

**Sonoma County
Local Coastal Plan**

**OPEN SPACE &
RESOURCE CONSERVATION ELEMENT
PRELIMINARY DRAFT**

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**Sonoma County Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403**

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OPEN SPACE & RESOURCE CONSERVATION ELEMENT _____

1. INTRODUCTION

Purpose

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

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

Relationship to Other Elements

The Open Space and Resource Conservation Element is coordinated with the Public Safety, Public Facilities and Services, Agricultural Resources, Water Resources, and Public Access Elements. Following are the relationships among the LCP Elements:

Open Space for Preservation of Natural Resources

- The Open Space and Resource Conservation Element includes policies that address preservation of scenic resources and biotic habitats, including riparian corridors; and protection of estuarine and marine environments during dredging operations. It also addresses air quality, energy, mineral, timber, and soil resources.
- The Water Resources Element includes policies that address preservation of both surface and groundwater resources, including water supply and water quality.

Open Space for Managed Production of Resources

- The Land Use Element establishes land use categories for agriculture and timber resources production.

- The Open Space and Resource Conservation Element includes policies that address management of mineral, timber, and energy resource production; and support facilities for the commercial fishing industry.
- The Agricultural Resources Element includes policies that address agricultural production.
- The Water Resources Element includes policies that address management of water resources.

Open Space for Outdoor Recreation

- The Public Access Element and Plan identify areas where recreational facilities are needed; and include policies that address public access to the Coast, needed improvements to parks and trails, bikeways, parking for recreational facilities, and recreational boating.
- The Open Space and Resource Conservation Element includes policies that address scenic resources.
- The Public Facilities and Services Element includes policies that address park and recreation services.

Open Space for Public Health and Safety

- The Land Use Element includes policies that limit development in hazardous areas, such as flood zones and areas with fire and geologic hazards.
- The Public Safety Element includes policies that protect the community from geologic hazards including bluff top failure, flood hazards, fire hazards, and hazardous materials.
- The Open Space and Resource Conservation Element includes policies that address air quality and soils and slope stability.
- The Water Resources Element includes policies that address water quality and quantity.

Open Space for the Protection of Archaeological and Historical Resources

- The Open Space and Resource Conservation Element includes policies that address preservation and protection of archaeological and historical resources. The policies address preservation and protection of Native American sacred sites, places, features, and objects; including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. It also addresses the confidentiality of records pertaining to such resources and provides for appropriate treatment of Native American and other human remains discovered during project site development.

Scope and Organization

The Open Space and Resource Conservation (OSRC) Element contains a policy framework for the preservation of open space and conservation of natural resources and an Open Space Map designating lands subject to various policies.

The OSRC Element has ten classifications of open space and resource conservation:

- (1) Scenic and Visual Resources
- (2) Biotic Resources
- (3) Commercial Fishing Operations
- (4) Soil Resources
- (5) Timber Resources
- (6) Mineral Resources
- (7) Energy Resources
- (8) Air Resources
- (9) Archaeological and Historical Resources

Information on Scenic and Visual Resources and Biotic Resources is organized by the ten SubAreas of the Sonoma County Coast - 1) The Sea Ranch North, 2) The Sea Ranch South, 3) Stewarts Point, 4) Salt Point/Horseshoe Cove, 5) Timber Cove/Fort Ross, 6) High Cliffs/Muniz/Jenner, 7) Duncans Mills, 8) Pacific View/Willow Creek, 9) State Beach/Bodega Bay, and 10) Valley Ford.

2. SCENIC AND VISUAL RESOURCES POLICY

The Sonoma County Coast is beautiful, rugged, and varied. A typical coastal cross-section west to east would show ocean with a rocky intertidal zone, steep vertical bluff, coastal terrace, hillside, and ridge. The landscape is divided by the Gualala and Russian Rivers, numerous creeks and gullies with riparian vegetation, and coastal villages and independent subdivisions. The beauty and accessibility of the Coast have made it a heavily used tourist and recreational area. A survey of travelers prepared as part of the 1979 *Highway 1 Capacity Study* revealed that for the majority of travelers, sight-seeing is the primary purpose of a trip to the Coast. The goal of the Scenic and Visual Resources section is to prevent the blocking or degradation of scenic views and to assure that development is compatible with the existing natural and man-

made landscapes.

