To implement measures to protect the historic character of the building, the permit was conditioned to retain the existing building envelope, to place the property on the Monterey County Historic Resources Inventory, and to require all development activities to be consistent with recommendations of the Historic Resources Report completed for the project. Parking mitigation was also included. Consistent with design standards, the permit was conditioned to provide for landscaping, lighting, underground utilities, and curb, gutters, and sidewalks along Sandholdt Road.

The County approved relocation of a structure for retail sales of bait, tackle, and marine related goods on the Island, requiring on-site parking, landscaping and installation of a sidewalk along the entire frontage of Sandholdt Road.[134]

The County approved a new restroom and shower facility adjacent to existing parking and storage facilities located at the Harbor District's main parking lot, northeast of the Sandholdt Bridge.[135] The permit also identified that the exterior colors and materials used for the building were similar to adjacent existing Harbor District facilities and would not impact views from Highway One or Moss Landing.

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[131] *County Code* Section 20.62.030.C allows a greater height than that established in any Commercial or Industrial District provided that the volume of the structure is not greater than that possible for a structure erected within the height limit and provided the design, exterior lighting, siting and landscaping plan for the project is approved by the Planning Commission.

[132] County coastal permit 980473 (3-MCO-00-244).

[133] County coastal permit 980468 (3-MCO-99-066). Prior to the County's approval to renovate the cannery building, the Coastal Commission had approved a permit in May of 1997 (3-97-024) for the repair and replacement of the K-Dock, adjacent to the cannery building, to support commercial fishing operations. The Commission's permit allowed construction of a sheetpile bulkhead and 8,300 square-foot concrete slab pier, later amended to 10,000 square-feet (3-97-024-A3).

[134] County coastal permit PC06395 (3-MCO-88-034).

[135] County coastal permit PC06489 (3-MCO-92-117).

The County also issued coastal permits at the Moss Landing Power Plant for installation of an air pollution control system, tank farm removal, and installation of an energy management center and oily water separator system in association with amendments to the Power Plant's master plan.[136]

Permit Review: Changed Land Uses

The County also approved several permits that represented some degree of change from existing uses at the time. These include a kayak rental, RV Park, college, spoils disposal, and marine research institute.

The County approved a permit for development of the Monterey Bay Kayaks operation in the former Little Baja building designated for visitor serving uses.[137] At the same time, the County denied an alternate application for the same development in an existing warehouse structure on the Island, finding that such development was not consistent with the Light Industrial land use designation, which was intended to preserve and support the commercial fishing industry.[138]

The County also approved a 35-space RV Park on Harbor District lands in the South Harbor in an area that had been used for boat and trailer storage and some unauthorized overnight camping.[139] The County made findings that the purpose of the RV Park, "…is to provide overnight accommodations exclusively for recreational and commercial fisherman [sic], as well as those involved in the marine fishing profession in Moss Landing…" The permit did not indicate that approval of the project displaced the boat and trailer storage use previously on this parcel, nor did it indicate to where such use would be relocated. The Harbor District currently has a pending application to expand the existing 35-space RV Park by 12 additional new spaces, including the expansion of some of the RV Park support facilities.[140] However, plans for relocating the dry storage to the area south of Sandholdt Road were withdrawn due to concerns regarding adjacent wetland habitat and required wetland buffers. Currently, the Harbor District is deciding on a site for long-term dry boat storage.

The County approved the relocation of the earthquake-damaged Moss Landing Marine Lab main campus, including a 90-space parking lot, dune restoration and public access improvements, to a site on Moss Landing Road just north of the Moss Landing cemetery designated Low Density Residential.[141] The new marine lab site included both wetland habitat on its perimeter and degraded native plant habitat on the hill where the proposed buildings would be sited. The County's approval included comments that the County refer amendments to the Coastal Implementation Plan (zoning) and land use plan designations to the Planning Commission which would change the land use designations and zoning for the marine lab parcel from Low Density Residential to Public/Quasi-

[136] County coastal permits 990145 (3-MCO-00-375), 990233 (3-MCO-00-376), and 000011 (3-MCO-00-377).

[137] County coastal permit 970457 (3-MCO-98-077).

[138] County coastal permit PC-96021 (3-MCO-98-082).

[139] County coastal permit 970454 (3-MCO-01-515).

[140] RV park support facilities include expanded restroom/laundry facility, equipment shed, manager's quarters, and clubroom.

[141] County coastal permit PC 92215 (3-MCO-93-063).

Public and to change the former marine lab parcel from Public/Quasi-Public to Outdoor Recreation; however such changes were never carried out through amendment of the LCP. (See also Issue LU-5 for recommendations regarding preferred land use designations for these parcels.) Rather, a second County permit for the project was granted in 1997, which indicated that a school is a Public/Quasi-Public land use allowed in residentially zoned areas.[142] As mitigation, the project was required to protect and restore environmentally sensitive and degraded plant habitats on the new site and the old lab site. Protection of wetlands and dune habitats was also required through conservation easements to be administered by the California Department of Parks and Recreation (for the old site) and the CSU Moss Landing marine Laboratories (for the new parcel).[143]

The County approved an emergency permit for a temporary use of a bermed decant and drying basin for dredge spoils on the parcel west of Highway One immediately south of Jetty Road (the North Harbor Interim Drying Site).[144] The purpose of the basin was to receive excessive harbor sediment that accumulated following heavy El Nino storms of 1998. Because some of this material was contaminated, rehandling and decanting prior to transportation to a confined, upland disposal site was required. A follow-up permit allowed continued use of the site for two years and then required site restoration.[145] The interim rehandling facility was located on a parcel with a Recreation and Visitor Serving land use designation where public facilities are allowed as conditional uses.[146] Restoration of the site ultimately incorporated some fill material after the decant basins were emptied of contaminated sediments and graded. The resulting landform now blocks views across the site to the harbor and coastal dunes beyond.

The County also approved facilities for the Monterey Bay Aquarium Research Institute (MBARI) at sites of former fish and tackle and cannery businesses on the Island west of Sandholdt Road. Over the years, there has been incremental development of MBARI facilities through the authorization of several coastal permits and permit amendments as well as variances granted from development standards.[147] MBARI first obtained permits to build at their present location in 1988.[148] Since then additional permits greatly increased the authorized square footage of the buildings and the number of employees accommodated.[149] By early 2001, MBARI staff had grown to 195 full time employees;

[142] County coastal permit PC95097 (3-MCO-97-039).

[143] Adopted Coastal Commission staff report A-3-MCO-97-042 for appeal of the County approval of Moss Landing Marine Lab relocation (County coastal permit PC95097); Commission found no substantial issue with regards to the project's conformance with the Monterey County LCP.

[144] County Emergency Permit 980137 (3-MCO-98-067), March 23, 1998, and an Emergency Permit extension approved August 4 1998.

[145] County coastal permit 980137 (3-MCO-99-014).

[146] The permit did not include findings as to the appropriateness of the proposed use for the site, given its Recreational designation.

[147] The County granted a variance for flood proofing in the V-zone, based on the finding that the use of the Science Engineering Building was functionally dependent on its location within the floodplain and close proximity to the harbor and Monterey Bay. The County also granted the variance to the 35-foot height limit for a cupola housing designed to more aesthetically hide communication antennae.

[148] County coastal permit PC-6505 (3-MCO-88-026).

[149] County coastal permit SH93003 (3-MCO-93-110).

with plans to grow to up to 250 employees. In order to accommodate its staff and marine related research efforts, MBARI applied for a coastal permit amendment to remodel and expand facilities and to develop additional off site parking, in order to avoid removal of landscaping in the existing parking lot along Sandholdt Road.[150] However, the new parking lot as proposed would have impacted coastal dunes, and the permit was appealed to the Coastal Commission. This portion of the project was later withdrawn. The project was subsequently modified to include only expansion of Building B and incorporation of the new and remaining parking spaces into existing parking areas, which necessitated removal of a narrow band of landscaping along Sandholdt Road. As part of County approval of this modified project, temporary use of a parcel located at the northwestern end of Sandholdt Road for a parking and construction staging area was permitted for a period of up to two years.[151] The County's permit does require restoration of the temporary parking and construction staging area within 12 months of the expiration of the permit.

Permit Review: Development Influenced by Coastal Commission Actions

The Coastal Commission issued some permits both prior to LCP certification and after certification (in its retained jurisdiction) that had bearings on County permit actions and influenced land use in Moss Landing. These include a commercial center, site preparation for a marine research facility, bulkhead repair, bridge replacement, and restaurant replacement following destruction by fire, as well as for Harbor facilities upgrades and repairs.

Prior to certification of the County's coastal development permit authority, the Coastal Commission approved a coastal development permit for the construction of a multi-level, 39,260 square foot visitor-serving facility referred to as the Moss Landing Heritage Center following approval, and incorporating conditions of a use permit issued by the Monterey County zoning administrator.[152] The project consists of a complex of four buildings that include an 80-seat restaurant, 30-room inn, deli, wine shop, bakery, cheese factory and a variety of small retail shops having a "farmer's market" atmosphere. The project is located on the 2.5-acre triangular parcel between Moss Landing Road and Highway One at the southern end of Moss Landing Road, in an area designated as Visitor-serving Commercial. The parcel also included historic degraded wetlands of the Moro Cojo salt marsh, which had been destroyed near the end of the last century. Subsequent human activities had resulted in the area most recently functioning as a seasonal, freshwater wetland, collecting drainage from adjacent roads. The 2.5-acre parcel was created through an earlier land division, reviewed and approved by the Commission, which incorporated an offer by the applicant to dedicate a 16-acre portion of the property, containing wetlands, to the Elkhorn Slough Foundation, to mitigate for impacts to the historic wetland characteristics of the site.[153] In addition to this earlier mitigation requirement, and in order to mitigate for the existing wetlands on site, the County's use permit also

[150] County coastal permit PLN970336 for Minor and Trivial Amendment to SH93003 (3-MCO-98-015).

[151] County coastal permit PLN010235 for Minor and Trivial Amendment to SH93003 (3-MCO-01-504). Temporary parking for until September 2003 would be on APN 133-232-011; commonly known as the Garner site.

[152] Coastal Commission permit 3-87-248; County Zoning Administrator Use Permit ZA-6151.

[153] Coastal Commission permit 3-85-198.

required the purchase and restoration of an equivalent 2.5-acre site within the larger Elkhorn Slough area to natural wetland habitat. The Commission's permit was thus similarly conditioned to require restoration of an equivalent 2.5-acre site through an amendment of the development permit once the site was identified and purchased. The project was also designed to utilize a system of pilings for structural support, with the base floor elevation above grade in most areas, to allow for continued seasonal ponding to occur. The County's use permit indicated that while most of the complex would be one or two stories in height, a portion of the site would be three stories, consistent with the 35-foot height limit established in the LCP zoning for the area. . The project was also found to be in conformance with the specific policies of the Moss Landing Community Plan addressing visual resources and received design review approval for its nautical/cannery style. The project is still under construction.

The Coastal Commission also approved some initial site work for MBARI properties located on the Island, prior to LCP certification, that foreshadowed the County approvals described above.

The Coastal Commission also approved the original conversion of a portion of warehouse to coffee shop and fish market, which later expanded into a full-scale eatery and the relocated Phil's mentioned above.[154]

The Coastal Commission has also approved several permits in the Harbor area since LCP certification, including: a bulkhead; the rebuilding of Skippers Restaurant, replacement of the Sandholdt Bridge, emplacement and repair of the Elkhorn Yacht Club bulkhead, the dredging and dredge disposal of harbor sediment; new dock construction and repairs; and emplacement of an oily bilge water separator system at the south harbor maintenance dock. Given that the Coastal Commission retains permit jurisdiction over tidelands, many projects required coastal permits from both entities. For example, the Coastal Commission approved a bulkhead project along the west bank of the south harbor, which required wetland mitigation along the Old Salinas River Channel.[155] The County approved a coastal permit for the work in its jurisdiction, and then follow-up coastal permits for the mitigation work.[156] The original wetland mitigation did not meet all success criteria, which necessitated alternative mitigation, according to the approved permit. To comply with this requirement the Harbor District agreed to install a public access observation area along the southeast bank of the Old Salinas River Channel several years ago, but has yet to do so.

For the Sandholdt Bridge the Coastal Commission issued the coastal permit for replacement of the bridge proper and the County issued a coastal permit for the bridge approaches. Similarly, for the Skipper's Restaurant replacement the Coastal Commission issued the coastal permit for all portions of the project located seaward of mean high tide, and the County issued a coastal permit for all portions of the project landward of mean high tide.

[154] Coastal Commission permit waiver 3-85-101-DM.

[155] Coastal Commission permit 3-88-47.

[156] County coastal permits PC-6524 (3-MCO-88-80) for bulkhead, PC06930 (3-MCO-89-163 & 3-MCO-90-025) for wetland mitigation.

(5) Analysis of Coastal Act Conformance

Coastal Act Sections 30220-30224 protect oceanfront lands for priority uses. Coastal areas suitable for water recreation are to be protected (Sections 30220, 30221). Visitor serving commercial recreation uses have priority over residential, general industrial and general commercial uses but not over coastal dependent industry (Sections 30222, 30222.5) Upland areas to support recreation uses are to be protected where feasible (Sections 30223). Recreational boating is to be encouraged in part by expanding berthing space and limiting non-water-dependent uses and protecting harbor space. (Sections 30224, 30234) Commercial fishing is also afforded protection (Sections 30234, 30234.5). Coastal Act policies also require protection of environmentally sensitive habitat areas (ESHA), scenic resources and communities of special character. Most of the new development in the harbor has been authorized by County coastal permits; some has been authorized solely or also by the Coastal Commission. Permits issued since LCP certification have resulted in changes to the harbor land use and character in various subareas of Moss Landing (North Harbor, Highway One Corridor, Moss Landing Road, South Harbor, and the Island). LCP revisions are needed to strengthen requirements to protect the community character and resources of the area to fully carry out Coastal Act policies.

Implementation of Provisions for the North Harbor Area

At the North Harbor dredge rehandling site, along Highway One south of Jetty Road, permitted decanting and rehandling of dredge material uses have limited the potential for planned visitor-serving uses, but satisfied a coastal-dependent need to clear Harbor sediments. Given that scenic views of the Harbor are afforded at this site and that the site originally had some planted cypress trees, endangered Monterey spineflower, and mudflats, the more intensive development envisioned by the LCP (which included restaurants and/or motels) need revision in order to assure development will be carried out in conformity with Coastal Act resource and scenic protection policies. The Harbor District, which acquired the site in 1995, has plans for some less intensive recreational use, such as providing water access for use of personal non-motorized watercraft (such as kayaks and canoes), a multi-use coastal trail through the site, day use picnic areas and group camping sites. Some of the site's biological and scenic resources were compromised when the County allowed fill of the site as part of the restoration and failed to adequately protect harbor views across the site, but such impacts were partially offset by required dune restoration. Views of the harbor and coastal dunes beyond could be restored if a portion of the fill is removed someday, possibly in conjunction with new development.

To the south the LCP also envisioned a small area near the Elkhorn Yacht Club as harbor facilities. The combination of Coastal Commission and County permits (for the Yacht Club bulkhead, kayak building, parking lot) has reinforced this concept for such use.

At the southern portion of the North Harbor area new development has been limited to coastal permits to rebuild Skippers and improve Maloney's restaurants. To some extent this has proven fortuitous in that the Harbor District owns the land and now plans on developing more coastal–dependent and coastal-related uses than the LCP had envisioned at this location, including

construction of a wharf promenade, additional docks, new boat ramp and improved parking and boat cleaning facilities for recreational fisherman and other boaters. Skippers Restaurant was rebuilt after a fire slightly more inland to open the shorefront area for public access. However, it results in greater view blockage than previously existed. As noted, some of these incremental changes resulted from permit approvals in the Coastal Commission's jurisdiction. By permitting Skippers and Maloney's independently, the Commission as well as the County lost some opportunity to comprehensively plan this entire area and site and size buildings to maximize view protection. As recommended in LU-11.2, some comprehensive planning can still occur.

Implementation of Provisions for the Highway One Corridor

Expansion and upgrading of the Moss Landing Power Plant within the existing site occurred consistent with *North County LUP* policy 5.5.2.1 for power plant expansion in the Heavy Industrial land use designation following approval of the plant expansion by the California Energy Commission. Related County actions were also consistent with *LUP* provisions. (See also Issue EN-1: Duke Energy.)

On the east side of Highway One, industrial manufacturing at the National Refractories site has ceased and the site is now for sale. Although it is served by a seawater intake system, the entire site's designation as Coastal Dependent Heavy Industry may no longer result in the best protection of resources in conformity with Coastal Act policies. The site may become the home of a desalination plant, in which case Recommendation LU-9.4 would be applicable.

On the opposite side of the Highway, the County's permit for a produce market south of the Whole Enchilada restaurant reinforces the recreational and visitor-serving nature of the area to some extent. This site had previously been occupied by a small market (Johnny Boys); however, the use to be made of the approved, enlarged indoor space is not clearly specified. Although the County made a finding that the retail convenience market use was consistent with the Visitor-Serving Commercial VSC regulations, it did not indicate the basis for that finding. The VSC zoning designation allows retail uses only accessory to visitor-serving uses.

Implementation of Provisions for Moss Landing Road

Along the northern portion of Moss Landing Road, County permits approved for a bed and breakfast, mixed retail/residential use, and other retail uses reinforce the LCP's general commercial designation in that area.

The new location of the Moss Landing Marine Laboratory main campus, west of Moss Landing Road, was approved by both the County and the Coastal Commission and has since been constructed. Although there were some site-specific issues associated with the new laboratory location (e.g., archaeology, viewshed, dune habitat), use of the site for the Marine Lab, a public university that focuses on the study of the marine environment and ecology, is a higher priority use than the residential and commercial use shown in the current LCP. Thus, the LCP needs updating to reflect this new use (see Issue LU-5: Moss Landing Marine Lab). (See also Issue SH-23: Portrero Road open space for recommended redesignation of an adjacent parcel.)

Along the southern portion of Moss Landing Road, in the triangular parcel north of the Moss Landing Road/Highway One intersection, the Moss Landing Heritage Center remains under construction, some 15 years after permit approval. Although use of the site displaces some seasonal wetlands, substantial on-site and compensatory off-site mitigation was required. Furthermore, the Elkhorn Slough Foundation obtained the remainder of the commercially designated land in this area for habitat protection purposes, which is appropriate given the wetland resources present. Thus, the LCP needs updating to reflect this new reality, which is addressed in Recommendation LU-11.1. But, the Foundation has applied to the County for permission to split off part of these holdings to facilitate a Boy Scout building that the Coastal Commission staff has raised concerns about due to the presence of wetlands.[157]

Implementation of Provisions for the South Harbor Area

Approval of the Sandholdt Bridge replacement has eliminated any potential harbor expansion southward into the Old Salinas River Channel. Although this option had been retained as a possibility in the LCP, it was never a favored location from a resource protection/Coastal Act perspective due to potential impacts to existing wetlands. There are other options for Harbor growth within its current confines north of the Sandholdt Bridge, including consolidation of existing facilities, expansion of berthing areas, and the use of other District-owned land for additional dry boat storage. The LCP needs updating to show expansion options north of the bridge to be consistent with resources protection policies of the Coastal Act (see Issue SH-25: Sandholdt Road area).

At the main Harbor parking lot, there have been improvements in the form of a new community park, a new shower/restroom and a laundry facility. The new RV Park has resulted in the clean up and removal of former derelict equipment that previously occupied the site. The RV Park also serves a valuable function of housing visiting fishermen, some of whom previously camped out on the storage site. Coastal Commission staff encouraged allowing its use by the general public when not fully utilized by fishermen in order to provide additional visitor-serving use, but the County did not accept this suggestion. The RV Park has displaced dry boat storage, which previously occupied the site. The dry boat storage was subsequently relocated within the Harbor maintenance yard, and now, at least temporarily, displaces space necessary for day-to-day Harbor maintenance.

The Harbor District has proposed relocating the dry boat storage to the Harbor support area south of Sandholdt Road. However, this area, which is located along the east bank of the Old Salinas River Channel, serves partly as a resource buffer for adjacent wetland habitat. Use of this site for boat storage would likely be constrained by the LCP's 100-foot wetland setback requirement. The LCP had envisioned accommodating dry boat storage on unused lands near the Harbor District office and in the North Harbor area "…if space constraints prohibit its development in the harbor support area south of the Sandholdt Bridge." While the LCP also envisioned hotel accommodations occurring in the North Harbor area, such accommodations may now be unnecessary, thereby providing additional space for dry boat storage in this area, which already has water access via an existing boat ramp. The Harbor District is also developing plans for improved ramp access and boat wash-down

[157] Pending County coastal permit 970360; correspondence R. Hyman, Coastal Commission staff to Chance, March 10, 1999.

facilities in this area. However, the issue of where Harbor support uses can locate currently remains unresolved.

Implementation of Provisions for the Island

On the Island east of Sandholdt Road (along the Harbor's west shoreline), new development has been in keeping with the LCP's vision of coastal-dependent support facilities for commercial fishing and other related marine industries.