Below are the applicable sections of the 1976 California Coastal Act applicable to Scenic and Visual Resources:

30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

30253. New development shall do all of the following:

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

Scenic Landscape Units and Vista Points

The scenic and visual resources component of the Open Space and Resource Conservation Element includes three categories of Scenic Resource Areas: 1) Scenic Landscape Units, which include Major Views; 2) Vista Points; and 3) Scenic Highway Corridors.

Scenic Landscape Units

The Sonoma County Coast is a scenic resource vital to the County. Coastal bluffs, Bodega Bay, and other landscapes on the Coast are of special importance. Preservation of these scenic resources is important to the quality of life of Coast residents and the tourists and agricultural economy. Maintaining the openness of these areas provides important visual relief from developed areas. These landscapes have little capacity to absorb very much development without significant visual impact.

The single Scenic Landscape Unit designated on the County Coast occupies portions of all Coast

SubAreas (**Figures C-OSRC-1a-k**). The Scenic Landscape Unit includes three basic types of landscapes - the flat terraces south of the Russian River, the more hilly terraces from Fort Ross northward, and the bluffs and landslide area between.

Major Views are long views of unique visual interest, focus, or variety. Major Views are abundant on the Coast and include islands, rock headlands, coves, lagoons, estuaries, rivers, expansive beaches, white water, coastal hills, and historic settings. Major Views are located in all Coast SubAreas (# of Major Views) - The Sea Ranch North (14), The Sea Ranch South (20), Stewarts Point (15), Salt Point/Horseshoe Cove (16), Timber Cove/Fort Ross (25), High Cliffs/Muniz/Jenner (30), Duncan's Mills (6), Pacific View/Willow Creek (25), State Beach/Bodega Bay (28), and Valley Ford (13).

Vista Points

Vista Points are roadside areas suitable for parking which have exceptional views. The viewshed from a Vista Point is more sensitive than the viewshed from a Major View since the viewer is stopped and can take full advantage of the visual experience. Designated Vista Points should be developed with safe ingress and egress, parking areas, interpretive signs, and restrooms where appropriate. Vista Points are located three SubAreas of the Coast (# of Vista Points - High Cliffs/Muniz/Jenner (2), Pacific View/Willow Creek (2), and State Beach/Bodega Bay (1) (Figures C-OSRC-1f, C-OSRC-1h, and C-OSRC-1i).

Goal C-OSRC-1: **Retain the largely open, scenic character of Scenic Landscape Units and views from Vista Points.**

Objective C-OSRC-1.1: Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid including Scenic Landscape Units within spheres of influence for public service providers.

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

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

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

Designation of Scenic Landscape Units and Vista Points

Policy C-OSRC-1a: Apply the Scenic Resources Combining Zoning District consistent with the

Open Space and Resource Conservation Element to all lands located within Scenic Landscape Units and views from Vista Points. **(GP2020 Revised)**

Visual Resources Protection Policy

Policy C-OSRC-1b: ~~Prohibit~~ Development which will significantly degrade the scenic qualities of Scenic Landscape Units and major views and from Vista Points shall be prohibited.
(Existing LCP Revised)

Policy C-OSRC-1c: ~~Prevent~~ Development (including buildings, structures, fences, paved areas, signs, and landscaping) shall be prevented from obstructing views of the ~~shoreline coastline~~ from coastal roads, Vista Points, recreation areas, and beaches. **(Existing LCP Revised)**

Policy C-OSRC-1d: Amendments to increase residential density in Scenic Landscape Units in excess of one unit per ten acres shall be avoided. The Local Coastal Plan Land Use Plan Map may designate a lower density or larger minimum lot size. **(GP2020 Revised)**

Policy C-OSRC-1e: Commercial or industrial uses in Scenic Landscape Units other than those which are permitted by the agricultural or resource land use categories shall be avoided.
(GP2020 Revised)

Visual Resources Design Guidelines and Standards

Policy C-OSRC-1f: Unless there are existing design guidelines adopted for the affected area, new structures within Scenic Landscape Units, other Major Views, and views from Vista Points shall be required to meet the following criteria:

- (1) New structures ~~proposed within a scenic view shed area shall, to the maximum extent feasible,~~ be screened from scenic corridor route view by sited and designed to take maximum advantage of existing topography and vegetation in order to substantially screen them from view from public roads and use areas.
- (2) New structures ~~proposed within a scenic view shed area shall, to the maximum extent feasible,~~ be sited and designed to preserve existing views of the ocean and ~~shoreline coastline~~ as viewed from scenic corridor routes public roads and use areas.
- (3) Highly visible open areas on ridgelines and hilltops shall be avoided.
- (4) New structures shall not be located on ridgelines or ~~prominent hilltops,~~ as viewed from scenic corridor routes, unless screened by existing topography and/or vegetation or so that they project above the silhouette of the ridgeline or hilltop against the sky as viewed from public roads and use areas.

- (5) Visible cuts and fills on ridgelines and hilltops shall be minimized.
- (6) To the extent feasible, structures shall be clustered on each parcel within existing built areas and near existing natural features such as tree groupings.
- (7) Driveways and access roads shall be substantially screened from views from public roads and use areas where practical.
- (8) Removal of trees and other mature vegetation shall be minimized. Removal of specimen trees, tree groupings, and tree Windbreaks shall be avoided. Where removal of trees is a necessary result of a proposed project, the trees shall be replaced at a greater than 1:1 ratio at another location on the site or at an off-site location approved by PRMD.
- (9) ~~Development authorized within scenic view shed areas shall be subject to the condition that neither topography nor~~ After new structures have been constructed, existing vegetation or topography shall not be altered or removed if doing so it would expose the development new structures to view from any scenic corridor route public roads and use areas.
- (10) Where existing topography and vegetation would not screen structures from view from public roads and use areas, landscaping consisting of native vegetation in natural groupings that fit with the character of the area shall be installed in order to substantially screen structures from view. Screening with native, fire-retardant plants may be required.
- (11) Structures shall be designed to use building materials and color schemes that blend with the natural landscape and vegetation.
- (12) Agricultural structures ~~are~~ shall be exempted from scenic view protection policies if they are to be located on the landward side of scenic corridor routes public roads and use areas from which there are ocean or river views.
- (13) Telecommunication facilities shall be exempt if they meet the siting and design criteria of the Scenic Resources (SR) Zoning District and are consistent with the California Coastal Act.
- (14) ~~Any~~ Satellite dishes that requires requiring a building permit shall be sited ~~so~~ such that ~~it~~ is they are not visible in views from ~~scenic corridor routes~~ public roads and use areas.
- (15) If compliance with these standards would make a parcel unbuildable, structures shall be sited where minimum visual impacts would result. **(GP2020 Revised / Existing LCP**

Revised)

~~6. — Development proposed upon a parcel mapped in more than one view shed rating category shall, whenever feasible, be located within the area with the lowest view rating. (Existing LCP)~~

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

- (1) Building envelopes shall be established for new residential structures so that residences are they are located upon in the least visually sensitive areas, and height limitations shall be established if necessary to further mitigate visual impacts.
- (2) Lots shall be clustered ~~where potential to reduce visual impacts can be reduced (unless clustering is prohibited in agricultural districts)~~ where consistent with the Land Use Element.
- (3) Building sites and roads are to be constructed to preserve significant tree stands and significant oak trees.
- (4) Driveways and access roads ~~are~~ shall be hidden from view from public view ~~whenever feasible~~ roads and use areas where practical. **(GP2020 Revised / Existing LCP Revised)**

Policy C-OSRC-1h: For development on parcels located both in a Scenic Landscape Unit and adjacent to a Scenic Highway Corridor, the more restrictive siting and setback policies shall be applied to preserve visual quality. **(GP2020 Revised)**

~~8. — Utilize the Open Space Easement Act for designated Open Space and Sensitive and Hazardous lands to provide reasonable taxation. (Existing LCP)~~

Scenic Corridors

Many residents of Sonoma County value highly the beauty of the Sonoma County Coast's many landscapes as viewed from rural roadways. Motorists can travel from rural communities into forest or scrub covered hills and ridges, rolling dairy lands, scenic inland valleys, wetlands rich in wildlife, scrub and grass covered terraces, breath-taking coastal bluffs, dunes, and beaches.

Preserving these landscapes is important to preserving the character of the Coast. The primary impression of any area on the Coast comes from what is seen while driving, cycling, or hiking along a roadway. One of the most effective methods of protecting visual resources is to protect scenic corridors along a system of scenic roads. Designated Scenic Corridors on the County

Coast are State Highway 1, Stewarts Point-Skaggs Springs Road, State Highway 116, Coleman Valley Road, Petaluma-Valley Ford Road, Bodega Highway, Fort Ross Road, Meyers Grade/Seaview Road, a paved portion of Willow Creek Road, and Bay Hill Road.

Goal C-OSRC-2: **Identify and preserve roadside landscapes which have a high visual quality as they contribute to the living environment of local residents and to the Sonoma County Coast's tourism economy.**

Objective C-OSRC-2.1: Designate as Scenic Corridors those roadways which cross highly scenic areas, provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to communities.