In contrast, west of Sandholdt Road the Island has experienced significant change. Although MBARI expansion has been approved as coastal-dependent industry, it is not afforded as high a priority under the LCP as other fishing and boating support facilities. Growth of MBARI facilities has created an increased demand for parking space. However, the provision of parking, in itself, is not a high priority use, nor is it a resource-dependent use in scenic coastal dune lands. The historic cannery buildings were not preserved and some of the new buildings are much larger than those previously there.

Both the food services on the west side of the Island have evolved from more limited origins: Phil's from a small 250 square foot fish market to a full-scale fish market and restaurant and the Bear Flag from a bait and tackle shop and retail sales of marine related goods to a café and bar Although these are not coastal-dependent uses *per se*, they do comply with the policy that allows for some support facilities for the folks working on and using the coastal-dependent facilities on the Island.[158] However, to the extent that they also cater to visitors, they illustrate the concern that the Island could be transformed from serving fishermen to being visitor-serving.

Other positive land use changes on the Island have occurred. Relocation of the Moss Landing Marine Lab (MLML) main campus has resulted in additional open space land adjacent to the Salinas River State Beach. The Marine Lab parcels were subsequently purchased by State Parks, and both agencies have been actively involved in restoration of coastal dunes on the site. The Marine Lab retains one parcel northwest of the Sandholdt Bridge where saltwater lab facilities remain, including a saltwater intake system which serves both the MLML saltwater lab and main campus, and which also provides saltwater for MBARI activities. The Marine Lab also has plans for reconstruction of the Sandholdt Pier, which was storm damaged and ultimately demolished in January 2002 after being deemed a safety hazard. The *North County Land Use Plan* map (Figure 2 in the *LUP*) needs to be updated in light of the changes in land use that have occurred in this area for both the relocation of the main campus and the remaining saltwater lab facility (see Issue LU-5, above).

LCP Implementation Regarding Appropriate Design

Implementation of the LCP has resulted in some changes to the aesthetic character of the Island as it was originally envisioned in the LCP. Although the *North County Land Use Plan* has fairly detailed design parameters, it committed the County to preparing design standards. However, the zoning

[158] County coastal permit 990455 (3-MCO-00-191).

simply repeats the land use plan language with little augmentation.[159] The County has not held all new development to the bulk and scale directives of the LCP policies. Also, the County has not always followed the intent of view protection policies, for example approving the North Harbor dredge rehandling site restoration plans without requiring variation in topography to provide for views of the harbor and coastal dunes beyond. On the other hand, the County has implemented its LCP in a manner consistent with the Coastal Act for the Moss Landing Road area. Only the Moss Landing Commercial zoning district regulations have commensurate design control provisions; the other zoning districts that apply in Moss Landing do not contain design provisions. What appears to have occurred is that the *North County Land Use Plan*'s design standards were not given due consideration for projects in these other zoning districts because the implementing regulations did not contain or reference the standards. (See also Issue SR-1: Historic Resource Protection.)

LCP Implementation Regarding Habitat Protection

As noted, some habitat has already been compromised by permitted development. Future implementation of current LCP policies in permitting new development may have the potential to result in further resource damage and habitat loss inconsistent with Coastal Act requirements and may foreclose opportunities for resource enhancement opportunities. For example, the County's approval of the MBARI parking lot was on coastal dunes west of Sandholdt Road.[160] MBARI also owns a mostly vacant parcel at the north end of the Island that contains sandy beach and coastal dunes that could be restored. It currently has a permit from the County for temporary use as a parking and staging area for ongoing MBARI construction projects. Since both of these sites are designated Light Industrial, they may be assumed to have development potential.

On the east side of Sandholdt Road, just opposite the MBARI parcel, is the mostly vacant Kett parcel, which is also zoned Light Industrial. In order to redevelop this site, which has had some aquaculture use in the past, shoreline protection in was proposed which would involve the fill of open coastal waters.

Additionally, a mostly vacant parcel just south of Sandholdt Bridge, owned by the Harbor District, is located adjacent to the Old Salinas River Channel and includes environmentally sensitive habitat. This area is zoned PQP(CZ) and designated for Harbor Facilities. Although the LCP requires a 100-foot setback, the entire parcel could be restored as wetland buffer and habitat. Previous permit conditions also require this area to include a public access observation area. Although the LCP can be read to ensure that permitted development in these areas not adversely impact resources, the land use and zoning designations and accompanying text can also be read as an endorsement of development.

Conclusion

As a result of permit approvals by both the Coastal Commission and the County, the Moss Landing

[159] *County Code* Section 20.144.160.D.3.

[160] The project was appealed by the Commission based on impacts to sensitive dune habitat, and was eventually withdrawn by the applicants.

area has developed only partially in the manner envisioned by the *North County Land Use Plan* in terms of land use and design and has experienced some resource loss. The Commission has endorsed some of the subsequent developments (except for MBARI's proposed parking lot in the dunes). As a result of evaluating these actions through the Periodic Review, it appears that the County has approved developments for uses allowed under the zoning, but without adequate consideration as to whether such uses are priority and with reliance on mitigation of adverse impacts instead of avoidance of impacts through relocation or redesign. This is, to some extent, understandable given that the County would rather see redevelopment than wait for a higher priority use that may never be proposed. However, it does demonstrate the need to ensure that highest priority uses can still be accommodated where limited lands for such uses exist. For example, the Harbor District, which still has to dredge contaminated sediments from the harbor currently does not have an upland rehandling site to process contaminated sediments. The Periodic Review shows that the LCP no longer reflects current and preferred land uses, although the standards governing the land uses, particularly the need to have support areas and facilities for fishermen and boaters and to keep the scale of development modest, remain relevant. Commission permit experience has also shown the need for more specific criteria for allowing uses dependent on seawater, as detailed in Recommendation LU-11.3 and as discussed under Issue LU-9 with regard to desalination plants.

Of high importance is establishing a basis for what land is still needed for associated priority uses, such as boat storage; dredge rehandling, upland disposal, and beneficial reuse; harbor maintenance; public parking as well as parking associated with harbor and other coastal-dependent activities; and staging areas for repairs or new construction. Additionally, new public access and recreational opportunities have been identified in and around the area, which should be incorporated into an updated land use map (see also Public Access recommendations for Moss Landing Area in Chapter 5).

There are also several public works projects being proposed that could benefit from better guidance and coordination than is currently provided for in the existing LCP. The Monterey County Department of Public Works has developed a Master Storm Drain Plan to improve water quality in the Moss Landing area by reducing untreated runoff that enters harbor waters. There is the need to re-examine the wastewater allocation scheme relative to current demand and remaining capacity. Erosion at the north and south jetty and erosion and deposition problems at adjacent parcels (e.g., the Kett property and Gravelle's Boat Yard south of the harbor entrance, and State Parks property north of the harbor entrance) suggests a need to look more broadly at options regarding the erosion problems along the limited harbor shoreline in this area and ways to resolve it in a manner consistent with competing Coastal Act policies. There is also a need for an oceanfront shoreline management plan for the Island that would evaluate the areas at highest risk from wave erosion, the best areas for beach replenishment, and the appropriate location and design for public access points that could incorporate pipeline facilities to assist in dredge disposal operations. Finally, there are opportunities to improve the traffic flow through Moss Landing using such means as intersection improvements, judicious location of parking and highway egress and ingress, frontage roads, and rail improvements (see Issue LU-14: Highway One and the Moss Landing Corridor). Once more information is gathered regarding these items there will be a basis for reexamining the land use prescriptions in the

LCP. In conclusion, this Periodic Review identifies the need for an updated comprehensive planning process, as suggested in Recommendation LU-11.2.

Finally, this report has noted that multiple agencies have jurisdiction in the Moss Landing area. For example, there is the dual coastal permitting jurisdiction shared by the County and Coastal Commission and the independent authorities left to the U.S. Army Corps of Engineers to approve dredging in federal channels and the State Energy Commission to approve power plant improvements. Implementation of an updated LCP for this area could be more effective if the various agencies participate in the plan update process and coordinate their individual regulatory tasks to the maximum extent possible. Recommendations LU-11.4, LU-11.5, LU-11.6 and LU-11.7 suggest measures to facilitate such coordinated planning.

e. Issue LU-12: Carmel Area Uplands

(1) Overview

This subchapter addresses the following concern identified through issue scoping: **Ensure that the largely undeveloped, rural resource lands in the Carmel Area uplands are not inappropriately developed.**

The Carmel Uplands, east of Highway One and Carmel Highlands, consist of very scenic lands, rural residential development, large tracts of grazing lands, public recreational lands, and environmentally sensitive habitats. Among the sensitive plant communities are Monterey pine, Gowen cypress, and central maritime chaparral. The 6,318 acre Uplands contains approximately 81 parcels, of which about two dozen somewhat scattered ones remain vacant and in private ownership.

The certified Monterey County LCP recognizes the sensitivity of these lands through application of protective scenic, habitat, and steep slope policies and generally very low residential density residential zoning, except for Odello East and substantial overnight accommodations on Point Lobos Ranch. The LCP contains many site-specific directives for these and other large holdings, with the general intent to cluster new development. The LCP states that the development of large properties (over 50 acres) and ranches should be guided by an overall management plan.

Since certification of the LCP several of these lands have been acquired for open space purposes, including much of Palo Corona Ranch, Odello-East, and Point Lobos Ranch. The latter acquisition ended plans for any new hotels. Several parcels have been developed pursuant to coastal permits. As part of the permit process, additional lands have been placed under conservation easements. In applying the protective policies of the LCP, the County has attempted to mitigate for adverse impacts. But in allowing new houses averaging over 5,000 square feet and associated structures, driveways, and septic systems, there has been resulting environmentally sensitive maritime chaparral habitat loss and additional visible development. The presence of the new homes and the background biological information associated with them has increased awareness of the sensitivity of the area (see also Issue SH-28: Protecting Central Maritime Chaparral Habitat for increased understanding of the sensitive nature of the maritime chaparral habitat). At the same time, some property acquisitions

have increased the potential for additional public use of the Uplands.

In light of the changed development patterns, ownerships, and protective legal instruments in the Uplands, the LCP is ripe for some updating and further review. At one level, LCP updates are needed to better reflect new owners' objectives for open space preservation over residential development. At another level, LCP policies need to be fully applied and in some cases clarified so that environmental damage is limited on any of the remaining parcels where development can occur. At still another level, it is it is desirable to re-examine the current designations and policies for the Uplands through preparation of a more detailed area plan. Some results of such more specific planning could be parameters for individual site developments, priorities for acquisitions, identifying candidate transfer and receiver sites, integrating habitat and recreational enhancements, design criteria for new homes, updated trail corridor locations, and possibly locating a hostel site. Many entities continue to be actively pursuing open space preservation in this area, and their efforts deserve support. In turn it is important that agreements reached that allow for some future development in return for some preservation be structured in a manner that best furthers Coastal Act objectives.

Since the following analysis comprehensively addresses land use, it relates to specific resource issues present in the Carmel Uplands. Two of these involve central maritime chaparral and Monterey pine forest that are also discussed under Issues SH-28 and SH-29. The information provided in this section on impacts to maritime chaparral and pine forest is further evidence of the need to protect these sensitive habitats. In turn the general recommendations under Issues SH-28 and SH-29 are applicable to the Carmel Area as well. Another issue present in the Carmel Uplands is high fire hazard, which is also discussed under Issue CH-9: Rural Fire Standards.

(2) Resource Background

Carmel Uplands Characterization

South of the Carmel River, the frontal slopes of the Santa Lucia Range rise east of Highway One, providing a dramatic portal to the southern Carmel Area and Big Sur Coast beyond. This portion of the Carmel Area segment inland of Highway One from the Carmel River to Malpaso Creek consists of very scenic lands, environmentally sensitive habitats, large tracts of grazing lands, and public recreational lands. Outside of an existing residential enclave known as the Carmel Highlands, this area is sparsely developed.

The Carmel Area uplands consist of approximately 81 parcels covering a total area of approximately 6,318 acres (see Map LU-12a). The average parcel size is 68 acres with the largest parcel being 527 acres. Major land holdings and their sizes are shown in Table LU-12a, along with their land use designations and allowed density of development. Prior to certification, nine of these parcels had been developed for residential use. Since certification ten additional parcels have been developed for residential use, resulting in 19 (or 23%) of these parcels developed for residential use, some with multiple homes on them. Of the 81 parcels, approximately 41 parcels are protected from development by public ownership or by having conservation or agricultural easements or other

agreements that prohibit or restrict additional development. The remaining 21 vacant parcels still have development potential, with at least two parcels on which multiple dwellings can be allowed (for a total of 28 dwelling units).

The vegetation on the Santa Lucia frontal slopes in this area is a mix of fairly dense oak woodland, Monterey pine and mixed conifer forests, and more open chaparral and baccharis scrub. The local coastal program includes descriptions for various portions of the frontal slopes, summarized below. Because of the vegetation cover and rough, mountainous terrain, the Santa Lucia frontal slopes are a high fire hazard, and the area becomes more remote and removed from urban services the further one goes inland of Highway One.

Threats to Carmel Uplands Resources

The primary threat to the Carmel Uplands resources is from new development on vacant parcels and redevelopment of existing structures. New development can displace habitat, intrude on the viewshed, and have other direct and indirect impacts. Map LU-12b shows remaining vacant parcels in the Uplands. As much of this area is remote from urban services, examples of indirect impacts include visible utility lines, improved roads on steep slopes or in habitat areas to meet fire access requirements, and sensitive vegetation clearing to reduce fire risks (see Issue CH-9: Rural Fire Standards).

Responses to Protect Carmel Upland Resources

In recognition of the scenic quality, sensitive habitat areas, and rural character of the area, a large portion of the Carmel Uplands has been purchased by the either the California Department of Parks and Recreation or the Big Sur Land Trust since certification of the LCP. Currently, approximately 1,934 acres are in State Parks or BSLT ownership, and approximately 5,532 acres are in private ownership protected by conservation easements, or other agreements that prohibit or restrict development. See the fourth column of Table LU-12a and Map LU-12b for descriptions and locations of these protected lands.

(3) Local Coastal Program Provisions

The *Carmel Area Land Use Plan* has a combination of general and parcel-specific policies that apply to the Carmel Uplands. The following text describes the Plan's planning principles for the Carmel Uplands, as well as provides brief descriptions of the area:

> *North of San Jose Creek* [Palo Corona Frontal Slopes]
>
> *Dominating the northern entrance to the Big Sur Country is a coastal mountain of arresting beauty, known today as the Palo Corona Ranch. This handsome landform enhances the coastal beauty of the Carmel area with its greenbelts and gentle slopes, rocky areas, wooded sections, and natural ridgelines. The northerly and westerly sides of the mountain slope gradually to the Carmel River flatland on the north and to Highway 1 on the west. Because of their visual prominence and scenic beauty, it is essential that the present use or at least the openness of the northerly, and westerly slopes remain undisturbed.*

Also of importance is the grazing of cattle that takes place on the Palo Corona Ranch. The grassland hills north of San Jose Creek are the major ranching resource of the Carmel area.

The overall planning objective for this 2,040-acre area is, consequently, to guide future land development in a way that preserves both the open scenic qualities as well as the viability of the traditional ranching activities. Development should be sited out of view from major public viewpoints and corridors in locations that will not result in conversion of grazing lands or interference with ranch operations.

Flatlands

The "Flatlands" extends from the east side of Highway 1 for a depth of approximately 2,500 feet to the 400-foot elevation 1ine. It is bounded on the north by San Jose Creek and on the south by Gibson Creek. This area of approximately 300 acres lies opposite Point Lobos State Reserve and includes the "Polo Field" and scenic pasturelands.

Development of the "Flatlands" is constrained by the proximity of sensitive coastal resources - the rare and endangered Gowen cypress woodland on the east side of Highway 1 (this is part of Point Lobos State Reserve) and the greater portion of Point Lobos Reserve on the highway's west side. An adequate setback area should be created around the Gowen Cypress Annex to protect this resource from potential adverse impacts. All development should be coordinated with State Department of Parks and Recreation's planning for the area.

The objective for the Flatlands is to preserve the scenic character of the open and highly visible pasturelands by concentrating all development within the forested area. At the same time, the forested character must be retained - thus the area east of the highway should appear no different from the wooded area west of the highway in Point Lobos State Reserve. Limited access to any development from Highway 1 should be provided with the road system screened by the forest cover to the greatest extent possible.

Development suitable for the "Flatlands" area would consist of a mix of residential and visitor-serving and day use recreation uses such as a lodge, walking and riding trails, a stable, etc. Preference shall be given to visitor serving and recreation uses. For the Polo Field, an extension of the existing church usage from the north may be appropriate.

Intermediate Terrain

Between San Jose Creek and Malpaso Creek lies the "Intermediate Terrain." It lies immediately east of the "Flatlands," rising rather abruptly from an elevation of approximately 400 feet to 1,000 feet. This heavily forested terrain is characterized by steep slopes of 40 to 80 percent. The very steep canyons of San Jose, Gibson, Wildcat, and Malpaso Creeks essentially preclude development, thereby protecting the area's watersheds and riparian habitat. There are some 1,450 acres in this planning unit, but only 100 acres may be suitable for development, based only on consideration of slope.

It is the planning objective for this area to preserve the Monterey pine and coast redwood forest resources, the water quality of the coastal streams, and the rural character of the area. Low-density rural residential development should be clustered on those few buildable areas of 30 percent slope and less. Building sites and access roads should not intrude into the public viewshed. As previously mentioned, the Flatlands are designated for a mix of residential and visitor-serving uses. An alternative location for a lodge-type visitor serving facility is the forested ridge of Huckleberry Hill. The visual prominence of this ridge from Highway 1, public lands and other major public use areas is a constraint to any development located here. Development should not be visible from major public viewpoints and viewing corridors. Proper siting and design and maximum retention of the existing tree cover will be essential in order to hide structures and access roads from public views.

The Uplands

Continuing to the east and rising from an elevation of 1000 feet to the crests at 1,800 to 2,000 foot elevations is the terrain that is called the Uplands. This land is essentially above the tree line, although clusters of pines have survived at this elevation. As in the intermediate terrain, this land rises abruptly, but here too, at the crest of the hill, there are plateaus of relatively flat land. Of some 2,100 acres - of which 364 acres are now in public ownership - there are approximately 450 acres of relatively level land (i.e., areas less than 30 percent slope). It is possible that some development could occur on these plateaus. However, these areas are remote; water supply to accommodate development is limited; and access is difficult. The cutting of new roads or improvement of existing roads to serve additional development of this area is a particular concern as such activity could permanently mar the open, scenic ridges.

The planning objective for this area shall be to preserve its open space and scenic recreational values. Low-intensity uses shall be allowed, and the land shall be retained in the largest possible parcels. Residential development of the Lobos Ridge Subdivision (located on Point Lobos Ridge) is considered appropriate if such development can be sited, designed, or screened to be effectively hidden from public view.

The following general policies relate to development within the Carmel Area uplands:

4.4.2.6. New subdivision and development of undeveloped parcels south of the Carmel River shall be permitted only if the following principal criteria can be fully met in addition to other applicable policies of this plan:

- *Structures, can be located, designed, or screened to be outside of the public viewshed.*

- *Narrow roads, which can be sited to minimize impact upon the viewshed and require a minimum of grading.*

- *Roads and structures can be sited to avoid disruption or degradation of riparian corridors and other sensitive plant and wildlife habitats.*

- *Access roads for new development can be constructed to meet minimum County standards as well as the resource protection standards of this plan.*

- *Development would be in keeping with the present rural character of the area.*

- *Development of roads and houses would be avoided on slopes exceeding 30 percent, unless this siting enhances the overall objectives and policies of this plan for individual parcels.*

- *Adequate sewer service or adequate sewage disposal area that qualifies under County standards is available.*

- *Adequate water supply is available.*

4.4.3.G.1: The development of large properties (over 50 acres) and ranches should be guided by an overall management plan. The plan should reflect the long-range open space values, and low-intensity recreation, and how development of the property will be phased over time.

The LCP estimated 312 new residences could be built in the Carmel Area uplands. Some sites have a specific maximum density assigned to them. For the remaining area "a density of 1 unit per 40 acres is required for new subdivisions below the 1,000-foot elevation, while for areas above the 1000-foot elevation, a density of 1 unit per 80 acres is required" (*Carmel Area LUP* Section 4.5.F). Caretaker homes can be constructed on parcels greater than 40 acres in size; one per parcel.

Much of the area is designated "Watershed and Scenic Conservation" (*LUP* Section 4.5.F), which provides for:

Protection of the watershed, streams, plant communities, and scenic values is the primary objective. This land use category applies to the upland and mountainous areas east of Highway 1. This is a multiple-use category in which several types of low intensity uses are

appropriate. These include: ranching and grazing of animals, recreational uses permitted in the Undeveloped and Scenic Outdoor Recreation category, rural residences, and related employee housing.

Permitted uses in the Scenic and Natural Resource Recreation designation (*LUP* Section 4.5.B) are:

Low-intensity recreational and educational uses that are compatible with protection of the area's natural resources which require a minimum level of development to accommodate basic user needs and which necessitate minimal alteration of the natural environment are appropriate. Uses may include hiking, fishing, picnicking, nature study, backpacking, horse riding, and walk-in camping, beach sand replenishment and grazing. Improvements in areas under this category are limited to picnic sites, hiking trails, restrooms, and parking areas.

The third column of Table LU-12a shows the land use designations for the major properties. Those over 50 acres or with a Special Treatment overlay also require an overall management plan in conjunction with subdivision or multiple unit permits. Section 20.146.070.A of the *County Code* details the management plan's required steps and contents, including delineating where different types of uses are to occur.

Table LU-12a. Major Land Holdings in the Carmel Area Uplands

Land Holding and Approx. Size (acres)	LCP Land Use Designations and Development Densities	Status
Odello-East ~134 ac	Part Agricultural Conservation - Part Medium Density residential with Special Treatment overlay; up to 162 clustered units & some commercial & recreational (*LUP* policy 4.4.3.E.2)	51 acres of property acquired by Big Sur Land Trust; put in agricultural easement; other 83 acres of property acquired by Clint Eastwood and put in agricultural easement.
Quail Meadows ~25 ac	Watershed & Scenic Conservation 1 unit/40 acres	Development plan for outside of the coastal zone resulted in the coastal zone portion being rezoned to Open Space.
Palo Corona (Frontal slopes are 560 ac)	Watershed & Scenic Conservation; with Special Treatment overlay over frontal slopes 1 unit/40 acres density transferred out of public viewshed	Majority of land acquired by Big Sur Land Trust; one 54-acre in-holding parcel is developed; 1 vacant 40-acre viewshed in-holding parcel remains developable.
Rancho San Carlos ~600 ac	Watershed & Scenic Conservation 1 unit/40 acres access shall be through Carmel Valley. (4.4.2.3; 4.4.3.E.7)	Specific plan approval for the portion of the property outside of the coastal zone allowed no development in coastal zone, but the conceptual master plan shows 5 homesites in the coastal zone
Carmelite Monastery	Public-Quasi Public	Private religious facility
Point Lobos Ranch 343 acres in	Watershed and Scenic Conservation With Flatlands, Intermediate Terrain and Uplands special treatment overlays	1,312 acres acquired by Big Sur Land Trust for transfer to State Parks; 317 acre in-holding allows for 1 house 24.2 acres subdivided into 7

Land Holding and Approx. Size (acres)	LCP Land Use Designations and Development Densities	Status
flatlands & intermediate terrain; ~1380 acres in Uplands	28 homes or 270 hotel units or both if transfer residences to Flatlands with Special Treatment overlay (4.4.3.E.4)	lots; one 5.4 acre lot approved for a 10 unit B&B; three other small in-holding lots have residences
Point Lobos Ridge 200 ac in 10 separate parcels	Watershed & Scenic Conservation Since all lots are already 40 ac or less in size, each would be entitled to one unit or a total of 10	Two lots developed at time of LCP certification; two parcels acquired by Big Sur Land Trust; permits approved for residences on two parcels; four vacant private parcels remain
Behavioral Science Institute (BSI) ~120 ac east of Corona Rd in three parcels	Resource Conservation, Forest and Upland Habitat Up to 25 clustered homes; outside of view of Highway 1; upper steeper portions to remain in open space (4.4.3.E.6)[a]	Clustering option not fully pursued; three upland parcels purchased privately; permits for homes issued on two; LCP amendment to rezone one parcel to add buildable area, but reduce density.
Gushman/ Wright ~785 ac	Watershed & Scenic Conservation 1 unit/40 acres below 1000 foot contour 1 unit/80 acres above 1000 foot contour	One permit issued on a 25 acre parcel; lot line adjustment on 360 ac involving four parcels; remaining ~400 ac consisting of four parcels is vacant
Hall now Keig ~154 ac	Watershed & Scenic Conservation 1 unit/40 acres below 1000 foot contour 1 unit/80 acres above 1000 foot contour	home constructed pursuant to Coastal Commission permit; management plan prepared; lot line adjustment in conjunction with former Sawyer property approved
Sawyer now Keig ~434 ac	Watershed & Scenic Conservation 1 unit/40 acres below 1000 foot contour 1 unit/80 acres above 1000 foot contour, with Special treatment overlay; up to 16 homes allowed if clustered on lower 30 acres (4.4.3.E.5)	Acquired by Keig, who did lot line adjustment in conjunction with former Hall property
Garrapata State Park 344 ac	Scenic & Natural Resource Recreation	Owned by State Parks

[a] *County Code* Section 20.146.120.C.7 says up to 40 homes.

(4) Local Coastal Program Implementation

Since LCP certification in 1988, approximately 30 coastal permits have been issued for developments in the Carmel Uplands. These include two for subdivisions, seven for lot line adjustments, and several for a total of ten new homes, as described in the following sections.

New Subdivisions

One permit was issued for a subdivision for what had been part of Point Lobos Ranch.[161] Two lots totaling 24.25 acres and containing three homes were resubdivided into seven lots. This permit was

[161] County coastal permit SB94001 (3-MCO-00-039). The original approval of SB94001, before it was revised, was appealed to the Coastal Commission as A-3-MCO-99-057. That appeal was rendered moot by the subsequent revision to SB94001, which was not appealed.

appealed to the Coastal Commission. The issue was that the Ranch was supposed to be subject to an overall plan, and this subdivision was just for a portion. The County amended the permit to show what would be the uses and densities allowed on the entire Ranch and this new permit was not appealed. The final allocation was consistent with the LCP and overall has resulted in much less density, since the majority of the property was being transferred to State Parks. Information in the permit file sent to the Coastal Commission stated that the flora is dominated by a large stand of mature Monterey pines, only one was to be removed for the subdivision access road, forest management plans would be required for individual lots, and that there were no significant sensitive habitat impacts. Subsequent review of a proposed home on one of the newly created parcels revealed that several Monterey pine trees would have to be removed in order to allow the lot to be developed and that the biological report for the original subdivision estimated a total of 41 Monterey pines would be removed.

One permit was issued to Garren for a subdivision of a 27-acre parcel that was formerly part of Behavioral Scenic Institute into two parcels of 16.4 and 10.6 acres.[162] The upper 16.4 acres is partially designated Low Density Residential and mostly Resource Conservation. A building site was shown located in the Low Density Residential portion of the site and a preserve was shown for the Resource Conservation portion of the site. This permit followed Coastal Commission approval of an LCP amendment that slightly increased the amount of Low Density Residential land area (by decreasing the Resource Conservation area) and reducing the density of the Low Density Residential area from 1 unit per acre to 3.5 units per acre. A deed restriction was required to be placed over the portions of the site over 30% slope or in Hooker's Manzanita.[163] The new smaller parcel 10.6-acre parcel is located in the Low Density (1 unit /3.5 acres) Residential designation.

Lot Line Adjustment Permits

Two lot line adjustments were approved for the owner of the Palo Corona Ranch. Parcel sizes went from 604, 6.5, and 15.5 acres to 526, 47, and 53 acres. The latter two new parcels were created in the public viewshed (in return for the two small parcels retired), pursuant to a Court order concerning the decedent's will. One has two existing homes and accessory structures; the other is vacant.[164] Then, the 526 and 47-acre parcels were adjusted to 533 and 40 acres.[165] The latter is the vacant viewshed parcel. No findings were made with regard to *Carmel Area LUP* viewshed policies, although the Negative Declaration states, "The subject lot line adjustment will not alter the aesthetic quality of the area."[166]

Two lot line adjustment permits were issued for Rancho San Carlos. Parcel sizes went from 62.4,

[162] County coastal permit MS94009 (3-MCO-95-004).

[163] The site plan in the permit shows the portion of the 16.4 acre parcel designated "Resource Conservation" to be an "Upland Preserve." It is unknown if the deed restricted area of over 30% slope and Hooker's manzanita corresponds to the Preserve or RC area.

[164] County coastal permit LL96016 (3-MCO-96-85).

[165] County coastal permit LL96023 (3-MCO-96-86).

[166] Negative Declaration for County coastal permit LL96016 (3-MCO-96-085).

1952.6, and 330.4 acres to 488.6, 768.4, and 1088.4 acres under the first permit.[167] Different parcels went from 27.2, 77.9, 42.3, and 6.99 acres to 20.6, 20.9, 63.8, and 49.1 acres under the second permit.[168] This latter permit included a right-of-way shown from Carmel Valley.

The fifth lot line adjustment was to Gushman involving four parcels totaling 310 acres, in conjunction with the aforementioned approval of three additional homes.[169] Parcel sizes went from 151, 19.05, 65.56 and 74.659 acres to 65, 86, 74.6, and 84.6 acres. A forest management plan, a scenic easement on all land over 30% slope or containing sensitive habitat (outside the building envelope), and an access easement were required. (See Issue PA-11: Coastal Trail System for further discussion of this easement requirement)

The sixth lot line adjustment was also to Gushman on former BSI land. Parcel sizes went from 0.612, 30.38, and 2.11 acres to parcel sizes of 2.56, 27.08, and 3.46 acres.[170] The 27.08-acre parcel was later issued the permits for a subdivision mentioned above and for a home to Garren mentioned below.

The final lot line adjustment was issued to Keig, who acquired the 160-acre former Hall parcel with one residence and the 450-acre vacant former Sawyer parcel. The lot line adjustment resulted in two parcels: one for 11.69 acres and one of 598.7 acres. A condition of the permit was that the applicant request rezonings of the two parcels to 1 density unit/199 acres and 1/density unit/11.69 acres, respectively. This would allow a total of only four homes (three new ones). The permit established and required recordation of building envelopes on the large parcel clustered on the lower portion of the property. One new building envelope would be in grasslands, one in pine forest. These were as shown on the previously required management plan prepared for the property in conjunction with the permit issued by the Coastal Commission for the first house. No LCP amendment to memorialize and recertify the rezoning was ever submitted by Monterey County.

New Home Permits

One permit was issued to Bliss for a 11,235 square foot home on a vacant 40-acre parcel on Point Lobos Ridge.[171] The permit raised issues of size and visibility from Point Lobos Reserve, adverse impacts to environmentally sensitive maritime chaparral habitat, and compatibility with adjacent parklands. A biology report characterized the entire site as maritime chaparral, although portions of the building pad location had been cleared. The total area of disturbance for development would be about one acre. Required mitigation included landscape restoration to eliminate and restore all existing roads and road cuts other than the primary road through the parcel and the driveway serving the home; revegetation with native plants consistent with a biological report prepared for the project including the replacement of a quarter of an acre of sensitive plant species; and a scenic and

[167] County coastal permit LL92034 (3-MCO-93-18).
[168] County coastal permit PLN980479 (3-MCO-98-188).
[169] County coastal permit PC6251 (3-MCO-89-166).
[170] County coastal permit LL92015 (3-MCO-92-092).
[171] County coastal permit 980149 (3-MCO-00-329).

conservation easement for slopes over 30% and areas with environmentally sensitive habitats outside of the building envelope. Required mitigation to prevent visual impacts from development of the house included landscaping sufficient to screen the structure from Point Lobos.

The Bliss permit was brought before the Coastal Commission for an Executive Director Determination based on procedural issues related to identifying as appealable projects that allow development in environmentally sensitive habitat areas to prevent a takings issue. The issue of appealability was ultimately resolved by a settlement agreement, which required the house to be limited in size to no more than 8,000 square feet, and the height of the structure reduced to a maximum of 12 feet above natural grade. Additionally, as a result of the settlement agreement, the permit was amended to require mitigation that placed slopes over 30% and the remaining area outside of the development envelope (approximately 39 acres) into a scenic conservation easement, and that restored the landscape by eliminating and restoring existing roads and road cuts on the site, except for the driveway, and the primary road through the parcel.[172] As a result of the settlement agreement, required mitigation to prevent visual impacts from development of the house also included the preparation and implementation of a landscaping plan, using native vegetation, including mature trees so that the home would not be visible from common viewing areas as specified in the Carmel Area LCP, including, but not limited to Point Lobos State Reserve and Highway One, for the life of the project. The permit allowed an exception to this provision of non-visibility for the first five years of the permit, to allow some time for growth of planted trees and other landscaping.

Another permit on Lobos Ridge was issued to Williams (later Schulte) for a two-story 8,976 square foot house plus barn and guesthouse.[173] The permit was conditioned for earth-tone colors and landscape screening, as the findings indicated that the parcel was in the public viewshed. The constructed house is plainly visible from Point Lobos Reserve. The biologic report indicated that the building site was environmentally sensitive dwarf coast chaparral, but that impacts were not significant considered the small amount of habitat affected. The permit found the project with consistent with policies that govern development adjacent to sensitive habitats and included conditions for reuse of the graded topsoil, revegetation with species compatible with the chaparral community, biologic monitoring, and an easement over the non-building envelope portion of the site.

One permit was issued to Sena to convert an existing 1,410 square foot house to office/guesthouse/storage and construct a new 2,489 square foot house with 840 square foot garage and 2,028 square foot barn on a parcel on Point Lobos Ridge. New development was found not to be visible to the naked eye and designed to prevent daytime glare and nighttime lighting. The new development was said to be outside of central maritime chaparral. 3.9 acres of maritime chaparral was proposed to be cleared for a vineyard, but that portion of the application was denied. A scenic

[172] County coastal permit amendment to 980149 (3-MCO-02-169).

[173] County coastal permit PC07608 (3-MCO-91-137). An amended County coastal permit 980225 reduced the size of the house to 6,335 square feet.

easement was required. The proposed removal of three trees was deemed insignificant, but nevertheless were required to be replaced at a 4:1 ratio.

One permit was issued to Hudson for a 3,380 square foot home, plus garage, guesthouse, and barn in a meadow just off Highway One in Point Lobos Ranch screened by trees. This permit was approved absent an overall Ranch management plan on a parcel where the lot lines had been reconfigured, apparently without benefit of a coastal permit.

One permit was issued to Bechtolsheim (now Southern Hills) for a 3,855 square foot house and 704 square foot garage on a 56.64-acre parcel that had been part of the Behavioral Science Institute (or BSI). The permit raised issues of structures being visible from Point Lobos State Reserve. Mitigation to insure minimizing visibility included landscaping screening, using natural materials, and controlling exterior lighting. The permit also raised the issue of development being built in sensitive maritime chaparral habitat, but noted that no vegetation would be disturbed by the project. The permit also raised the issue of development being built in plots of buckwheat (host to the endangered Smiths blue butterfly) Lewis Clarkia, and Douglas spineflower. The permit findings noted their abundance, deeming the loss insignificant and conditioned the project to replace the habitat on a 2 to 1 basis. Other site constraints included the development being above 30% slope and located in a high fire hazard area. The siting was close to the edge of the property on Mt. Devon Road, leaving the remainder of the property open and partially to be placed under a County required scenic easement.

One permit was issued to Garren for a 4,493-square foot home on a 16.4-acre parcel created from a 27-acre former BSI parcel, described above.[174] The site was described as a near-pristine closed cone forest with some maritime chaparral. The chaparral was not deemed an environmentally sensitive habitat area, but some parts of the parcel were determined to have sensitive species. A deed restriction was required on the subdivision permit that required development to avoid sensitive plants and 30% slopes.[175] The permit for the house was conditioned to require that invasives be removed. Findings indicated that the home would not be within the public viewshed.

One permit was issued to Forsyth Company (German) for a three-story, 6,970-square foot house on a 25-acre parcel formerly owned by Wright. The permit raised the issue of visibility from Point Lobos State Reserve. It was approved by the Board of Supervisors on appeal with findings that visibility was reduced due to resiting and a lowered height. The permit also raised the issue of building in chaparral, which was cleared for a well site prior to a permit issued and was addressed as a violation. A restoration plan was required, but the permit is unclear whether and how much environmentally sensitive habitat area would be lost from the construction.

The permits issued to Gushman authorized development of three homes of 4,112, 4,810, and 5,568

[174] County coastal permit 94163 (3-MCO-95-005).
[175] County coastal permit MS94009 (3-MCO-95-004).

square feet.[176] None of the building sites were located in the public viewshed. Later a new permit was issued to Heyman for one of these homes: a 4,004 square foot house on the 74-acre parcel. The previously required scenic easement was slightly modified to accommodate the new home design. Findings indicated that the original purposes of the easement requirement would still be fulfilled and that the house would not be in the public viewshed.

One additional permit application for a home remains unresolved. The County Planning Commission denied a permit request for a 3,750-square foot home on a 2.8 acre parcel just south of BSI (APN 241-161-005) based on an unsuitable septic system location, impacts to public viewshed (of Highway One and Point Lobos State Reserve), excessive natural landform alteration (grading of steep slopes), potential erosion, slope instability (landslide potential), and vegetation removal. No areas on the parcel are less than 40 acres. This matter was appealed to the Board of Supervisors and never finalized. The last action in February 2002 was a Board directive for the applicant and County staff to try to find an acceptable building site on the property and the proposal may have since been abandoned.[177]

Other County Actions

One permit was issued for a bed and breakfast on a parcel in Point Lobos Ranch. This permit was also appealed to the Coastal Commission to address overall density on the Ranch discussed above.[178] The Commission conditioned the permit to require recordation of the density allocation. A condition was also added to require a management plan to address coordination with State Parks, who was acquiring the land surrounding the bed and breakfast.

Finally, the County took another action that should have been an LCP amendment, but no application was ever submitted. A rezoning to Open Space from Watershed and Scenic Conservation was approved for Quail Meadows at the edge of the Coastal Zone.[179] There was also a lot line adjustment approved on Point Lobos Ranch that was not subject to a coastal permit.

(5) Analysis of Coastal Act Conformance

More recent experience with the cumulative effects of continued development in the Carmel Uplands indicates that continued residential subdivision, lot line adjustments, and construction in the Carmel Uplands sometimes conflicts with Coastal Act policies that require concentrating development in urban areas and protecting agricultural, environmentally sensitive habitat area, scenic, and upland recreational lands. The County needs to more consistently apply policies to

[176] Note: these figures may be adjusted in conjunction with the final County approval; this information is not readily available in the final action notice.

[177] County coastal permit PLN990150 (3-MCO-01-650). Personal communication, Thom McCue Monterey County Planning and Building Inspection Department, June13, 2003.

[178] County coastal permit PLN970284 (A-3-MCO-99-092).

[179] Correspondence Hyman to Towner, memorandum of October 25, 1991 advising that an LCP amendment request should be submitted.

minimize the impacts of development and should revise the LCP to more specifically favor clustering that helps achieve this objective.

Implementation of Provisions Allowing New Development

With regard to the individual projects that were approved, most of the homes were fairly large (with an average size of over 5,000 square feet) and involved clearing an equivalent or even larger area of native vegetation from the building site for road access, fire clearance, and septic systems. Although the County required significant mitigation measures, and in some cases, required smaller dwellings and lower rooflines than originally proposed, land disturbance and view impacts were not required to be minimized as much as possible. As to protecting the public viewshed, experience shows that required measures such as tree screening and lighting controls can still result in highly noticeable impacts to the landscape. With regard to habitat protection, given that areas of central maritime chaparral are considered environmentally sensitive habitat area, the County should have implemented LCP policies that mandate minimizing "structures and impervious surface to the amount needed to reduce environmental impacts to the greatest extent possible." And, since certification of the LCP, new information has been developed on the importance of central maritime chaparral. Although the Coastal Commission endorsed the County permit at the time, since then it seems apparent that to create four new parcels with no building sites outside of native Monterey pine forest conflicts with policies protecting environmentally sensitive habitat areas (see Issue SH-5: Subdividing ESHA in Appendix A).[180] The ambiguity in the LCP, that says residential use shall be located within the forest cover, but also that resource protection shall prevail when there are policy conflicts, should be clarified.[181]

Implementation of Overall Management Plans and Clustering Provisions

When reviewing the area wide development patterns, it appears private and public acquisitions have eliminated about 90% of the development potential possible under the LCP. . Many new owners, such as Big Sur Land Trust, Eastwood, Garren, and Keig have preserved significant tracts of land and reduced development potential. These are positive, significant steps that have occurred since certification that deserve commendation.

However, in two cases, where zoning changes occurred (at Quail Meadows) or were to have occurred (on Keig), the County has yet to submit the necessary LCP amendments (see Issue IM-9: Local Coastal Program Amendments)

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[180] See also Issue SH-29: Protection of Monterey Pine Forest Habitat. That discussion focuses on the Del Monte Forest planning area, where the LCP's consideration of Monterey pine forest as environmentally sensitive habitat area is more ambiguous than in the Carmel Area's LUP. If pine forest in the Carmel Area functions as habitat for rare or endemic species, has special value for wildlife, or is in the public viewshed, it is defined as environmentally sensitive habitat area under *County Code* Section 20.146.040. The permit for subdividing pine forest into 7 lots had no finding to this effect. But, as discussed under Issue SH-29, even if these criteria were not met, the native pine forest on this site should be considered environmentally sensitive habitat area, based on what is now known about the habitat.