Objective C-OSRC-2.2: Provide guidelines so future land uses, development, and roadway construction are compatible with preserving scenic values along designated Scenic Corridors.

The following policies shall be used to achieve these objectives:

Scenic Corridor Designation

Policy C-OSRC-2a: Apply the Scenic Resources Combining Zoning District to those portions of properties within Scenic Corridor setbacks. **(GP2020)**

Policy C-OSRC-2b: Recognize Highway 116 from State Highway 1 to the southern edge of Sebastopol as an official State Scenic Highway. The unique scenic qualities of this portion of Highway 116 shall be protected as generally outlined in the September 1988 *116 Scenic Highway Corridor Study*. Request official State Scenic Highway designation for State Highway 1. **(GP2020)**

Scenic Corridor Policy, Design Guidelines, and Standards

Policy C-OSRC-2c. ~~Except in Outside of rural communities and urban service areas, require a the minimum setback of a new structure from a Scenic Corridor shall be 100 feet from the right-of-way ~~along scenic corridors and greater where possible.~~ However, ~~permit a setback of 50 foot setback when sufficient screening exists to shield the structure~~ feet may be permitted when it can be documented that existing vegetation or topography sufficiently screens the structure from public view from the road. Where the ~~General Plan policies and standards are~~ Scenic Corridor standards of the Coastal Zoning Ordinance are more restrictive than the above standards, development shall comply with the ~~General Plan or Coastal Plan policies, whichever are more restrictive, provided that no development shall be approved which does not comply~~~~

~~with Coastal Plan policies~~ Coastal Zoning Ordinance. **(Existing LCP Revised)**

Policy C-OSRC-2d: For development on parcels located both within a Scenic Landscape Unit and adjacent to a Scenic Corridor, the more restrictive siting and setback policies shall be applied to preserve visual quality. **(GP2020 Revised)**

Policy C-OSRC-2e: Develop design criteria for Scenic Corridors within The Sea Ranch, Bodega Bay, and other Urban Service Areas. **(GP2020 Revised)**

Policy C-OSRC-2f: Highway-oriented billboards along Scenic Corridors shall be prohibited. Establish design criteria for considering new freestanding outdoor advertising structures or signs along Scenic Corridors to retain visual quality. Consider amortizing existing signs subject to the limitations of State law as a condition of approval for discretionary permits. **(GP2020 Revised)**

Policy C-OSRC-2g: Public works projects shall be designed to minimize damage and removal of trees along Scenic Corridors. Where trees must be removed, replanting programs shall be designed so as to accommodate ultimate planned highway improvements. Replanting and revegetation shall be required following grading and road cuts. **(GP2020 Revised)**

Outdoor Lighting

Sonoma County has a diversity of natural areas and landforms that contribute to its quality of life, economic well-being, and environmental beauty. Night time views of both the landscape and sky can be significantly degraded by excessive and unnecessary levels of light which increase “sky glow” around urban areas, make the man-made environment prominent, and result in visual clutter at night. Issues related to resolving “light trespass” can direct County staff resources away from other priorities. Appropriate light levels for varying uses should be balanced with a desire to maintain Sonoma County’s rural character and preserve views of the night time skies for residents and visitors.

A related issue is the effect of artificial night lighting on biological resources, on which Rich and Longcore (2006) provide the most up-to-date science.

Natural patterns of darkness are as important as the light of day to the functioning of ecosystems. For millions of years, plants and animals evolved under a day–night cycle, where the bright light of the sun during the day was replaced at night by weak light from the stars and sunlight reflected off the moon and planets. This situation ended very recently when humans started to artificially light the nighttime sky. Because animals (including man) and plants did not evolve under these artificial conditions, nighttime lighting may have serious negative consequences for the ecosystem, termed “ecological light pollution” by Longcore and Rich (2004).

Ecological light pollution includes direct glare, chronic increases in illumination, and temporary, unexpected fluctuations in lighting. Sources of ecological light pollution include sky glow, lighted structures (e.g., office buildings, communication towers, bridges), street lights, security lights, vehicle lights, fishing boats, flares on offshore hydrocarbon platforms, and lights on undersea research vessels. Therefore, it involves potential effects across a range of space and time scales.