[181] *Carmel Area LUP* policy 4.4.3.E.8 directs location in the forest cover, while *Carmel Area LUP* policy 4.4.2.7 says to resolve conflicts between Plan policies in a manner which is most protective of significant coastal resources.

Also, while the LCP policies governing overall development plans encourage clustering, among other measures, as a means of minimizing development impacts, several changed circumstances have made it more difficult to implement such clustered development patterns. For example, changes in ownership, the limited ability to modify development patterns of previously subdivided single-family lots, and private density credit transfers led to the following problems:

- Ownership of Palo Corona Ranch was split between a private party and the Big Sur Land Trust. A vacant parcel remains in the Palo Corona viewshed. The LCP requires development to be transferred to a portion of the Palo Corona Ranch outside of the viewshed. A strict application of LCP policies for the lot line adjustment permit would not have resulted in a new vacant parcel being created in the public viewshed. For example, the two new parcels could have been created outside of the public viewshed, or each newly created parcel could have been drawn to contain one existing house. A private agreement retained two density credits for the two new viewshed parcels, but the lot line adjustment permit did not mention or explain this. The LCP's mandated transfer of development credit to outside of the viewshed cannot now occur because the remaining portion of the Ranch has been sold to the Big Sur Land Trust.

- Ownership of Point Lobos Ranch was split between private parties and the Big Sur Land Trust without agreement on a division of the density credits that had been assigned to the Ranch as a whole. This was left for the County and Coastal Commission to resolve when subsequent development permits were considered. The Commission found on appeal of the permits that the spirit of the LCP provision requiring a master plan for the Ranch was carried out through the land transfer agreements. Some questioned that the resulting development pattern of a State Reserve partially bisected by private residences and bed and breakfasts was optimal for managing a Reserve that contained significant environmentally sensitive habitat area, including mountain lion habitat. Also, the details regarding development additional public recreational amenities and visitor-serving accommodations (other than the bed and breakfasts) were left for future planning.

- BSI's upland holdings were sold to different private buyers. The required overall management plan was not prepared for this Special Treatment Area, which should have resulted in clustering development on the lower, less sensitive portion of the property. As a result, one remote home was built in the public viewshed. And another parcel completely designated Resource Conservation remains privately owned.

- Comprehensive planning occurred for Rancho San Carlos, but the comparative small coastal zone portion was not part of the County's approval of development on the rest of the Ranch. The Ranch's development pattern outside of the coastal zone is thus set (all is in a preserve status, except development envelopes). Therefore, when a coastal permit application is considered, there is no possibility to move building sites outside of the coastal zone, if such would better achieve LCP objectives, such as viewshed protection. Also, since there are multiple parcels of the Ranch in the coastal zone, including non-contiguous ones, they could

be sold separately and, thus, comprehensive planning and clustering opportunities could be lost.

Conclusion

The County has made much progress toward the vision of preserving the Carmel Uplands in open space for habitat protection and recreational use. Much of this has occurred outside of the regulatory process through acquisitions. The permit process has been less successful in fully achieving LCP policy objectives. If past findings for approval are repeated for future permits, the approximately 30 additional homes that could be built would be large, some likely sited in environmentally sensitive habitat area and/or the public viewshed (see Map LU-12b for remaining development potential for primary homes, after accounting for various acquisitions, agreements, and County actions since LCP certification). Also, given the remoteness of the Carmel Uplands and the large parcel sizes, caretakers' homes (allowed on parcels over 40 acres) are likely to be proposed.[182] These will all likely require some amount of new or upgraded road construction, that also may intrude on the public viewshed (road scars are sometimes more of an impact than is the home itself) and affect riparian and other environmentally sensitive habitat areas (See Issue CH-9: Rural Fire Standards).

Also, as substantial land is transferred to the public, most if not all of these homesites and their associated access roads would be visible from some existing or future public trail. Thus, the result is that the "pristine" wilderness viewshed will likely be punctuated by large, scattered homes in remote areas. Night lighting and the sun reflecting off of development can also impact the public viewshed. Being isolated, pressure for caretakers' units, currently not allowed, will increase. Also, maritime chaparral needs fire to survive. Even a few more homes in the area would mean that it would be difficult to perform controlled burns and that there would be increased pressure to extinguish any wildfires (see Issue SH-28: Protecting Central Maritime Chaparral Habitat). The area is also mountain lion habitat and the introduction of residences may impact the habitat. Although existing LCP policy language should serve to prevent or mitigate each of these impacts in isolation, the combination of factors may lead to trade offs and the need to approve development for constitutional taking reasons. And, as noted, some opportunities for clustering, which could reduce the length of needed roads and other impacts, have been lost.

Thus, a multi-faceted approach to protecting the resources of the Carmel Area Uplands involving regulation, acquisition, and planning is needed. Basic LCP resource protection policies should be followed. Updates to these policies should also be adopted for Monterey pine forest, maritime chaparral, and other sensitive habitat protection, viewshed protection, ridgeline development restrictions, and "trophy" homes (see Recommendations for Issues SH-1: ESHA Identification, SH-28: Protecting Central Maritime Chaparral Habitat, SH-29: Protection of Monterey Pine Forest Habitat, CH-9: Rural Fire Standards, SR-7: Critical Viewsheds, SR-8: Ridgetop Development, and SR-9: "Trophy" Homes). There is also the need to update land use designations and densities, in line with the ownership changes and property restrictions that have occurred. These are specified in Recommendation LU-12.1.

[182] It appears that there are approximately 15 "40-acres or greater" parcels, which would be eligible for caretakers' houses.

The County should be rigorous about requiring overall management plans where they are prescribed. While lot line adjustments do not and should not require overall management plans, they need more scrutiny to ensure that LCP objectives are not compromised. Recommendation LU-12.3 addresses this need. If possible, there should be improved communication between the County and private parties about to place restrictions on portions of their property or sell off portions, so that the remainders are not problematic (see Recommendation LU-12.7).

Of course, continued acquisition of land to placed in preserves and/or public ownership would help prevent further impacts from residential development and deserves support (see Recommendations LU-12.5 and LU-12.6).

However, even public ownership does not completely address all the Coastal Act issues associated with the Carmel Area Uplands. Implementation of the LCP policies must assure that the location and intensity of development of public recreational facilities will protect environmentally sensitive habitat areas and scenic views in conformity with Coastal Act policies. This Periodic Review suggests that regardless of the ownership status, the Carmel Uplands would benefit from a more specific planning exercise to account for changed circumstances. Regulation and management on an individual parcel or parcel-grouping basis is limited as to what can be accomplished (see Recommendation LU-12.4). If the Uplands's resources are to be optimally protected, the entire area should be reviewed as to the best locations for development and for open space, both public and private. For example, a comprehensive strategy could emerge to cluster remaining private development potential out of sensitive areas and set standards for their construction. Such a strategy may benefit from the use of transfers of density credits, which should be an option allowed, as provided for in Recommendation LU-12.2. And, for the lands available to the public, decisions as to where to locate trails, for example, need to be made on an area-wide basis to ensure connectivity and optimal locations (see Recommendations PA-10-1, PA-11.1, and PA-11.2).

f. Issue LU-13: Big Sur Coast Highway Management Plan

(1) Overview

This subchapter addresses the following concern identified through issue scoping: **Ensure that the Monterey County Local Coastal Program (LCP) is coordinated with the Big Sur Coast Highway Management Plan (CHMP).**

Highway One south of the Carmel River in Monterey County is one of the state's most spectacular scenic resources and provides access along this rugged shoreline for more than three million visitors per year. It is also extremely vulnerable to the elements and requires substantial maintenance just to keep it functional.

The certified Monterey County LCP is primarily concerned with Highway One capacity and traffic management issues, given that it is mandated and physically constrained to stay two-lane. The LCP contains various policies directed toward making highway improvements such as turnouts, shoulders, and parking. The LCP also contains a request for an overall design theme for the

construction and appearance of improvements within the Highway 1 right-of-way be developed by Caltrans in cooperation with the State Department of Parks and Recreation, the U. S. Forest Service and local citizens.

Since certification of the LCP the need for more specific directives for Highway One has continued to be recognized, but emphasis has changed. A series of storm-induced road closures, followed by attempts to reopen it and dispose of the landslide material has demonstrated the need for pre-planned responses. This has become more of a necessity due to the establishment of the Monterey Bay National Marine Sanctuary with tightened restrictions on disposing material into the ocean. The County has approved several permits for Caltrans to perform highway improvements, but the agency desires more certainty, speed, and intergovernmental coordination to keep the highway open and make improvements. As a result Caltrans has prepared, in cooperation with the Coastal Commission, the *Coast Highway Management Plan*, with specific guideline documents that address landslides and storm events; protecting the highway's aesthetic characteristics; and managing vegetation within the corridor.

In light of this new initiative, it is timely to revise the LCP to account for the new information derived from the planning process. This can be accomplished by providing more specific guidance in the LCP for various types of highway improvements likely to occur, including bridge replacement, pullouts, sidecasting, culvert replacements, and the like. There are also opportunities to revise some other policies addressing new development that would impact use of the highway with regard to traffic generation mitigation measures. Additionally, there is a need for the various agencies involved in regulating highway improvements to coordinate through implementation of the Coast Highway Management Plan, as County responsibility alone is somewhat limited due to Commission retained and federal jurisdictions.

This issue is related to Issue SR-10: Big Sur Critical Viewshed as it is important to construct highway improvements in a manner that does not detract from scenic resource protection. At the same time, it is important to maintain the highway for recreational travelers to enjoy the scenic resources and, hence, protect those views seen from the highway. This issue is also related to Issue PA-11: Coastal Trail System because much of the California Coastal Trail through Big Sur Coast will run along Highway One.

(2) Resource Background

Highway One Characterization

Highway One, south of the Carmel River in Monterey County, is widely recognized as one of the state's most spectacular scenic resources, heavily traveled, and providing access along this rugged shoreline for more than three million visitors per year. These 72 miles of winding, difficult-to-maintain, two-lane blacktop traverses the frontal slopes of the Santa Lucia Range along the length of the rugged Big Sur Coast landform.

Begun in 1929, the vision of a modern coast road quickly gained the support of those who believed the time had come to replace the old Coast Trail and—at the north end—the unpaved, dead-end,

single-lane County-maintained old Coast Road. When built, the construction of the Big Sur Coast Highway—originally called the Carmel-San Simeon Highway—proved to be both an engineering and construction challenge that periodically exceeded available funds and construction resources. Promoted as a scenic drive as well as for the potential economic advantages for the region, the highway was eventually completed with the help of convict labor, immediately prior to World War II.

When opened to regular post-war tourist traffic in 1946, the highway itself—not just the scenery it revealed--was widely acclaimed and admired. The graceful concrete arch bridges, the rustic roadside fountains and rockwork, the way the highway was carefully woven through the redwood groves and clung to the high cliffs above the Pacific, all added up to a well-deserved characterization of "spectacular." Over the years, there have been a number of gradual, incremental safety improvements: the original redwood beam bridges have been replaced, the concrete arch bridges have been painstakingly retrofitted to resist earthquakes, and shoulders improved where there is room. Nonetheless, the highway's essential two-lane nature has been retained.

Because of the rough-and-ready character of the highway facility, together with the surrounding context of a wild, seemingly unspoiled coastal landscape, the visitor is still able to enjoy at least a modest sense of discovery and adventure. The existing character of Highway 1 is a narrow but paved roadway tenuously clinging to an overwhelmingly rugged landscape. New vistas, and the potential for surprises, are revealed with each turn of the roadway. The essence of this driving experience is the sense of adventure—imparted not only by the passage through a rough, untamed landscape and breathtaking drop to the ocean below, but also by the distance between human habitations and the scarcity of motoring amenities (such as gas stations). Another contributing element is the roadway itself: straight sections are rare, the turns sharp, shoulders narrow, guardrails frequent, most pullouts are unpaved, repair work common, one or both lanes periodically closed at one or more points. Living with landslides means that in some spots the roadway is in a process of migrating: tension cracks in the pavement, lumpy repeat repavings, even short sections allowed to go unpaved awaiting better stability, are all signs of a highway "on the move." And, for the most part, there is a background awareness of no way out except to keep going or go back the way you came. Far from detracting from the quality of the experience, these quirks enhance the impression of a driving adventure.

The LCP text underscores the importance of recreational travel on this highway:

> *The major population centers of California, the San Francisco Bay Area, the Los Angeles Area, and the large cities of the Central Valley, are less than a day's drive from Big Sur. The Monterey Peninsula, Salinas, Santa Cruz, and San Luis Obispo are one to two hours away. The accessibility of Big Sur to these centers has a major impact on the demand to visit Big Sur and the resulting traffic congestion on Highway 1. Visitors from other states and foreign countries who are attracted to Big Sur's scenic beauty also contribute significant amounts of traffic along Highway 1…The traffic on Highway 1 is predominantly recreation oriented. Recreational traffic is estimated to comprise 95% of all trips during the peak summer*

months.[183] *The remaining 5% consists of residential traffic and a small volume of commercial and agricultural traffic. Driving for pleasure constitutes the major proportion of recreational traffic along the Big Sur coast that originates from outside the area. It accounts for about 70% of the recreational traffic volume during the peak summer months. Internal local trips within Big Sur consist of about 65% recreational trips and 35% residential trips during a summer month. During this same peak period, passenger cars are estimated to account for about 91% of the traffic on the highway north of Big Sur Valley; trucks account for 2%*[184]*; buses, campers, motor homes, and vehicles with trailers make up about 5% of the traffic*[185]*; and motorcycles account for 2% of total traffic.*

The Monterey Peninsula area to the north is famous for its aquarium, shopping, golf courses; and, like Hearst Castle in San Luis Obispo County, records millions of visits per year. While these major tourist attractions bracket the Big Sur Coast, the character of what is encountered by the visitor stands in sharp contrast to what has been developed at nearby destinations. Visitor attractions, in the conventional sense, are relatively sparse along the Big Sur Coast. There are no amusement parks, golf courses, wine tasting rooms, movie theaters, visitor centers, convention complexes, casinos, sports stadiums, fast food franchises, multi-story hotels or similar artificial attractions. Instead, the main draw is the scenic drive itself, along with the opportunity to access Big Sur's beaches, parks, nature reserves, campgrounds, small-scale restaurants and resorts. Whether experienced at a developed site such as the Esalen Institute, or on the trail deep in the Ventana or Silver Peak Wilderness areas, natural beauty and serenity are key attributes of the authentic Big Sur experience.

Threats to Highway One Resource

Smooth and optimal performance of the highway for all users is threatened by landslides that periodically close the route, inadequate shoulder widths, insufficient turnouts for slow-moving vehicles, unrealized opportunities for improved non-motorized public access, the unaesthetic and uncoordinated public and private improvements along the highway corridor, and localized congestion at peak times. Caltrans' ability to respond to the above problems in a timely fashion is affected by differing public agency missions (e.g., protecting the integrity of the transportation facility vs. the integrity of the marine environment), as well as the delays that are inherent in the regulatory process, and lack of coordinated management within the highway corridor.

Just as the highway was not easy to build, it is not easy to maintain. Closures over time are a fact of life, primarily the result of slip-outs, landslides, and washouts where either the road disappears or is blocked by falling earth. Some travel delays are intentional; these are generally only a matter of a

183 This data, quoted from the *Big Sur Coast Land Use Plan,* is from *Monterey County Planning Department Big Sur Coast Transportation and Highway One Background Report*, July 1979, and is generally consistent with subsequent observations.

184 This data, quoted from the *Big Sur Coast Land Use Plan,* is from *Monterey County Planning Department Big Sur Coast Transportation and Highway One Background Report*, July 1979. According to more recent Caltrans 2001 traffic volumes data, truck traffic was one percent of the total, as measured at the Big Sur River Bridge.

185 This data, quoted from the *Big Sur Coast Land Use Plan,* is from *Monterey County Planning Department Big Sur Coast Transportation and Highway One Background Report*, July 1979. In a later Caltrans survey in 1990, 2.9% of respondents indicated they drove an RV.

few minutes or hours (e.g., during the annual Big Sur Marathon, or waiting for a temporary signal to change at a construction site). However, when there is a big wildland fire or the highway is broken by a major landslide, slip-out (when the highway is undercut by erosion) or culvert blow-out, through traffic can be disrupted for days, weeks or months at a time. Sometimes the highway is cut in multiple places, as in the 1998 El Niño storm cycle. On other occasions, it can be just one critical event: for example, the very large 1983 landslide in J.P. Burns State Park that closed the highway for more than a year. Accordingly, a major challenge for Caltrans is how to minimize highway "down time" while protecting the intrinsic qualities of the National Scenic Byway.

Closures limit Highway One's ability to serve visitors and residents and creates various hardships. While Caltrans has the ability to reconstruct the road, the prime issue in the operation of the highway turns on the need to dispose of immense quantities of landslide material that periodically close the route. Traditionally, heroic-scale engineered solutions were sought, in an effort to achieve complete ("global") stability.[186] When clearing and removing a landslide, this could involve sidecasting or pushing hundreds of thousands of cubic yards of earth towards the sea. The impacts of such traditional maintenance strategies were not fully appreciated at the time of LCP certification.[187]

The experience with the 1998 El Niño repairs demonstrated that the traditional assumptions and methods for keeping the highway open would have to be reexamined. An important changed circumstance is the presence of the National Marine Sanctuary. A key regulation is the prohibition[188] on depositing of any material into the marine environment, as the Sanctuaries are not to be the dumping grounds for debris of any kind. This means that ocean disposal is considered a prohibited use along the length of the Big Sur Coast. Only a very limited, finite disposal capacity appears possible in terrestrial disposal sites. The most promising potential terrestrial disposal sites are themselves on the surface of active or ancient landslides, or in eroding gullies, which raises concerns about the risk of inducing further instabilities. As well, a range of resource impacts can be anticipated at terrestrial sites. These impacts could deter Caltrans from pursuing an otherwise promising disposal site—for example, placement of large volumes of rock and earth debris could potentially displace habitat for the endangered Smith's blue butterfly, or detract from the Critical Viewshed, or reduce available grazing or public recreation lands.[189]

Accordingly, there is urgency in finding solutions to the maintenance needs of the highway, particularly the problem of how to manage the inevitable future landslides without significant disruption of marine habitats and other sensitive resources along the highway corridor. The techniques used following the 1998 El Niño season (extremely long hauls to remote locations outside the coastal zone) and since (stockpiling in pullouts and on highway shoulders) do not

[186] JRP Historical Consulting, Inc.,. *A History of Road Closures along the Big Sur Coast,* September 2001. Prepared for the California Department of Transportation, District 5.

[187] California Department of Transportation, District 5, *Slope Instabilities Affecting the Highway 1 Corridor: Road Condition and Hazard Potential,* September 2001.

[188] Code of Federal Regulations, Title 15 Section 944.5.

[189] California Department of Transportation, District 5, *Negative Declaration: Disposal Sites for Landslide Material from Highway Repairs, Highway 1along the Big Sur Coast.* December 2000.

represent satisfactory long-term approaches. There is general agreement that a different approach is needed, not only to protect the State from the extremely high cost of long distance hauling, but also the cumulative air pollution impacts from the hauling operation, the loss of public access opportunity, the impacts on the viability of needed visitor-serving businesses, and the impacts of increased wave erosion resulting from the diversion of natural materials that would otherwise replenish the shoreline. According to Caltrans, long-distance hauling can be the single most time consuming operation that determines the time to re-opening when a high-volume landslide closes the highway.[190]

The unpaved highway shoulder and pullouts provide the majority of parking for divers at San Jose Creek beach, for surfers at Sand Dollar beach, for beachcombers at Jade Cove, and for a substantial portion of all trailhead parking. A number of highway vista points—as well as numerous informal view pullouts--represent some of Big Sur's most popular scenic vantage points. However, stockpiling along the highway appears to have resulted in impairment of public views, facilitation of invasive non-native plant growth, and loss of pullout capacity for slow-moving vehicles—as well loss of capacity for public visual and trail access.

Another issue with highway management is that non-motorized public access opportunities--one of the important intrinsic values of Highway One--are lacking in several respects. For bicyclists the highway can be challenging, with intermittent lack of shoulders, and inattentive motorists and steep cliffs all too close. Pedestrian deficiencies include many highway stretches where the paved shoulder is either too narrow or non-existent; lack of restrooms; and the need to cross traffic to reach a trailhead or scenic viewing point. Walking along the highway shoulder is common for hikers and other visitors to span the gaps between off-highway trail fragments and to get to trailheads or beach accessways where parking is not immediately available. Workers and residents also walk to work, school, or to the post office. And, in many places, the highway shoulder doubles as the interim alignment of the California Coastal Trail. But, there is little to encourage the pedestrian alternative: most of the highway lacks a defined roadside path; motor vehicles are too close; and, rarely has any effort been made to achieve a horizontal separation by vegetated buffer or other means. Similarly, vertical separation is generally lacking. Only two formal pedestrian underpass structures exist on the entire Big Sur Coast (and one of these was originally intended for cattle). As a result, despite dense fogs, blind corners and heavy peak period traffic, visitors are often forced to dash across the exposed surface of the highway to reach a viewpoint, historic feature, or trailhead.

The LCP reports deficiencies in transit service that remain today:

> *Public transit to and through Big Sur is available only on a very limited basis by buses operating along Highway 1. Public bus service from downtown Monterey to Nepenthe south of the Big Sur Valley is provided by Monterey Peninsula Transit during the summer. Bus service between Monterey and San Luis Obispo with two round trips daily was recently put*

[190] The impact of off-site hauling operation on time-to-opening is vividly illustrated in Caltrans *Draft Coast Highway Management Plan: Guidelines for Landslide Management and Storm Damage Response* July 2003, Figure 7.

> *in operation by Coastlines, a privately owned transit company* [which is no longer operational]. *Private tour buses operate along Highway 1 on a charter basis, transporting groups of visitors to various places in Big Sur and to Hearst Castle in San Luis Obispo County. Scheduling of bus service in the past has not fully met resident needs nor offered visitors adequate flexibility in travel times.*

The LCP reports concerns with the aesthetic quality of the Highway that also remain today:

> *...study has shown that the aesthetic qualities of Highway 1 are eroding. This is the result of both private and public development in the scenic viewshed, and visitor overuse within the highway right-of-way itself. ... Non-native and invasive plants are spreading along the highway to the detriment of the scenic beauty.*

Issues concerning the protection of the scenic viewshed, beyond the highway, are detailed in the Scenic Resources chapter of this report. The maintenance, operation and improvement to the highway itself, and adjacent public utilities and facilities can result in visual impairment or clutter as well. Utility poles, lack of visual access through bridge rails, wire mesh rock containment netting, rampant growth of invasive non-native plants on disturbed surfaces, and stockpiled landslide materials in pullouts are all examples of necessary but sometimes unaesthetic roadside features.

In the past, the problem of unclear visitor orientation was often resolved by adding more signs. For example, redundant signs—starting at Carmel--continually remind the visitor that they are getting ever closer to Hearst Castle. Both private and public agency signs of all kinds have proliferated, generally larger than the minimum necessary and usually of flat metal rather than indigenous materials. These even include historic bridge signs, and coastal access signs—appropriate in terms of message, but perhaps not in design, choice of materials, or placement.

A final threat to the highway performance is peak period congestion and a consequent deterioration of the visitor experience. The LCP states:

> *The limited capacity of Highway 1 to accommodate local and recreation traffic at a level that reserves reasonable service and emergency use and also allows motorists to enjoy the beauty of Big Sur's scenic coast is a major concern.*

Although the LCP was concerned with projected increased recreational travel demand, the average daily traffic (ADT) counts for Big Sur remain in approximately the same range as when the LCP was written.[191] Nonetheless, the enjoyable aspects of the drive can be compromised by long lines of

[191] Section 4.1 of the *Big Sur Coast Land Use Plan* states that ADT (average daily trips) based on mid-1970's data was 4,500 north of the Big Sur Valley at Level of Service D, and 2,600 south of the Valley. Caltrans' own published data for 1982 reports 2,350 ADT at the Anderson Canyon Bridge, 3,400 ADT at the Big Sur River Bridge, and 4,200 ADT at the Garrapata Creek Bridge. By 2002, these same points recorded 2,600, 42,00, and 4,700, ADT respectively (current data now available on-line at Caltrans' Traffic and Vehicle Data Systems Unit website). For the segments that encompass these points, Caltrans, *Draft Coast Highway Management Plan—Guidelines for Corridor Aesthetics* July 2003, Appendix 2 reports ADTs of 2,800, 4,200, and 4,800, respectively. Current peak volumes range between 610-740 vehicles/hour, and current ADT for the Big Sur Valley area is in the

traffic straggling behind large, slow-moving recreational vehicles, perhaps with inexperienced drivers at the helm. According to California Highway Patrol officers, a major factor in their ability to enforce the slow-moving vehicle law is the availability (or lack) of safe turnouts and pullouts. Inadequate turnouts, especially along the northern Big Sur Coast, remain a problem.

The LCP is also concerned that:

> *Activities or development that could generate significant volumes of truck traffic such as potential logging, mining, or other commercial operations could have detrimental effects on traffic conditions and could reduce the vehicle capacity of the highway.*

Paradoxically, the truck traffic that has had the greatest detrimental effect is that which is required to long-haul landslide materials to remote locations, outside the coastal zone. At full tilt after the 1998 El Niño landslides, the continuous stream of truck traffic severely impacted the capacity of the highway for all other uses (including recreational traffic) and wore out the pavement, which had to be replaced when the repairs were all completed.[192]

Responses to Enhance Highway One

Beyond individual projects to maintain and improve the highway (some of which are noted in the following LCP implementation section), planning for comprehensive management is now occurring—in the form of the Coast Highway Management Plan. These planning efforts have been complemented by scenic regulation, starting with the banning of billboards in 1946 and further detailed under Issue SR-10: Big Sur Critical Viewshed. Highway planning takes place against the backdrop of the special scenic designations afforded Highway One, regulation of landslide spoil disposal by the Monterey Bay National Marine Sanctuary, and intergovernmental coordination through the Big Sur Multi-agency Advisory Council.[193]

State Highway Route 1, from the Carmel River to the San Luis Obispo County line was designated a State Scenic Highway in 1965. It was later designated as a National Scenic Byway, at the highest status level of All-American Road (1996). While the Federal Highway Administration has oversight responsibilities for the entire nationwide scenic byways program, an individual byway typically has its own sponsoring organization, termed the Byway Organization. The California Department of Transportation (Caltrans) currently supports the effort to establish a permanent byway organization for the Big Sur Coast Highway.

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range of 4,500 according to Keith Hinrichsen, Associate Transportation Planner, Caltrans-Dist. 5, e-mail communication, July 27, 2003--which is the same figure reported in the *Big Sur Coast Land Use Plan*, Section 4.1.

[192] Ordinarily, truck traffic currently accounts for only 1 % of Highway 1 traffic (as recorded at Big Sur River Bridge, and reported in Caltrans *Annual Average Daily Truck Traffic on the California State Highway System,* 2001).

[193] The Council was established by resolution of the Board of Supervisors at the time the Monterey County LCP was certified. The congressman, as well as each elected state legislative representative and the County supervisor, along with representatives from the Monterey County Planning and Building Inspection Department, Coastal Commission, National Marine Sanctuary, US Forest Service, State Parks, Regional Park District and community organizations all sit on the council. This quarterly community forum serves to keep alive dialogue on how best to preserve the Big Sur landscape and community character. It serves as a sounding board for Caltrans and other management agencies.

In order to protect the intrinsic values of the National Scenic Byway system, each scenic byway is subject to a corridor management plan. Caltrans is in the process of completing a comprehensive, stakeholder-based effort to update the corridor management plan (CMP). As required for designation, a CMP for the Big Sur Coast Highway, reflecting the policies of the Monterey County LCP, was submitted in 1996. Now, in order to provide a more effective management and decision-making tool, Caltrans is in the process of completing a comprehensive, updated corridor management plan. This undertaking is known as the Coast Highway Management Plan (CHMP).[194]

The current planning effort is led by Caltrans and guided by a multi-stakeholder Steering Committee composed of community and agency representatives. The CHMP effort has emphasized intensive community involvement, partnerships with all relevant public agencies, a solid foundation of scientific investigation, and mapped data in a GIS database format. To date CHMP has produced a wide variety of products including inventories and background studies.[195] The Coast Highway Management Plan (CHMP) is expected to contain management strategies for protecting the intrinsic natural, scenic, recreational, historic and cultural qualities that distinguish the Big Sur Coast Highway. The key planning documents have now been released in draft form for public review. In addition to the primary management plan document,[196] specific guideline documents address the

[194] See the Coast Highway Management Plan website for the latest information: www.dot.ca.gov/dist05/projects/bigsur.

[195] The corridor inventories are: Pattillo & Garrett Associates, *Corridor Intrinsic Qualities Inventory-Recreational Qualities*, May 2002; JRP Consulting Services, *Corridor Intrinsic Qualities Inventory-Historic Qualities* November 2001; Parsons Brinckerhoff, *Corridor Intrinsic Qualities Inventory-Cultural Resources*, September 2001; Mikkelsen, Patricia, et. al., *Cultural Resources Inventory of Caltrans District 5 Rural Highways Monterey and San Luis Obispo Counties, California: Coast Highway 1,* June 2001; Parsons Transportation Group, *Corridor Intrinsic Qualities Inventory-Natural Qualities,* December 2001; and Public Affairs Management, *Corridor Intrinsic Qualities Inventory-Scenic Qualities,* January 2002.
Also, greater analysis was sought about the geologic factors that influence the overall reliability of the highway. In particular, information was collected about geology and landsliding as well as the conditions of highway facilities that convey surface water. The baseline and historical information capture the complexity of maintaining a highway along the Big Sur Coast. These reports included: Wills, C.J. et. al., California Department of Conservation, Division of Mines and Geology *Landslides in the Highway 1 Corridor: Geology and Slope Stability along the Big Sur Coast,* 2001; C. Hapke, C., K. Dallas, and K. Green; U.S. Geological Survey, Pacific Science Center, and University of California, Santa Cruz. *Estimated Sediment Yield from Coastal Landslides and Active Slope Distribution Along the Big Sur Coast*, February 2003 and addendum: *Coast Cliff Erosion Rates, Big Sur, CA* , May 2003; Caltrans, *Slope Instabilities Along the Highway 1 Corridor: Road Condition and Hazard Potential,* September 2001; JRP Historical Consulting Services, *History of Road Closures*, November 2001; Caltrans, *Culvert Inventory for Coast Highway Management Plan*, Nov. 2001; Moss Landing Marine Laboratories, *Ecological Impacts of the Landslide Manipulations at the McWay Slide, Big Sur Coast, and Management Recommendations ,* n.d.; Moss Landing Marine Laboratories, *Marine Disposal of Landslide Debris Along Highway One: Environmental Risk Assessment and Monitoring Protocols*, February 1998; Duffy, John D., Caltrans Senior Engineering Geologist *Living with Landslides*, January 2001; *Roadway Safety and Scenic Integrity: Rockfall Protection on the Big Sur Coast* (July 27, 2000 Public Workshop Summary).
Also a Geographic Information System (GIS) database for the corridor has been prepared of access and recreational facilities, historic and cultural features, scenic qualities, terrestrial habitat, and culverts. Some additional supporting documentation includes: The Watershed Institute, et al., "*Big Sur Coast Highway One Erosion and Revegetation: An Examination of Revegetation Practices at McWay and Other Regional Sites*", December 2000; Caltrans District 5, *A Bridge Rail Inventory Along Route 1, Big Sur*, June 2001; Caltrans *Site Restoration Guidelines*, February 2002.

[196] Caltrans, *Draft Corridor Management Plan*, July 2003.

issues associated with highway storm event closures and landslides;[197] protecting the highway's aesthetic characteristics;[198] and managing vegetation within the corridor.[199]

The proposed management strategies will require implementation by a variety of public agencies and means—including not just Caltrans, but also Monterey County through its LCP. The intention is that the CHMP will be a living document, and will be implemented by each of the contributing entities (including Caltrans), within the scope of their respective authorities. Accordingly, the CHMP Steering Committee will need to be reconstituted and re-shaped to oversee implementation responsibilities as a collaboration of stakeholders. Upon completion of the current CHMP planning effort, Caltrans hopes to identify an appropriate byway organization, which could evolve from the present Steering Committee. The most significant aspect of the CHMP, with respect to keeping Highway 1 functional along the Big Sur Coast, is the set of strategies that it proposes for dealing with the landslide disposal issue. As envisioned, implementation of the CHMP offers the possibility that each segment of the highway will eventually have an identified "best management" strategy, or combination of strategies, for preventing and/or responding to instabilities. For a given highway segment, these approaches might well include improving the stability of the highway at selected locations, while in other locations separating the highway from the instability (e.g., by bridges or tunnels), while at yet other locations simply accepting natural instabilities and "learning to live with landslides" --which may entail such measures as allowing the roadbed to bend and shift, and realigning, regrading and repaving from time to time.[200]

And, the CHMP illustrates how the landslide materials themselves will need to be recharacterized, not as debris but as a natural resource. As recent joint investigations by UCSC and USGS demonstrate, the amount of material that Caltrans moves off the highway is insignificant in comparison to the total amount of mass wasting (landslides, erosion, etc.) from all causes along the Big Sur Coast.[201] An alternate perspective is that landslides are a normal, natural process along the extremely steep Big Sur Coast,[202] and that the presence of the highway tends to interfere with this

[197] Caltrans, Draft *Guidelines for Landslide Management and Storm Damage Response*, July 2003. This document contains new insight and improved understanding of geophysical processes that impact the highway and adjacent marine environment. Examples include: landslide risk can be linked to the El Niño storm cycle; while the highway contribution to sediment flux can be locally significant, it is minor overall; complete (global and local) stability is no longer always the optimum solution; "living with landslides" can be seen as viable strategic paradigm; long distance hauling of landslide materials has its own impacts; withholding of sediments also can have impacts on natural sediment flux rate and on highway stability; soil flows and culvert loss were a major factor in the 1998 storm season closures; culvert repair, modification and replacement is a cost effective approach to improving highway reliability while reducing risks of marine resource impacts.

[198] Caltrans, *Draft Guidelines for Corridor Aesthetics,* July 2003.

[199] Caltrans, *Draft Guidelines for Vegetation Management*, July 2003.

[200] Duffy, John D. "Living with Landslides." Powerpoint Presentation. Caltrans. January, 2001. Also, California Geological Survey and California Department of Transportation. Proceedings: 53rd Annual Highway Geology Symposium, San Luis Obispo, California. August 13 – 16, 2002.

[201] Hapke, Cheryl. *Estimated Sediment Yield from Coastal Landslides and Active Slope Distribution Along the Big Sur Coast*. February 2003.

[202] California Division of Mines & Geology, *Landslides in the Highway 1 Corridor: Geology and Slope Stability along the Big Sur Coast,* September 2001.

natural process that historically has fed stupendous volumes of sediments and nutrients into the marine environment. Therefore, appropriate public policy would be a strategy that would allow, to the extent feasible, the normal sediment input regime to continue with as little disruption as possible. In other words, the sediments contained in landslides can be viewed as a resource, and we should try to either help the sediments continue on their way down the slope, or make certain that they are salvaged and recycled for productive uses, such as beach replenishment.

(3) Local Coastal Program Provisions

The *Carmel Area Land Use Plan* governs the four and 1/2-mile portion of rural Highway One from the Carmel River to Malpaso Creek. The *Big Sur Coast Area Land Use Plan* governs the 68- mile portion from Malpaso Creek to the southern County boundary. Both plans contain several provisions that explicitly address Highway One. These provisions include policies for highway design, regulations for traffic-generating development, and management and planning actions to take. Of course, many other LCP provisions, such as for habitat and scenic resource protection, are applicable to highway and related projects as well. The philosophy behind many of the highway-oriented provisions is explained in the LCP as follows:

> *Studies supporting this plan have reached several important conclusions concerning future planning and management of Highway 1. One conclusion is that because the vast majority of traffic on the highway during congested peak use periods is recreational driving originating outside of Big Sur, efforts to reduce highway congestion by limiting land use development within Big Sur itself can have only marginal effects. Unless there is substantial change in current recreational use patterns and volumes, significant decreases in peak period traffic congestion will only be achieved through physical regulation of the highway including limitations to visitor access at its north and south ends.*
>
> *A second important conclusion is that management of Highway 1 should attempt to optimize rather than maximize visitor use levels on the highway in relation to other user needs and planning objectives for the coast. As an objective, the maintenance of an acceptable minimum level of service and corresponding maximum traffic volume standard for Highway 1 traffic must satisfy several criteria. A reasonable level of traffic volume must be accommodated that reflects current recreational and residential use patterns, future demand for access to Big Sur, property rights of landowners, and resource protection goals aimed at preserving the natural character and beauty of Big Sur.*
>
> *The encouragement of land uses that help redistribute traffic volumes to non-peak periods is a desirable approach to reducing traffic congestion on the highway. Development and management policies that encourage a more even distribution of traffic flow would result in an overall increase in access to Big Sur and place fewer constraints on the amount of recreational and residential development that could be approved.*

Big Sur Coast Land Use Plan *Key Policy 4.1.1 states:*

Monterey County will take a strong and active role in guiding the use and improvement of Highway One and land use development dependent on the highway. The County's objective is to maintain and enhance the highway's aesthetic beauty and to protect its primary function as a recreational route. The highway shall remain a two-lane road and shall include walking and bicycle trails wherever feasible. In order to protect and enhance public recreational enjoyment of Big Sur's unique natural and scenic resources, recreational traffic should be regulated during congested peak use periods.

Additional relevant *Big Sur Coast Land Use Plan* policies include:

4.1.2.1: Improvements to Highway 1 shall be undertaken in order to increase its service capacity and safety, consistent with its retention as a scenic two-lane road. The highway capacity improvements detailed in the following policies are essential for the maintenance of existing service levels for the benefit of Coastal Act priority uses and residents alike. In light of the anticipated traffic increases on the Coast Highway, the County shall review the traffic levels after five years and determine what capacity improvements have been implemented or planned and what additional solutions may be necessary and feasible.

4.1.2.2: A principal objective of management, maintenance, and construction activities within the Highway 1 right-of-way shall be to maintain the highest possible standard of visual beauty and interest.

4.1.2.3: Existing levels of service on Highway 1 during peak use periods are unacceptable, particularly from June to August between 10:00 a.m. and 7:00 p.m. Therefore, in order to restore reasonable traveling speeds for residents and visitors, to protect emergency use of the highway, and enhance the quality and enjoyment of the scenic driving experience, reductions in peak use period traffic should be sought. A combination of actions, including public education and regulation of Highway 1 use during peak periods, shall be undertaken to achieve an improved service level.

4.1.2.4: To conform to the Coastal Act, most remaining capacity on Highway 1 shall be reserved for coastal priority uses: recreation and visitor-serving facilities, the military, agriculture and other coastal dependent uses.

4.1.3.A.1: The County requests that, in order to maximize vehicular access to the Big Sur coast the width of Highway 1 be upgraded to a standard of 12-foot lanes and 2 - 4-foot shoulders where physically practical and consistent with the preservation of other coastal resources values. A program of constructing left-turn lanes, and other improvements shall be undertaken to improve traffic capacity and safety.

4.1.3.A.2: The County requests that appropriate areas along Highway 1 be designated by Caltrans for construction of paved turnoffs for slow-moving vehicles. The turnoffs should be signed to notify approaching vehicles in time to pull over. The California Slow-Moving Vehicle Law, California Code Section 21665, should be enforced during peak traffic periods.

4.1.3.A.3: Pedestrian and traffic hazards which result from on-shoulder parking at unsafe locations shall be corrected wherever possible, with priority being given to congested recreational attractions such as the Garrapata Beach-Soberanes Point area, the Andrew Molera State Park frontage, and River Inn. New facilities, both publicly-owned and commercial, must have adequate and safe off-shoulder parking before they are opened to public use. Existing facilities shall not be expanded unless the standard of adequate and safe parking is met. On-shoulder parking should not be allowed where safe shoulder width or sight distances can not be achieved, or where important seaward vistas will be impaired. Caltrans is requested to initiate a program to carry out this policy; emphasis should be placed on the construction of parking areas with designated entrances and exits, at suitable locations as identified in cooperation with the County, U.S. Forest Service, Department of Parks and Recreation, and local citizen advisors.

6.1.6.4: Parking and Facilities - Emphasis should be given to improving access on the east side of Highway 1 suitable for parking near accessways or trailheads and, where feasible, pedestrian access to the west side of the highway shall be provided. Such areas should be effectively screened from the road through the location of site features, construction of berms, or planting of vegetation screens. The number of parking spaces provided should not exceed the capacity of the shoreline destination as determined by its size, sensitivity of the resources, and the type and intensity of use appropriate for the area…

4.1.3.A.4: The number of private roads and recreational access road entrances off Highway 1 shall be limited whenever possible for traffic safety and management purposes. The County shall require new developments to demonstrate that the use of existing public or private roads is either not feasible or that easements for use cannot be obtained before it approves construction of a separate entrance to Highway 1.

4.1.3.A.6: The traffic bottleneck at Hurricane Point should be corrected as the highest priority for Caltrans' efforts on Highway 1 within the Big Sur L.C.P. area.

4.1.3.B.1: Undesirable parking locations identified pursuant to policy 4.1.3.A.3, as well as those which must be phased out under habitat or visual resource restoration programs, shall be retired from service when alternative safe facilities are in place. The placement of boulders or other methods should be used to prevent inappropriate public access or parking in such areas. Native vegetation that does not obscure the public view should be re-established on bare areas.

4.1.3.C.3: Where consistent with scenic protection and other resource management policies, public restrooms should be provided at major destination points including the Rural Community Centers, major public viewing areas adjacent to Highway 1, and State and National Forest developed recreation sites. Trash receptacles should be considered and a program of litter abatement shall be undertaken.