Artificial night lighting affects the natural behavior of many mammal, bird, reptile, amphibian, fish, and invertebrate species. It can disturb development; feeding, mating, resting, migration, and other activity patterns; and hormone-regulated processes, such as the internal clock mechanism. Probably the best-known effect is that many species are attracted to and disoriented by sources of artificial light, a phenomenon called positive phototaxis. Apart from insects, birds that migrate during the night are especially affected, potentially causing direct mortality from collisions with structures and indirect negative effects through the depletion of their energy reserves. The reason why migrating birds are attracted toward artificially lit structures remains obscure. Gauthreaux and Belser (2006) discuss several hypotheses, including the possibility that artificial lighting interferes with the magnetic compass. Regardless of the precise mechanism, it is clear that artificial lights may interfere with birds' ability to orient themselves (Evans Ogden 1996).

The extent of ecological light pollution is global. Globally, hundreds of millions of migrating birds are affected by the presence of artificial light on a yearly basis, many of which do not survive the encounter. Cinzano et al. (2001) calculated that about 18.7% of the terrestrial surface of the Earth experiences night sky brightness that is polluted by astronomical standards, which means that species and ecosystems may be affected by sky glow from distant sources. Furthermore, even shielded lights pointed downward, and thereby not contributing to sky glow, may have ecological consequences.

Illuminance, the amount of light incident per unit area, is the most commonly used measurement of ecological light pollution. It is expressed in "lux", the intensity of light per unit area of the source. How bright these sources appear to organisms depends on ambient conditions; in dark conditions a dim light appears very bright, whereas it would be practically invisible in daylight. **Table C-OSRC-1** shows the illumination in lux from common sources.

**Table C-OSRC-1: Illumination From Common Light Sources
(Rich and Longcore 2006)**

SOURCE	ILLUMINATION (lux)
Full sunlight	103,000
Partly cloudy	50,000
Operating table	18,000
Cloudy day	1,000 - 10,000
Bright office	400 - 600
Most homes	100 - 300
Lighted parking lot	10
Full moon under clear conditions	0.1 - 0.3
Quarter moon	0.01 – 0.03
Clear starry sky	0.001
Overcast night sky	0.00003 – 0.0001

Goal C-OSRC-3: **Preserve and maintain views of the night time skies and visual character of urban, rural, and natural areas, while allowing for night time lighting levels appropriate to the use and location.**

Objective C-OSRC-3.1: Maintain night time lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve night time skies and the night time character of urban, rural, and natural areas.

Objective C-OSRC-3.2: Ensure that night time lighting levels for new development is designed to avoid light spillage offsite or upward into the sky.

The following policies shall be used to achieve these objectives:

Policy C-OSRC-3a: All new development projects, County projects, and signage shall be required to use light fixtures which shield the light source so that light is cast downward, and that are no more than the minimum height and power necessary to adequately light the proposed use. **(GP2020 Revised)**

Policy C-OSRC-3b: Continuous all night exterior lighting in rural areas shall be prohibited, unless it is demonstrated to the decision-making body that such lighting is necessary for security or operational purposes, or that it is necessary for agricultural production or processing on a seasonal basis. Where lighting is necessary for the above purposes, glare onto adjacent

properties and into the night sky shall be minimized. **(GP2020 Revised)**

Policy C-OSRC-3c: Light levels that are in excess of lighting manufacturers' standards for specific uses and the California Outdoor Lighting Standards in Title 24 of the California Code of Regulations shall be discouraged. **(GP2020 Revised)**

Policy C-OSRC-3d: In evaluating proposed development, the potential impact of any proposed artificial night lighting on the coastal ecosystem should be considered using the illumination figures in Table C-OSRC-1 of the Open Space and Resource Conservation Element and the information in the publication "Ecological Consequences of Artificial Night Lighting" by Catherine Rich and Travis Longcore, Editors (2006) or more up-to-date science. **(New)**

Policy C-OSRC-3e: The following or similar condition of approval shall be applied to all new discretionary development:

*"Prior to issuance of building permits, an exterior lighting plan shall be submitted for design review by the Permit & Resource Management Department or Design Review Committee. All exterior lighting shall be "Dark Sky Compliant" and fully shielded in order to avoid nighttime light pollution. Reference can be made to the International Dark Sky Association website for guidance on exterior lighting: www.darksky.org. All exterior lighting shall be downward facing, and located at the lowest possible point to the ground to prevent spill over onto adjacent properties, glare, nighttime light pollution and unnecessary glow in the rural night sky. Light fixtures shall not be located at the periphery of the property, shall not wash out structures or any portions of the project site, and shall not be directed toward other properties. Security lighting shall be on motion sensors. Flood lights and uplights are not permitted. Luminaires shall have a maximum output of 1000 lumens per fixture. Total illuminance beyond the property line created by simultaneous operation of all exterior lighting shall not exceed 1.0 lux." **(New)***