4.1.3.B.4: The County requests that an overall design theme for the construction and appearance of improvements within the Highway 1 right-of-way be developed by Caltrans in cooperation with the State Department of Parks and Recreation, the U. S. Forest Service and local citizens. Design criteria shall apply to roadway signs, fences and railings, access area improvements, bridges, restrooms, trash receptacles, etc. The objective of such criteria shall be to ensure that all improvements are inconspicuous and are in harmony with the rustic natural setting of the Big Sur Coast. The special report by local citizens entitled, Design Standards for the Big Sur Highway, on file at the County Planning Department, should serve as a guide and point of departure for Caltrans and other public agencies in developing a design theme for Highway 1 and in making improvements within the State right-of-way.

4.1.3.C.1: To comply to Coastal Act policies concerning the allocation of limited highway capacity to coastal priority uses, 85 percent of the capacity of Highway 1 under improved road conditions and managed traffic shall be reserved to serve recreational travel, service trips to public and private recreation and visitor-serving facilities, use by military vehicles, and coastal-dependent agriculture. To implement this policy, the land use regulations of this plan limit future residential development to a level that will utilize not more than 15 percent of highway capacity at buildout.

4.1.3.C.2: Proposed new or expanded public or private recreation and visitor-serving uses shall be required to submit with their application, a traffic component which evaluates the anticipated impact to Highway 1 service capacity and makes recommendations on how conflicts can be overcome or mitigated.

4.1.3.C.3: Proposals for commercial mining or logging, that may produce heavy truck traffic, shall submit with their application, a traffic component evaluating potential conflicts with recreational and residential use of Highway 1 and County roads, and describing how such conflicts can be avoided. In general, the County will not approve applications requiring use of heavy trucks on Highway 1 during peak recreational use periods.

4.2.1:Caltrans should conduct Origin and Destination Studies of traffic on Highway 1 along the Big Sur coast on a regular basis in order to provide up to date information on trends in recreational and residential use of the highway.

4.2.2: Monterey County, San Luis Obispo County, and Caltrans should cooperate to evaluate the impacts of proposed developments on Highway 1 traffic conditions. The program should coordinate the planning and phasing of development generating significant traffic impacts in the two counties in order to insure that an equitable share of remaining Highway 1 capacity is allocated to each area according to appropriate priority uses.

4.2.4: The County requests that Caltrans, in cooperation with Monterey and San Luis Obispo Counties and the U. S. Forest Service immediately begin a program of management of recreational use of Highway 1. The objectives of this program shall be to enhance public access and enjoyment of the Big Sur coast and the safety of Highway 1 by ensuring that

service capacity at no time falls below Level of Service E or a minimum driving speed of 35 miles per hour and that Levels of Service D and C be obtained wherever the basic design of the highway permits.

The following management actions in addition to the improvements listed in Section 4.1.3 A. above, shall be completed as part of this program. Caltrans is encouraged to complete additional studies as needed to determine specific features of this program.

a. A system of unobtrusive traffic signs advising travelers of traffic congestion on Highway 1 and suggesting alternate routes should be installed by Caltrans as a step in reducing undesirable peak period traffic congestion.

b. Roadside visitor information centers should be established near the north end of the Big Sur coast and at San Simeon at the south end. These centers should provide information on road and traffic conditions, recreation opportunities, visitor accommodations and facilities, coastal access locations, and the environmental responsibilities of the public. [repeated in policy 5.4.3.D.6]

c. Progressively stronger traffic regulation measures should be implemented if traffic congestion seriously affects access and travel conditions. The program should start with the placement of automated traffic conditions and route option signs. If traffic continues to increase causing unacceptable Highway 1 service loads, then the flow of traffic into Big Sur should be regulated by devices such as signal lights.

d. Use of Highway 1 by slow-moving vehicles should be regulated during peak hours of peak traffic days in order to increase highway capacity to accommodate future growth in Big Sur coast travel demand. This can be accomplished by requiring slow-moving vehicles that are holding up traffic to pull over consistent with State law and may, in addition, require special State legislation to be adopted that will permit access controls to be established at certain critical times.

5.4.3.D.7: Caltrans shall provide additional roadside restroom facilities located south of Big Sur Valley… consistent with viewshed and resource protection criteria.

5.4.3.D.8 Improvements to the Bicentennial Bicycle Path shall be completed where feasible and the route shall be properly signed…

Additionally, *Big Sur Coast Land Use Plan* policies 4.1.2.5, 4.1.3.D.1, 4.1.3.D.2, 4.1.3.D.4 and, 5.4.3.D.4 call for an improved level of public bus service to Big Sur. Under policy 4.1.3.D.2 developers of new visitor facilities may be required to provide some transit improvements.

Also, while the *Big Sur Coast Land Use Plan's* Critical Viewshed Policy prohibits most new development visible from Highway 1, it does provide specific exceptions for certain improvements within the highway corridor. The exceptions to the Key Policy for Highway 1 Facilities include:

3.2.5.C.1: Public Highway Facilities. Road capacity, safety and aesthetic improvements shall be allowed, as set forth below, provided they are consistent with Section 4.1.1, 4.1.2, and 4.1.3 of this plan. Signs, guardrails, and restrooms shall be of a design complementary to the rural setting and character of Big Sur, with preference for natural materials. Protective barriers constructed by Caltrans should utilize boulders or walls of rock construction. Public agency permanent highway signs should be framed with unpainted redwood. All highway signs should be reviewed once every three years by Caltrans to determine the need for their continued use. All unnecessary signs should be removed.

3.2.5.C.2: Private Highway Improvements. Private driveway entrances, gates, roadside fences, mailboxes, and signs shall be of a design complementary to the rural setting and character of Big Sur, with preference for natural materials.

Carmel Area Land Use Plan Key Policy 3.1.2 mirrors Coastal Act Section 30254 in requiring Highway One remain a two-lane road south of the Carmel River. It also contains policies similar to *Big Sur Coast LUP* policies 4.1.2.3, 4.1.2.4, 4.1.2.5, 4.1.3.A.2, 4.1.3.A.3, 4.1.3.A.4, and 4.2.1.Also, *Carmel Area LUP* Policy 3.1.3.9 calls for new traffic-generating projects to pay their "fair-share" towards Highway 1 improvements.

In terms of regulating Highway One development, *County Code* Section 20.70.120.R exempts from coastal permit requirements:

Repair and maintenance activities, and safety improvements on public or private roads that do not result in an addition to, or enlargement or expansion of the object of such repair or maintenance activities. (See Coastal Commission's September 5, 1978 "Repair, Maintenance and Utility Hook-Up Exclusions from Permit Requirements" document for further detail on which public road projects are exempt.)

(4) Local Coastal Program Implementation

Permit Review

Since LCP certification the County as well as the Commission has granted numerous authorizations for Caltrans to undertake projects to maintain Highway 1 throughout Big Sur. Most of these projects reflect the exposure of Highway 1 to major seismic and landslide hazards that frequently result in closure of the roadway.

Caltrans has received roughly 25 County coastal permits for roadway improvements, most of which were intended to respond to hazards that threatened the roadway. Many permits authorized seismic retrofit of bridges. Additional permits authorized lane and roadbed reconstruction, realignments, deposition of material and berm construction, construction of concrete barriers and drainage improvements and tree removal. In addition, a few permits authorized various types of slope stabilization and shoreline protection including repairing existing and installing new crib walls, tie-back and pile walls; constructing rock slope protections such as buttresses; and wire mesh rock drapery and rock fall catchment fences. In addition to the numerous hazard avoidance actions, the

County authorized a few additional roadway improvements. For example, several new turnouts were approved along the southern Big Sur Coast, and a well and temporary concrete plant were authorized. Caltrans has sponsored construction of at least two more formal (signed, paved) vista points, with appropriate entry improvements.

Several County actions were through emergency authorizations. The CCC also authorized an additional three emergency permits. These two CCC permits allowed limited term marine disposal of landslide material and one to construct a temporary access road, for installation of a viaduct to prevent closure of the road.

This Periodic Review has briefly reviewed permit requirements on other development to comply with the cited highway policies. At least six County permits were for projects that could generate more traffic on Highway One than just a single home. They are all accessed by only one driveway each; which in some cases pre-existed. Five of the six were required to make intersection improvements on Highway One. Only one project was in the Carmel Area, where a financial contribution for Highway One improvements is mandated. In this case the County required a fee based on a calculation of additional traffic generation.[203] At least five of the six permit applications contained a traffic study. At least one such study included measures to reduce trips.[204] All projects provided required parking, although one was granted a reduction based on the fact that some of its employees were seasonal.[205] In general, the new or improved parking is not visible from Highway One. In one case, field inspection revealed that the parking is not screened as well as it could have been and in another case, the Coastal Commission added additional screening requirements on appeal.[206] Off-highway parking improvements at Andrew Molera State Park have been implemented, as anticipated by *Big Sur Coast LUP* Policy 4.1.3.A.3.[207] However, existing shoulder parking has not been phased out in accordance with the policy, and the off-highway parking improvements along the Soberanes Point-Garrapata Beach frontage have never been implemented.

Management Experience

Implementation of many action items mentioned in the LCP has been slow to occur. An innovative special traffic management study was prepared by Caltrans.[208] While this was not an origin and destination study as such, it did "…provide up to date information on trends in recreational and residential use of the highway…," as contemplated by LUP Policy 4.2.1. The anticipated overall highway design theme, which had a target date of April 1, 1988 in *County Code* Section 20.145.130.B.2, has evolved to become part of the current Coast Highway Management Plan (CHMP) effort, particularly the aesthetic guidelines. The 3-year interval sign audit has not yet been formally implemented, but the CHMP calls for a similar program. Caltrans has provided off-highway

[203] County coastal permit PLN970284 (A-3-MCO-99-092) for a 10-room Bed and Breakfast facility.

[204] County coastal permit PLN970492 (3-MCO-02-339) for an inn expansion in Big Sur village

[205] County coastal permit PC6386 (3-MCO-89-204) for a multi-agency facility in Big Sur village.

[206] County coastal permit PC6386 (3-MCO-89-204) and County coastal permit PLN970284 (3-MCO-99-168), respectively.

[207] County coastal permit PC6952 (3-MCO-89-191).

[208] Caltrans District 5, Big *Sur Transportation Management Study*, November 1990.

parking at two new vista points, and boulder barriers for closed pullouts, in accord with *Big Sur Coastal LUP* Policies 4.1.3.B.1 and 4.1.3.A.3. However, no agency has undertaken the parking management role apparently anticipated under these two policies. Peak use management of traffic as envisioned under *Big Sur Coast LUP* Policy 4.1.2.3 and management of recreational traffic pursuant to Policy 4.1.1 and Action 4.2.4 have not occurred. Bus service has not expanded, and in fact is diminished now that the Coastlines bus service is no longer available.

(5) Analysis of Coastal Act Conformance

Coastal Act Section 30251 requires that scenic and visual qualities of coastal areas be protected and Section 30254 requires that State Highway Route 1 in rural areas remain a scenic two-lane road. Public access policies require that access be maximized. Some of the new road improvements and other roadside developments have been authorized by County coastal permits; some have not, either because they are exempt or because the Coastal Commission retains original permit jurisdiction or federal consistency authority. Since certification, implementation of the LCP policies has resulted in Highway One design impacts, deficiencies for non-motorized travel and recreational uses, unsatisfactory traffic management measures, and County—Caltrans coordination problems that are not fully protecting the scenic resources in conformity with the Coastal Act. A coordinated management plan for the protection of the scenic values of Highway 1 is being developed and should be reflected in revisions to the LCP.

Highway One Design

One policy of the Coastal Act directly embodied in the LCP is that Highway One remain a scenic two-lane road. Implementation of the LCP has not resulted in any significant deviation from this objective, nor from the specific standard of 12-foot travel lanes with 4-foot paved shoulders. Those standards remain valid as any extra width has the potential to alter the highway's character and create greater slope instability. To date incremental improvements, such as bridge retrofits and some limited shoulder widening, have not compromised these policies, but cumulatively have the potential to do so in the future. The LCP needs updating to explicitly address the issue of how to accommodate only those improvements that are really necessary for public safety and recreational quality, such as limited turnout lanes, left turn pockets, vista points, and strategically spaced paved pullouts.

A related concern is how to design improvements consistent with viewshed protection policies. Although the *Big Sur Coast Land Use Plan* prohibits most new development that is visible from Highway One, by necessity it allows for highway and related improvements. Issue SR-10: Big Sur Critical Viewshed has highlighted concerns with development that is visible, both development that is allowed to be visible under some circumstances and development that should not be. Review of implementation of Highway One provisions along with responses, such as the CHMP background reports, has provided additional evidence of the need for policy updates to more clearly state what is allowed to be seen in the viewshed and under what circumstances.

Similarly, CHMP has identified the need for culvert extensions that may not currently be allowed under LCP policies or under some of this report's recommendations (e.g., for Issue SH-4: Resource-dependent Uses in ESHA). Generally, new fill is allowed in coastal wetlands, including riparian wetlands, only for the uses specified in Coastal Act Section 30233. However, many streams, drainage courses and other associated drainage features along the Big Sur Coast Highway are crossed on fills placed over culverts. Accordingly, Caltrans carries out an ongoing program of culvert inspection and replacement, in order to minimize the risk of failures, improve highway stability, and prepare for storm event peak flows. From time to time, in certain locations it will be necessary to replace or modify an old culvert (which could include replacement with the same or another type of culvert, or a causeway or bridge), or replace or add to an old fill with new material. Such work is essential for a variety of reasons, including but not limited to: avoiding collapse or sudden structural failure of existing culverts (with consequent downstream or shoreline impacts); avoiding collapse of the highway where erosion has oversteepened or undercut the fill slope; upgrading stream crossings to accommodate current width standards for all appropriate transportation modes (i.e., two paved travel lanes, not to exceed 12 feet each, paved shoulders up to 4 feet in width each side, and where needed, a pedestrian roadside path or off-highway trail); replacing undersized culverts; implementing an erosion control or restoration measure in the watercourse (e.g., an energy dissipater at a culvert outlet); implementing an environmental enhancement measure (e.g., removal of a barrier to anadramous fish migration); and correcting or repairing structural or environmental damage. The LCP needs updating to clarify the conditions under which such structures are allowable as incidental public services pursuant to Coastal Act Section 20233(a)(5) (see Recommendation LU-13.9).[209]

[209] This recommendation to allow culvert repairs, extension, and widening of a roadway for such structures is made consistent with the following previous findings and analysis adopted by the Coastal Commission. The Commission found than, in Consistency Certification No. CC-058-01, findings adopted June 10, 2002: "In order to be for an "incidental public service purpose" a proposed fill project must satisfy two tests: 1) the project must have a "public service purpose," and 2) the purpose must be "incidental" within the meaning of that term as it is used in section 30233(a)(5)…"

With respect to the second test, in 1981, the Commission adopted the "Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas" (hereinafter, the "Guidelines"). The guidelines analyze the allowable uses in wetlands under Coastal Act Section 30233 including the provision regarding "incidental public service purposes." The Guidelines state that fill is allowed for, "Incidental public service purposes which temporarily impact the resources of the area, which include, but are not limited to, burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines (roads do not qualify)." A footnote (no. 3) to the above-quoted passage further states: "When no other alternative exists, and when consistent with the other provision of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted."

The California Court of Appeal has recognized the Commission's interpretation in the Guidelines' of the term "incidental public service purposes" as a permissible one. In the case of Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County (1999) 71 Cal.App.4th 493, 517, the Court found that: "… we accept Commission's interpretation of sections 30233 and 30240… In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.'

In past cases, the Commission has considered the circumstances under which fill associated with the expansion of an existing "roadbed or bridge" might be allowed under Section 30233(a)(5). In such cases the Commission has determined that, consistent with the analysis in the Guidelines, the expansion of an existing road or bridge may constitute an "incidental public service purpose" when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

Encouraging Non-motorized Travel and Recreational Uses

The Coastal Act objective to promote non-automotive travel modes is embodied in LCP policies favoring trails, public transit, bicycle lanes, and restrooms. These policies have been partially implemented in varying degrees. County authority is largely limited to acting on coastal permits proposed by Caltrans and others for these types of improvements that even need coastal permits. The County can be somewhat proactive in planning and applying for funding for some amenities.

The progress with trails is detailed in Issue PA-10: Coastal Trail Systems. Recommendation LU-13.6 to provide public access in certain highway projects is made to complement the Coastal Trail System recommendations.

In terms of public transit, while MST has managed to retain a modicum of summer service, the demise of the Coastlines bus service means there is no public transit south of Nepenthe. Thus, fulfilling the transit policy goal is further away than it was when the LCP was certified.

Similarly, at one point prior to certification, Caltrans had a program to add improved shoulders suitable for bicycling along Highway One. Since certification, there have been no such proposals. However, shoulders improvements have occurred in conjunction with repairs.

Installation of new public restroom facilities at Big Sur Station, and updated public facilities at Andrew Molera State Park, Pfeiffer Beach, Willow Creek and Mill Creek picnic areas has occurred. The latter three are US Forest Service developed recreation sites not under County coastal permit authority. Rarely acknowledged is the fact that private businesses provide much of the restroom capacity for the traveling public along the Big Sur Coast. But, long stretches of the highway remain without public restrooms. And, highway-oriented trash receptacles are uncommon, and recyclables collection remains a major unmet need.[210]

Managing Traffic

Not all of the LCP's traffic management policies have been explicitly implemented. More provisions that result in smoother traffic flow have been implemented than those that address

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The Commission recently granted to the Cities of Seal Beach and Long Beach a coastal development permit (5-00-321) for the construction of bridge abutments and concrete piles for the Marina Drive Bridge located on the San Gabriel River. The Commission found that the project involved the fill of open coastal waters for an incidental public service purpose because the fill was being undertaken by a public agency in pursuit of its public mission, and because it maintained existing road capacity.

The Commission has also determined in connection with a project (El Rancho Rd. Bridge) proposed by the U.S. Air Force (USAF) that permanent impacts to wetlands are allowable under Section 30233(a)(5) of the Coastal Act as an incidental public service because the USAF was undertaking the fill in the pursuit of a public service mission and because the "permanent fill [was] associated with a bridge replacement project [that] would not result in an increase in traffic capacity of the road." (CD-70-92, and reiterated in CD-106-01).

Thus, based on past interpretations, fill for the expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" if: (1) there is no less damaging feasible alternative; (2) the fill is undertaken by a public agency in pursuit of its public mission; and (3) the expansion is necessary to maintain existing traffic capacity.

[210] Personal communication, Aileen Loe, Caltrans, November 12, 2003. The current lack of trash receptacles is a result of past experience—when trash receptacles had been provided, the result was overuse (speculating use by locals also) and a net increase in litter (leading to a difficulty keeping up with the increased volume which ultimately results in greater fly-away litter problem). Provision of trash receptacles therefore requires a much greater maintenance effort and is not simply an incidental task.

roadway users. The County's authority in implementing these policies is also limited mainly to those that regulate the physical improvements. And, positively, the County has consistently allowed the necessary highway improvements requested by Caltrans. The County may be able limit new driveways onto Highway One (if there are cases where alternative access is available or property owners are willing to consolidate driveways) and it is able to require off-street parking, and it can authorize the other management measures that involve physical improvements requiring coastal permits. For the limited amount of permits for major new developments along Highway One, the County has followed the policies and they remain sound. *Big Sur Coast Land Use Plan* policy 4.1.3.A.4 to minimizing highway encroachments is also an important adjunct to the Critical Viewshed policy. This objective should be recognized in Policy 4.1.3.A.4, as suggested in Recommendation LU-13.3.

Policies for traffic studies and potentially curbing additional traffic generation are limited in their application. Assumptions regarding the per unit traffic generation ratio may over time be undermined by allowing large "trophy" houses (see Issue SR-9: "Trophy Homes). Such residences entail domestic help and could be expected to produce multiple employee-generated trips. Thus, their traffic impacts need to be accounted for, as provided for in Recommendation LU-13.5. Also, where new traffic generators in the Big Sur Coast will impact the highway, they should be required to mitigate for their impacts, as is already required in the Carmel Area (see Recommendation LU-13.7). On the other hand, accommodating employees of priority visitor-serving uses in Big Sur could result in less Highway One trips. Currently, restaurant and inn owners report that many of their employees commute from outside of Big Sur, due to the lack of employee housing in the immediate community (see Issue LU-1: Caretaker Units).

With regard to more action-oriented measures, Caltrans is the agency directly responsible for the work, and Caltrans and the Transportation Agency for Monterey County (TAMC) are responsible for determining and allocating funding for projects. Although *Big Sur Coast LUP* policy 4.1.2.1 directs the County to perform the required 5-year review process to assess needed highway improvements, such needs are regularly considered on a County-wide basis by TAMC, and various improvements have occurred. Caltrans' focus has been on those actions that maintain and improve the physical highway. Various safety improvements, that incidentally serve to preserve the capacity of the highway, have been implemented. Earthquake retrofit of the historic concrete arch bridges, installation of several left turn pockets, installation of debris control measures on culvert inlets, and shoulder improvements are all examples. In 1998, the Hurricane Point segment collapsed in a major landslide. The slide was removed, and the missing highway segment was replaced on a revised alignment. The bottleneck seems to have disappeared along with the old alignment and thus *Big Sur Coast LUP* policy 4.1.2.6 is outdated. Thus, Recommendation LU-13.4 supports its deletion. While Caltrans has constructed several turnouts for slow-moving vehicles in the southern portion of Big Sur, resident opposition has stalled installation in the northern portion of Big Sur.

While Caltrans has not vigorously undertaken the parking management role apparently anticipated by *Big Sur Coast LUP* policies 4.1.3.B.1 and 4.1.3.A.3, it has sponsored construction of at least two more formal (e.g., signed and paved) vista points, with appropriate entry improvements. There is

still the need to identify additional suitable vista point locations through interagency planning. As far as removing undesirable parking at the three locations mentioned in the *LUP*, there has only spotty implementation adjacent to Garrapata State Park. Here, a few retired pullouts formerly used as parking areas have been filled and replanted. However, the restoration was performed without a specific objective of maintaining continuous lateral access, so certain opportunities to provide coastal lateral access were missed (see also Issue PA-9: Carmel River State Beach Parking). Off-highway parking improvements at Andrew Molera State Park have been implemented, but the highway shoulder parking still remains. While Policy 3.2.5.E suggests that this parking should have been removed, in this case retaining some shoulder parking at Molera has merit to serve trailheads and as overflow. Thus, the policy remains conceptually sound but needs to continue to be implemented in a manner that does not reduce access overall. What is important is that additional shoulder parking is not removed without proper review, an action that could occur because the LCP does not explicitly require parking prohibitions to receive coastal permits. To comply with current Coastal Commission practice, this permit requirement should be explicit in the LCP (see Recommendation LU-13.8).

With regard to the more traffic management oriented policies, Caltrans has not taken direct measures. However, the spirit of the policies has been followed. While there is no formal allocation of highway use to visitors versus residences, nor is any feasible, the intent of the policy to give priority to tourist use has been achieved through land use regulation by virtually halting the creation of new vacant residential parcels and tends to be self-regulating. The policies remain conceptually sound and become more important to implement in some manner if either recreational traffic significantly increases or there are proposals to significantly increase residential densities in Big Sur in the future.

Coordination with Caltrans

The preceding analysis illustrates that while the LCP policies are the County's, implementation falls largely to Caltrans. Accordingly, the County and Caltrans need to function in close coordination to maintain the integrity of the transportation corridor and the coastal resources adjacent to the Highway. Thus, the advent of the *Big Sur Coast Highway Management Plan*, whose primary purpose is to establish coordinated management of the Highway 1 corridor. The basic policy concepts of the LCP that govern highway development are sound, but some details are now outdated or lacking in view of the *Highway Management Plan*.

Conclusion

Highway One south of the Carmel River remains a two-lane road available for public recreational travel as mandated by the Coastal Act. One regulatory challenge is to accommodate necessary improvements in a manner that retains the two-lane character as well as complies with other LCP and Coastal Act resource protection objectives. This can be accomplished by providing more specific guidance in the LCP for various types of highway improvements likely to occur, including bridge replacement, pullouts, sidecasting, culvert replacements, and the like as detailed in Recommendation LU-13.2. While the prevailing rule should be to minimize paving and

earthmoving, short sections of additional paving are appropriate provided that they are only intermittent, well-spaced, and designed so as to preserve the general impression of a simple, two-lane rural byway. This objective can also be accomplished in part by actions that reduce existing visual clutter and the potential for additional clutter. For example, Caltrans is already embarking on a program to remove excessive signs and should continue this effort (see Recommendations LU-13.13 and LU-13.15). Already successful examples of alternatives to signs include the annual publication of a free recreation flyer and map (*El Sur Grande*), websites, and information desks at Big Sur Station and Pacific Valley.

The other regulatory challenge is to accommodate new development envisioned in the LCP in a manner that does not exacerbate Highway One traffic congestion or shift priority to residential generators. This can largely be accomplished by implementing the current LCP policies. However, traffic study and mitigation policies should also account for the potential for domestic employee trip generation, as provided for in Recommendation LU-13.5.

The institutional challenge is to have Caltrans on the same page as the County with regard to committing both to following the regulatory policies as well as to undertaking the needed physical improvements and management measures for Highway One. This can occur in the near term through County and public participation in concluding the CHMP process (see Recommendations LU-13.10, LU-13.11, and LU-13.12). It then can be institutionalized by having the County require Caltrans and other applicants demonstrate how their proposed projects are consistent with CHMP, as provided for in Recommendation LU-13.1). Further institutionalized certainty could occur for some aspects of CHMP if approved by the Coastal Commission as public works plans.[211] There is also the need for continued coordination with, and hopefully consistent planning by, the U.S. Forest Service, since much of Highway One in Big Sur passes through Los Padres National Forest, and the Monterey Bay National Marine Sanctuary, since any ocean disposal of slide material falls within their purview. Both federal agencies are in the process of updating their management plans (see Recommendation LU-13.13).

g. Issue LU-14: Highway One and the Moss Landing Corridor

This subchapter addresses the following concern identified through issue scoping: **Ensure conflict between policies supporting Highway 1 & 156 widenings and not allowing wetland fill is resolved in a manner consistent with the Coastal Act.**

North County Land Use Plan contains provisions that apply specifically to Highway One. Additionally, the *Plan's* other resource protection policies would also apply to any project on Highway One. Policy 3.1.2.1 states:

[211] Pursuant to Coastal Act Sections 30605 and 30606 plans for public works, including those by State Parks for its future holdings or Caltrans for Highway One right-of-way, public works plans can be prepared to govern development in the coastal zone. Future development then is authorized through a public works project approval prepared by the responsible entity and subject to review by the Coastal Commission. Thus State Parks plans can be approved in lieu of a coastal development permit processed by the local government. If the local government has a certified LCP in place for the area in question, the public works plan must be found to be consistent with the LCP, otherwise the standard of review of the public works plan is solely the Coastal Act.

Highway 1 should be widened on the existing alignment to four lanes of traffic with necessary left-turn lanes as soon as possible to serve increasing traffic volumes and provide safer and less congested traveling conditions. Barriers should be constructed between the northbound and southbound lanes where necessary to control traffic turns and increase traffic safety. The following criteria shall be met before approval of a permit for highway expansion:

a) added lanes are needed to alleviate existing inadequate capacity and to facilitate safe access to developments with connections to the Highway and/or to Jetty or Moss Landing Roads.

b) any reconfiguration of the Elkhorn Slough highway bridge includes in its design the improvements identified in Table 2, item 12[pullout and shoreline accessway] as well as accommodating oil spill containment equipment.

c) mitigation for any adverse wetland impacts, approved by the Department of Fish & Game, has been included in the project and will be completed in conjunction with road construction such that the design does not require wetland fill.

North County Land Use Plan Introduction to Circulation Section 5.2.2 states:

The primary transportation emphasis of the Coastal Act is to preserve highway capacity for coastal access and coastal dependent land uses. In this context the plan shows improvements to Highway One and recommends a reduction in the number [of] access points from the highway to minimize hazardous and congested conditions. Needed parking facilities are also proposed. Pedestrian access is discussed in item E. below and in Section 5.4.

North County Land Use Plan policy 5.2.2.A states:

Highway One should be improved as a four lane divided scenic highway. Access points to Highway One shall be consolidated and limited to Jetty Road, Dolan Road, Moss Landing Road and Potrero Road.

Other LCP policies address protection of wetlands and agricultural resources. For example, the *North County Land Use Plan* Policy 2.2.1 prohibits "to the fullest extent possible" any development that may adversely impact visual resources in wetlands areas. Policy 2.3.2.1 prohibits all development in wetlands, including grading, filling, and the construction of roads, unless it is a resource dependent use. Policy 2.4.2.2 specifically addresses filling in wetlands and limits this activity to "protection of public beaches, existing significant structures, coastal dependent development, and the public health and safety;" Policy 2.4.2.4 restricts diking, dredging and filling in Elkhorn Slough, Bennett/Struve Slough, and Moro Cojo Slough among others, to that which is needed to maintain or enhance their biological productivity. Policy 2.6.1 requires the "preservation of prime agricultural soils exclusively for agricultural use." Policy 2.6.2.1 requires that prime

agricultural lands designated for Agricultural Preservation land use (such as those adjacent to Highway 1 north of Moss Landing) be preserved for agricultural use to the fullest extent possible. Policy 2.6.3.2 limits development in these lands to accessory buildings and uses required for agricultural activities; and Policy 4.3.1.E requires land designated Agriculture Preservation to be used exclusively for agricultural purposes and does not allow the development of non-agricultural facilities.

Other LCP policies generally relate to alternative transportation issues. For example, *North County Land Use Plan* Section 3.1 acknowledges that if transit is to help alleviate congestion a more comprehensive network is needed but mentions only bus and bicycle. *North County Land Use Plan* policy 3.1.3.5 generally recommends a program to provide public transportation as an alternative to automobile transportation. *North County Land Use Plan* policies 3.1.3.6 and 7 discuss providing and improving bicycle routes. Public transit (bus) is only generally addressed in the "Moss Landing Community Plan" Chapter 5. Rail is not specifically discussed, but some policies are somewhat applicable to rail safety and the risks of derailments at Elkhorn Slough. *LUP* policy 2.3.3.B.2 requires that activities be carried out to minimize impacts from…"biochemical degradation" and policy 2.3.3.B.8 prohibits oil and other toxics substances from entering or draining into the estuarine system and requires oil spill contingency plans. Development is allowed adjacent to an estuary only if it will not increase risk of oil or toxic discharge. *North County Land Use Plan* policy 5.5.2.4 provides that modernization and expansion of industrial facilities shall be compatible with circulation system capacities, planning objectives, and air quality; and, policy 5.5.2.6 calls for limiting access onto Highway 1 for the PG&E and Kaiser Refractories plants, with access preferred off Dolan Road.

In addition to State Highway Route 1, the primary regional road network in the North Monterey County coastal zone includes: Salinas Road to Hall Road, connecting to Highway 101 southbound via San Miguel Canyon Road; San Juan Road, leading from Watsonville to Highway 101; Highway 156, connecting Highway 1 and Castroville to 101, north- and east-bound; and Highway 183, leading from Castroville to Salinas, all depicted on Map LU-14. The transportation network also includes the Union Pacific Railroad's main west coast (Portland-Los Angeles) rail line that runs through Elkhorn Slough, from Pajaro to Salinas, roughly paralleling Highways 1 and 101. In addition to its primary role for freight service, it is currently used for daily intercity (*Coast Starlight*) passenger service by AMTRAK, and capital improvements for extended CALTRAIN service from San Francisco to Salinas are well underway. A spur line runs from Castroville to Seaside, through Fort Ord seaward of the Highway 1 freeway. (See Map LU-14.)

Highway One between Salinas Road and Castroville is a rural two-lane road that winds through scenic, rich agricultural lands, the Elkhorn Slough wetland complex, and the Moss Landing community (see Map LU-14). At the time of LCP certification, the Commission noted that Highway 1 was congested and that demand from recreational traffic and the planned growth under the LCP would continue to strain the capacity of the transportation network. The policies cited above were adopted as a possible alternative to plans being promoted for a new freeway east of Highway 1 across the middle of the Slough (a proposal that is no longer active). In certifying the *North County*

Land Use Plan in 1982, the Coastal Commission accordingly found that, while widening on Highway 1 was inconsistent with Section 30254 of the Coastal Act, such an alternative might be on balance more protective of coastal resources than retention of the proposed freeway alignment.

Since LCP certification two decades ago there have been a number of important changes in the region. For example, traffic volumes have increased, development patterns have changed, and experience and better scientific information have advanced our understanding of how to better manage the rich variety of coastal resources in the region, particularly the productive agricultural lands and the Elkhorn Slough wetland complex.

Relative to traffic volumes, for example, average daily traffic counts on Highway 1 at Dolan Road in Moss Landing went from 20,700 to 38,250 between 1982 and 2002, an increase of 85%.[212] According to background reports prepared for the 21st Century Monterey County General Plan update, portions of the major transportation corridors in the North County planning area, including Highway 1 from Santa Cruz south to State Route 156 (Castroville) and Highway 156 connecting inland Route 101 to the Coast Highway are congested and operating at level of service E or F during peak summer and commute hours.[213] As a result, traffic is also increasing on parallel arterial routes.

Caltrans engineers are concerned that future demand will overwhelm the capacity of the existing two-lane Highway 1, on the segment between Salinas Road and the Highway 156 junction (i.e., the "Moss Landing corridor"). Projections by traffic analysts--using recent growth rates and build-out at existing zoning densities—indicate that widening to 6 lanes (not just 4) would be needed, if Highway 1 is solely relied upon to provide for coastwise transportation needs. According to Caltrans traffic analysts, this segment of Highway 1, while it serves interregional traffic (much of it tourist), is predominantly used by commuter traffic.[214]

Development patterns and changes that have likely contributed to this traffic situation since certification of the LCP include the establishment of a large marine research complex at Moss Landing, expansion of agricultural packing facilities along Highway 1, the draw of homeowners to northern Monterey and southern Santa Cruz Counties where land and home prices tend to be comparatively more affordable, and University and other developments associated with the conversion of Fort Ord. Rapid residential and commercial growth has particularly occurred in both the Watsonville and Salinas urban areas, which are connected by the North County road network. In addition, expansions of two major industrial-scale packing operations that rely on the Highway 1 Moss Landing corridor have been allowed, even though equally-suitable facilities sites served by rail are available nearby in Watsonville/Pajaro, at Castroville, and potentially along Dolan Road in Moss Landing. Heavy truck traffic entering and leaving the highway, as well as slower moving

[212] Caltrans, *1982 Traffic Volumes on State Highways Report*, pg. 5 and for current volumes: "Caltrans Traffic and Vehicle Data Systems Unit" website. See <www.dot.ca.gov/hq/traffops/saferesr/trafdata>. Note that this number is average for "ahead" and "back" traffic volumes at this location.

[213] See also Caltrans, *Project Study Report of Route 1 in Moss Landing*, July 2001 (pgs. 15-16).

[214] Ibid., pg. 3.

agricultural machinery, are often cited by traffic engineers as aggravating traffic flows and increasing safety risks.

Some projects that address safety and congestion issues have been initiated since LCP certification on Highway 1, while maintaining its two-lane character. These have included new left turn pockets at Salinas Road, Jensen Road, and the Capurro packing plant along with a median turn lane south of Jetty Road, a right turn lane at Moss Landing Road, two park-and-ride facilities, and transit bus stop improvements. Monterey-Salinas Transit (MST) now runs buses between Watsonville and Salinas every half-hour and between Watsonville and Monterey five times per day. A transfer is required to get to the CSU Monterey Bay campus.[215] The Association of Monterey Bay Area Governments (AMBAG), in conjunction with the Santa Cruz County Regional Transportation Commission, sponsors Commute Solutions to facilitate ride sharing, van pooling, and other measures to reduce single-occupancy vehicle use throughout the Monterey Bay region.

Caltrans and TAMC (Transportation Agency of Monterey County) continue to favor widening Highway One in the long-term, but other projects have assumed higher priority.[216] For example, constructing the Prunedale bypass on Highway 101 is the top priority transportation project in the County. The other main focus has been on improving the Salinas Road/ Highway One interchange. Also, State Transportation Improvement Program (STIP) funds have been allocated for advance analysis of widening Route 156 to four lanes and modifying the Routes 1/183 interchange. Both projects have some limited potential for congestion relief on the two-lane segment of Highway One. Recommendation LU-14.4 provides direction for addressing Highway 156 expansion in a manner consistent with the Coastal Act.

The Salinas Road interchange at Highway 1 has been a significant concern for a number of years because of the high incidence of serious collisions that occur at this intersection.[217] Long lines of southbound vehicles waiting to make left turns onto Salinas Road not only tend to congest Highway 1, but probably contribute to higher overall traffic volumes through the Moss Landing corridor. The primary challenge is how to improve safety without inducing unwanted growth or inducing future widening of the rural, two-lane segment of Highway 1 south of the Salinas Road intersection.

Improvement of the Salinas Road junction to a grade-separated interchange—as currently planned by Caltrans—will, if properly configured allow a smooth flow of traffic onto Salinas Road, thereby eliminating both the congestion and the safety issues. Highway 1 (via Castroville and Highway 183) and Salinas Road (via San Miguel Canyon Road and Highway 101) represent almost equidistant routes for southbound traffic to move from Santa Cruz County to Salinas. Therefore, it can be expected that congestion in the Moss Landing corridor, and the pressure to widen the current rural two-lane Highway 1, will be at least partly reduced by the proposed Salinas Road interchange. In other words, by making it easier to go east around Elkhorn Slough wetlands, it will help relieve any

[215] See http://www.mst.org/.

[216] TAMC, *2002 Regional Transportation Plan,* shows widening Highway One as an unfunded project over the next 20 years.

[217] Caltrans, *Project Study Report of Route 1 in Moss Landing*, July 2001, pg. 20, for example.

perceived need to fill the wetlands (for highway widening) along Highway 1 as it crosses the same wetlands to the west. Recommendation LU-14.2 provides direction for improving this intersection in a manner consistent with the Coastal Act.

A little further to the south at the 1/183 interchange, the local redevelopment agency has taken the lead in advancing transportation planning following Caltrans' preparation of a Project Study Report for that intersection. Currently, the County is working with Castroville to develop a community plan as part of the 21st Century Monterey County General Plan update. Priorities for the Castroville plan include the elimination of the hazards of crossing Highway 1 onto Highway 183 into Castroville and the reduction of congestion through downtown by building a 183 bypass southwest of town, with an underpass from southbound Highway 1 to 183 adjacent to the Tembladero Slough as phase 1. This would require Slough armoring under the Highway 1 bridge, including floodwalls. Future phases of the project would include the filling of a significant portion of the historic Tembladero Slough flood plain and moving a portion of the current low flow channel south to accommodate the road. Such a proposal conflicts with several resource protection policies in the LCP and would confound ongoing planning efforts to find solutions to the flood and water quality problems within this drainage system. Additionally, for traffic to/from Salinas, such a bypass would have the potential to further induce congestion in the Highway 1 Moss Landing corridor. Recommendation LU-14.3 provides direction for addressing these issues in a manner consistent with the Coastal Act (see also Issues CH-12: Tembladero Slough and WQ-6: Watershed Planning).

In addition there are complementary alternative transportation initiatives that are receiving increased attention such as planning the Monterey Bay Sanctuary Scenic Trail (MBSST), which will fill in the often-lengthy gaps in the pedestrian and bicycle trail system parallel to the shoreline of Monterey Bay (see Issue PA-11). Also, hearings are currently being held regarding the implementation of extended Caltrain service from Gilroy to Salinas, along the existing Union Pacific mainline through Elkhorn Slough. At present, the majority of Santa Cruz County-Salinas travelers crowd the Highway 1 corridor. Resurrection of the historic station stop at Pajaro Junction—proposed in conjunction with the Caltrain extension--would provide a very attractive non-automotive alternative from Watsonville to Salinas. Another active passenger rail effort would restore service to the Monterey Peninsula, along the route of the pre-Amtrak era Del Monte Express. The rail line remains intact from its junction near Moro Cojo Slough through the former Fort Ord, and a demonstration rail excursion has already been completed. Finally, a study was prepared evaluating around the Monterey Bay rail service, but was shelved because SCCRTC did not favor rail service within Santa Cruz County.

Accordingly, while highway improvements have been installed and transportation planning has advanced, there is still a critical need for a comprehensive regional approach that carefully protects agricultural and wetland resources as well as the rural community character (see Recommendations LU-14.8 and LU-14.9). The challenge is how to meet regional transportation needs, while avoiding further congestion of Highway 1 and following Coastal Act mandates of maintaining the rural portions of Highway 1 as a scenic two-lane road, providing pedestrian and bicycle amenities, avoiding wetland loss while restoring the functions of the Elkhorn Slough complex, and keeping the maximum amount of existing farmland in production.

All these mandates, except the first, are embodied in parallel LCP policies. Application of these LCP policies, collectively, would preclude substantial widening of Highway One. The cited other LCP policies that say that Highway One "should" be widened to four lanes do not guarantee the widening because they are not mandatory, Policy 3.1.2.1 does not allow wetland fill, and Policy 4.3.5.9 requires all public development to conform to plan policies and meet the plan's resource protection standards. However, by having these four-lane policies in the LCP, some ambiguity results.

It would be necessary for the County to submit an LCP amendment if it ever wanted to resolve the ambiguity in favor of actually allowing widening of Highway One to four lanes. Such an amendment request would not be consistent with the cited Coastal Act policies. In 1982, the Coastal Commission was able to find for the possibility of Highway One widening based on the balancing provision of the Coastal Act (Section 30007.5) that it was the only alternative to a more damaging outdated freeway proposal across the middle of Elkhorn Slough.[218] A similar line of reasoning could not now apply to a request to actually allow the widening, from two perspectives. On the one hand, there is a host of other alternatives to four-laning Highway One to consider alone and in combination. And, on the other hand, the required Section 30007.5 argument that four-laning would be on balance more protective of the environment is not the case. Especially, with the establishment of the Elkhorn Slough Natural Estuarine Reserve, Monterey Bay National Marine Sanctuary (MBNMS), and related wetland and water quality preservation efforts, protection of the wetland complex is now the broader environmental good and the wetlands will be adversely impacted from expansion of the roadway to four-lanes.

In fact what would be best for the environment and supportable under the Coastal Act is reducing impacts from the existing road. Highway 1 crosses extensive wetland areas on fill prisms, which—along with tidegates at Moro Cojo Slough and Bennett Slough/Struve Pond--displace wetland acreage and interfere with natural tidal circulation. Clearly, carefully designed replacement of such fill with bridges and causeways, or realignment of the highway to minimize impingement on wetlands, could be a great benefit to the health of the Elkhorn Slough wetland system. Because even bridge and causeway piers can be defined as "fill," the existing LCP standard of no fill is essentially unworkable. Also, policy 5.2.2.A to limit access points to Highway One would not allow other intersection improvements that could be part of an improvement package that retains a two-lane highway.

What then can and should happen in this corridor? As suggested, a variety of Highway One related improvements can be made that do not conflict with Coastal Act policies and may even result in some resource improvement. Recommendation LU-14.1 includes criteria for approving such projects (see also Recommendation LU-11.2 to update the Moss Landing Community Plan).

[218] Coastal Act Section 30007.5 provides that in applying all of the Act's policies any "conflicts be resolved in a manner which on balance is the most protective of significant coastal resources." This means, for example that broader polices which, "serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies"

To further address existing and projected congestion involves capacity increases and/or demand reduction. On the capacity increase side, Caltrans already is proceeding with plans for a major, costly improvement of Highway 101, as noted. Making that and other improvements on the roadway network, along with changes to signing and other means of directing travelers throughout the region would afford those who would currently use Highway One through Moss Landing an option to avoid its congestion. Recommendation LU-14.13 addresses signing to help achieve Coastal Act objectives. Of course, there may be various financial, environmental, social, and other constraints to completing this approach and it is beyond the Coastal Commission's purview to mandate it. But if the goal is to increase road capacity to relieve Highway One congestion, there is an alternative to widening the Moss Landing corridor to four lanes.

This approach of capacity increases elsewhere serves to reduce demand to use the Moss Landing corridor. Other demand reductions involve altering travel choices, such as carpooling, van pooling, staggering work hours and telecommunication. These options are already being promoted by SCCRTC and AMBAG to some extent, but not by specifically focusing on Highway One single-occupancy vehicle use. Recommendation LU-14.12 suggests that such specific targeting occur. Also, Recommendation LU-14.6 suggests an approach to limit industrial traffic generation. . Finally, demand reduction can be achieved by providing alternative transportation. At least in the short run given current societal preferences, providing alternatives through this corridor might not greatly reduce motor vehicle and hence congestion, but they would offer choices. Such choices could prove attractive to those travelers using the corridor for recreational purposes, which is consistent with Coastal Act objectives.

The four main alternatives, which to some degree already exist and which are being planned for some level of improvement, are pedestrian paths, bicycle routes, buses, and trains. The former two are further discussed under Issue PA-11: Coastal Trail System. As noted, while there is some support in the LCP for improved bus service, there is little that encourages rail use and protects its rights of way.[219] Rail comprises an important part of the regional and national transportation system. A little-appreciated role of the region's rail lines is their tremendous freight transport capacity, and therefore their potential to relieve truck traffic loading on the Highway 1 corridor. Better utilization of the rail lines for both passenger and freight service would provide an alternative to motor vehicle use of Highway 1. This will require improvements to the tracks, which is addressed under

[219] The policies seem to address new development of rail facilities but are less clear on ongoing activities. A *Joint Oil Spill Contingency Plan* was developed for Santa Cruz and Monterey Counties in 1991 and updated since then. The original (1991) Joint Oil Spill Contingency Plan was developed for both counties through a grant from OSPR. Subsequent updates were managed by each individual County, and were incorporated into the Federal US Coast Guard Central Coast Area Contingency Plan, since it dealt with more specific details of oil spill response for all areas of concern within each county. Monterey County participated in a mock oil spill drill in the Slough in 1999 and another drill in 2000. The Coast Guard developed a specific response plan for the Slough in 1998-99. These plans address emergency, not chronic, situations and not operations that can affect the Slough on a day-to-day basis. Therefore, to address daily rail traffic Elkhorn Slough resource protection managers sought out information from Union Pacific regarding maintenance of UPRR rails over the Slough. A workshop was held involving Elkhorn Slough National Estuarine Research Reserve (ESNERR) and Union Pacific, for the latter to explain its maintenance activities and inspection schedules. In response ESNERR plans to increase monitoring and communication with Union Pacific.

Recommendations LU-14.5 and LU-14.10 (see also Recommendation LU-15.3 to provide a train station in Fort Ord).

All rail lines eventually fail, due to differential settling, saltwater corrosion, boring worms, etc., and railroads that cross wetlands are more prone to failure than elsewhere. Railroad locomotives and tank cars carry immense amounts of fuel oil, corrosive chemicals, etc. A single derailment accident can cause more harm to a wetland or stream than any number of other disturbances and Elkhorn Slough is very vulnerable. The LCP policies need to anticipate the need to maintain and improve the lines and include policies to guide such improvements in a manner consistent with the Coastal Act. The best strategy for protecting coastal resources is to minimize risk, by maximizing safety improvements. Recently, Union Pacific, at the urging of the Elkhorn Slough National Estuarine Research Reserve and the Reserve Advisory Committee, replaced the railroad bridge crossing the Parsons Slough, in order to prevent additional undermining and destabilization of the rail line there. However, the remaining rail line through the Elkhorn Slough wetlands is also in need of continued maintenance, which may result in at least some wetland impacts that would be prohibited by Policy 2.3.2.1. The LCP language should be revised consistent with Coastal Act Section 30233. Far worse impacts may occur if there is a derailment at any point along this subsiding wetland fill, and the Coast Starlight or a long line of tank cars dumps into the slough. While an alternative to double-track the existing single-track rail through the slough would avoid or minimize risk, under the Coastal Act, a parallel track could not be allowed on wetland fill. Instead, any such added rail line would need to consider siting on a causeway, with removal of existing wetland fill and restoration of more normal circulation. For such additional improvements that cannot be found consistent with Section 30230, the County would need to submit an LCP amendment request and the Coastal Commission would have to determine if citing the balancing provision of the Coastal Act could justify an approval.

Enhanced transit service will require the cooperation of all those who now plan and/or provide such service as well as coordination with the demand reduction initiatives noted above (e.g., SCCRTC and AMBAG's Commute Solutions). Recommendation LU-14.11 addresses the desirability of this coordination.

Finally, to ensure safe travel for visitors as well as other users, certain improvements to the existing highway could likely pass muster. As discussed in under Issue LU-13: Big Sur Coast Highway Management Plan, the Coastal Act itself allows for incidental fill of wetlands provided there is mitigation and the LCP currently lacks similar provisions.[220] Such improvements could include

[220] As noted in the footnote regarding Consistency Certification No. CC-058-01 above, based on past interpretations, the Commission has found fill for the expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" if: (1) there is no less damaging feasible alternative; (2) the fill is undertaken by a public agency in pursuit of its public mission; and (3) the expansion is necessary to maintain existing traffic capacity. An important question raised in the case discussed is the applicability of this interpretation to transportation infrastructure other than roads and bridges, such as the construction of a "safety area" at the end of an airport runway. One such case was a light rail train mass transit proposal in San Diego (CC-64-99), where a bridge support piling was located in a wetland. The Commission determined that the proposal was not an allowable use under Section 30233 because the purpose of the project was not to maintain existing capacity but rather to expand the capacity of the light rail service by extending it to a new area.

paved turnouts and pullouts; access control, with frontage roads for improved farm and packing plant access; appropriate grade separations; alignment of Dolan Road with the Moss Landing Road intersection;[221] and other measures. Some of these measures might require work in wetlands beyond what would be allowed under Section 30233 alone or work in agricultural lands, archaeological sites, or other sensitive habitats that would not be consistent with LCP policies and by extension Coastal Act provisions. Such proposals should be considered through LCP amendments, where potential conflicts between Chapter 3 policies may be resolved. Such projects would likely need to include compensatory mitigation and be accompanied by more information on the project need and the feasibility of alternatives.

In conclusion, growing traffic demand and congestion underscore the need to plan for growth and transportation in a regional context consistent with Coastal Act mandates, and, hence, to identify and implement feasible alternatives to widening rural Highway 1 through the Moss Landing corridor. Moreover, successful implementation of the 21st Century Monterey County General Plan update goal of concentrating growth in community and rural service centers, while maintaining the scenic two-lane rural character of Highway One in the Moss Landing/Castroville area, will also require carefully integrated transportation planning to support these multiple objectives. A key ingredient for this planning is to conduct and then make use of a more thorough investigation of traffic origin and destination than has been completed to date.

h. Issue LU-15: Fort Ord

This subchapter addresses the following concern identified through issue scoping: **Ensure that the LCP contains provisions governing Fort Ord that comply with the Coastal Act.**

Since certification of the LCP in 1988, military use of Fort Ord has ended ushering in the potential for significant land use changes. Following closure of the Fort Ord Military Base in 1991 and removal of remaining US Army forces in 1994, the State Legislature established the Fort Ord Reuse Authority Act (FORA) to prepare, adopt, finance and implement a plan for the future use and development of the former military base, consistent with approved coastal plans, air quality plans, water quality plans, spheres of influence, and other county-wide or regional plans required by federal or state law.[222] FORA approved an *Installation-Wide Multi-Species Habitat Management*

[221] According to conversations with Highway Patrol officers, the worst intersections in this area, in terms of accident potential, are at Salinas Road and Dolan Road, followed by the Highway 183 intersection at Castroville, the Capurro packing plant entrance at Bennett Slough, and the northern Struve Road intersection at the Beacon station. Additional locations with recorded fatalities and/or high potential for additional injury accidents are Springfield Road at the Moss Landing School entrance and at Moss Landing Road. Each of these dangerous intersections, however, can be eliminated or improved in a way that does not require Highway 1 to be configured as a four-lane throughway. Grade separations would alleviate each of these intersection hazards, although in the cases of Dolan Road and Struve Road some frontage road and/or realignment work would be needed. With the abandonment of the National Refractories plant, realignment of the Dolan Road intersection becomes feasible incident to any reuse of the site. Such realignment, along with a grade separation, is also highly desirable for consolidation with Moss Landing Road and correction of two very dangerous intersections.

[222] Senate Bill 899, signed into law on May 10, 1994.

Plan for Fort Ord, CA (HMP) and the *Fort Ord Reuse Plan* in 1997.[223] The HMP was required by the U.S Fish and Wildlife Service to provide habitat protection, preservation, and restoration of certain areas as mitigation for potential future development on the former Fort Ord site. According to the *Fort Ord Reuse Plan*, the HMP is an agreement between the U.S. Army and the US Fish and Wildlife Service requiring organizations who are to manage habitat reserves and habitat corridors on former Fort Ord lands to enter into agreements with the U.S. Army for transfer of the property and for implementation of the HMP requirements that *apply to the land transferred to them. FORA subsequently approved an HCP Supplement to the Installation-wide Multi-Species Habitat Management Plan* to enable it to qualify as a Habitat Conservation Plan (HCP). In addition to the HCP supplement, an HCP Implementing Agreement was developed to protect and perpetuate natural wildlife diversity and habitats on the former Fort Ord lands consistent with the HCP.

The County's existing local coastal program does not address the former Fort Ord area, because that land has been federally-owned and operated by the U.S. Army since 1917 (see Map LU-14). All recent planning for reuse of the former Fort Ord has indicated that the land west of Highway One would be transferred to State Parks ownership.[224] The Coastal Commission's Federal Consistency Determination for the U.S. Army's Disposal and Reuse of Fort Ord was based on the understanding that all lands west of the Highway One right-of-way and, therefore, within the coastal zone, would be transferred to State Parks and managed for public access and visitor-serving uses and habitat preservation in accordance with the HMP.[225] Since this portion of Fort Ord west of the inland boundary of the Highway One right-of-way will be in the coastal zone, there is a need to prepare policies to govern it pursuant to the Coastal Act. Until a certified local coastal program and/or public works plan covers the former Fort Ord coastal zone area once transferred out of federal ownership, the Coastal Commission will be responsible for processing coastal development permits.

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[223] U.S. Army Corps of Engineers, Sacramento District with Jones & Stokes Associates. *Installation-Wide Multi-Species Habitat Management Plan for Fort Ord, CA*. April 1997; EMC Planning Group, Inc and EDAW, Inc, et al. *Fort Ord Reuse Plan*, June 1977.

[224] The Fort Ord Reuse Authority (FORA) is governed by a 13-member Board consisting of three members of the Monterey County Board of Supervisors, two city council members each from the Cities of Marina and Seaside, and one city council member from each of the cities of Carmel, Del Rey Oaks, Sand City, Monterey, Pacific Grove and Salinas. As provided for in Section 67675.2, the FORA Act requires that each member agency must submit a certified general plan or amended general plan applicable to territory of Fort Ord that is in conformance with the FORA Act, along with sufficient material for the Board to conduct environmental review. Section 67675.3 provides that the Board can certify portions of the general plan or amended general plan relating to Fort Ord only if consistent with the Fort Ord Reuse Plan. The Act also requires that all property transferred from the federal government to any user or purchaser, whether public or private, shall be used only in a manner consistent with the adopted Reuse Plan, except for property transferred to the California State University or to the University of California that is used for educational or research purposes, and except for property transferred to the California Department of Parks and Recreation. Thus plans for that portion of the former Fort Ord land to be transferred to State Parks will not necessarily be required to be consistent with the Fort Ord Reuse Plan. However, as the Commission approved a Consistency Determination for the U.S. Army's transfer of Fort Ord land within the Coastal Zone based largely on approval of the Installation-Wide Habitat Management Plan (HMP) as developed in 1994, any future use of those lands will be required to be consistent with the 1994 HMP, or with subsequent revisions, provided no substantive changes have occurred since the 1994 Consistency Determination. The FORA Reuse Plan notes that the California Department of Parks and Recreation is scheduled to receive "virtually all of the beach frontage and coastal dune land west of State Highway One, comprising nearly 1000 acres."

[225] California Coastal Commission. Federal Consistency Determination CD-16-94 for the U.S. Army's Disposal and Reuse of Fort Ord, adopted May 1994.

This section of scenic coastline is covered mainly by coastal dunes and former military infrastructure (structures and roadways). Thus, the majority of the site is environmentally sensitive habitat. This area includes the former Stillwell Hall, and two small sewage treatment areas. The area in question also includes the Highway One right-of-way and portions of the Union Pacific Railroad line, including a balloon loop used for turn around, and a spur line that crosses Highway One near at the 1st Street underpass, near the former Fort Ord/current CSUMB main entrance/Highway One interchange. Planning issues regarding former Fort Ord land located within the coastal zone that will likely require resolution include:

- Reuse/restoration of the disturbed dune and seacliff areas that Stillwell Hall and grounds are located on, after the Hall is razed or otherwise removed;
- Protection and restoration of the dune habitat consistent with the *Installation-Wide Multispecies Habitat Management Plan for Fort Ord, CA* (see Issue SH-31: Dunes);
- Control of erosion and restoration of gullies caused by erosion around the stormwater outfalls;
- Reuse of the old sewage treatment plant;
- Disposition of storage bunkers in the dunes;
- Provision of coastal access and recreational opportunities consistent with Coastal Act resource protection policies (see Issue PA-2: Public Access in ESHA);
- Maintenance and possible installation of public capital facilities or infrastructure improvements that serve the developed portions of Fort Ord (e.g., wastewater collection pipeline, water supply facility, stormwater pipes) (See Issue WQ-7: Public Works Maintenance); and
- Maintenance and improvements of transportation infrastructure that runs through Fort Ord including Highway One, the railroad line, and the regional bike path. (See Issue SH-18: Planting Invasives, which is especially applicable to maintenance of the highway median, and Recommendations LU-14.7, LU-14.8, and LU-14.10.) The Transportation Agency of Monterey County (TAMC) has indicated an interest in developing a commuter rail station and depot along the Union Pacific Railroad line that exists west of Highway One, near the former Fort Ord/current CSUMB main entrance (Light Fighter Drive interchange).[226] State Parks may consider leasing or further transferring this land to TAMC. However, such use of the site may not be consistent with Coastal Act viewshed and environmentally sensitive habitat protection policies. Thus, an inland location needs to be considered instead for any

[226] Suggestions for relocating Stillwall Hall to this site for use as a railroad depot are no longer relevant now that the Hall is being dismantled.

major rail platform support facilities, such as a parking lot or building (see Recommendation LU-15.3).

The *North County Land Use Plan* already contains policies that govern similar dune systems to the north. For example, policy 2.3.2.1 prohibits all development in environmentally sensitive habitat areas, including dunes, except for resource dependent uses if such uses will not cause significant disruption of habitat values. Policy 2.3.3.A.6, in part, limits uses in dunes to scientific, education, and low intensity recreation. Policy 2.3.3.A.7 calls for a dune stabilization and restoration program, and policy 2.3.3.A.9 requires boardwalks or other appropriate pathway materials where access routes are through dunes. The *North County Land Use Plan* could easily be adapted to cover former Fort Ord lands located within the coastal zone. As outlined in Recommendation LU-15.1, the LCP should be updated, including a land use designation and a public access component for coastal Fort Ord, in order to conform to Coastal Act policies. Given the various noted stakeholders involved in Fort Ord, it will be necessary for the County to coordinate with them in preparing this update, as suggested in Recommendation LU-15.2. Correspondingly, it will be incumbent upon State Parks, if it takes title to the land, to coordinate its planning with the County and Coastal Commission, as called for in Recommendation LU-15.4.

i. Issue LU-16: Armstrong Ranch

This subchapter addresses the following concern identified **the designation for the Armstrong Ranch in Monterey County complies with Coastal Act directives.**

Two parcels of land, located just north of the Marina city limit east of Highway One and comprising approximately 260 acres, are currently designated Light Industrial with a Special Treatment overlay in the LCP (see Map LU-14).[227] The Light Industrial land use designation allows for agriculture processing and other agriculture-related or coastal dependent operations not engaged in heavy manufacturing or requiring extensive plants for operation, in addition to other marine related uses in appropriate areas (*North County LUP* Section 4.3.1.L). *North County LUP* Policy 4.3.6.F.5 specifically provides that:

> *The Light Industrial Area north of the City of Marina is designated as a Special Treatment Area in order to encourage planned development of agricultural-related or coastal dependent industries. Development proposals for this area should emphasize protection of the site's vernal ponds and adjacent agricultural lands, and should be designed and landscaped to be aesthetically pleasing to travelers on Highway One.*

These lands are part of the approximately 2,000-acre Armstrong Ranch, which extends eastward beyond the coastal zone along the northern border of and into the City of Marina. Nearly all of the Armstrong Ranch lands within the coastal zone are currently used for grazing. Seasonal wetlands, or vernal pools, are also on this property. These grazing lands lie adjacent to lands designated "Agricultural Preservation" and Wetlands and Coastal Strand," which extend west of Highway One.

[227] APNs 203-011-003 and 203-011-021.

This area is one of the most scenic rural landscapes along Highway One in North County, and is the last remaining open space before entering the urban setting of the City of Marina to the south.

Armstrong Ranch owners had prepared plans for developing a community of some 25,000 people and the *City of Marina General Plan* calls for 3,580 housing units on the Ranch.[228] However, the City of Marina now has an Urban Growth boundary initiative that prevents annexation of Armstrong Ranch property in unincorporated Monterey County and concentrates development within the City limits. After soliciting proposed land use changes from the public as part of the 21st Century Monterey County General Plan update process, Monterey County received a request to rezone the coastal zone portion of Armstrong Ranch for mixed use, including high, medium and low density residential, commercial, industrial and community serving uses. The City of Marina, in a letter to the Monterey County Planning and Building Inspection Department dated July 10, 2002, recommended against such a change, saying that it would be inconsistent with the Urban Growth Initiative, which "…prohibit[s], for a period of approximately 20 years, any new development other than park and open space uses above the Urban Growth boundary line…, located generally along the northerly side of the City of Marina."[229] This initiative and the transfer of Fort Ord, which already has urban infrastructure, to civilian uses are changed circumstances which render the LCP as it pertains to the Armstrong Ranch out-of-date, especially given Coastal Act mandates to concentrate development, preserve agricultural land, protect wetlands, and maintain scenic views. Therefore, Recommendations LU–16.1 to redesignate Armstrong Ranch is required to assure conformance with Coastal Act Sections 30250, 30240, 30241, 30233, and 30251.

[228] City of Marina Planning Department, *City of Marina General Plan*, October 31, 2000.

[229] Correspondence, Jeff Dack, Marina Planning Director letter to Monterey County, July 10, 2002.

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