Community Character and Design

Sonoma County has adopted a basic framework of directing the majority of growth into incorporated cities or in unincorporated Urban Service Areas of the County where public sewer and water are available, and where there is an existing pattern of urban-level development. This pattern of compact development and community-centered growth preserves the open space, agriculture, and natural resources that make Sonoma County unique and contribute to its valued quality of life and economic vitality. It is important to ensure that new development enhances existing unincorporated communities while retaining the unique character of each. Successfully integrating community amenities such as attractive streets, safe bike and pedestrian access, attractive and long-lasting buildings, inviting public spaces, and important natural and cultural resources will make developed spaces more livable.

The Sonoma County Coast is well known for its agrarian and small town atmosphere and its diverse and beautiful scenic and natural resources, particularly its majestic coastline. In some cases manmade structural features which have special cultural, historical, architectural, and aesthetic qualities are as important as the natural features.

Regulating the design of certain types of new development in agricultural, rural, and resource areas will help to preserve the very qualities which attract tourism and new development enhance economic vitality. The character of the County Coast is diverse. As a result, developing design guidelines for the Coast must be done in a way that recognizes the character of the local community. Community design guidelines which avoid more urban-level development requirements in rural areas and promote integrating new development with the surrounding landscape and quality construction and landscaping, will benefit not only property owners and developers but all who live in and come to visit the Coast.

In the Coastal Zone development is concentrated in Urban Service Areas and Rural Communities, as the Coastal Act mandates that new development be located in close proximity to developed areas with public facilities and services. To delineate the areas appropriate for development in the Coastal Zone, Urban Service Areas have been established and include The Sea Ranch on the North Coast and Bodega Bay on the South Coast. Between these Urban Service Areas lie Rural Communities, areas that were previously subdivided or developed with public water and private septic systems and include Duncans Mills, Jenner, Sereno del Mar, Carmet, Salmon Creek, Timber Cove, and Valley Ford. These large lot subdivisions with second homes have a strong impact on community aesthetics. Maintaining and preserving these communities adds to the visual character of the Coast.

The major community design issues on the Coast are preservation of coastal views and the visual quality and compatibility of new development with the natural landscape (comprised of landform and vegetation) and existing development.

Except for The Sea Ranch, Bodega Bay, and Bodega and Duncans Mills Historic Districts, construction materials, colors, and architectural features should blend with the natural landscape features of the site so that structures and nature complement one another and development has a minimal aesthetic impact. In the Bodega and Duncans Mills Historic Districts, Stewarts Point, and Valley Ford, integrating new buildings with the existing character of the town is the main concern.

An issue closely related to integrating structural design with the physical conditions of a site is that of scale, the relationship of the size of the structure to its surrounding features, both natural and man-made. Homes on the Coast constructed out of scale with their surroundings may be too massive for their lot size, block light and air for smaller neighboring homes, or degrade the character and harmony of the community.

There are few unifying features in many of the subdivisions on the County Coast. Design guidelines would address this issue. In older communities, traditional styles of early coastal buildings are encouraged. In newer communities, roof lines and building exteriors should be compatible with surrounding buildings.

Urban Service Areas

The Sea Ranch. For over 100 years sheep ranches occupied the ten miles of coastline now occupied by The Sea Ranch. Oceanic Properties bought the 5200 acre Del Mar Ranch in 1963, intending to create a low density residential community where development would blend harmoniously with the natural environment. These goals have been achieved to some extent under The Sea Ranch Design Guidelines (Appendix A) and the guidance of The Sea Ranch Design Review Committee. The overall effect is of subdued, modern structures in some locations well integrated with the existing landforms and vegetation.

Bodega Bay. In 1809 Russian fur traders built warehouses on Bodega Head, farmed the land, and caught seal and sea otter for furs. In 1841 the Russian colony was offered for sale. After the sale the area was resettled and farmed. During the 1850s Bodega Bay became a deep water port for exporting lumber and agricultural products to San Francisco, but was soon displaced by the fishing industry. By the 1900s only a few shallow draft fishing vessels and resident fishermen used the Bay.

In the early 1900s Sonoma County Bodega Bay and other coastal and river became popular visitor destinations. Taylor Tract northeast of Bodega Bay was subdivided in 1914 and 1922 as a second-home community. The commercial strip along State Highway 1 was subdivided in 1921. During the 1920s and 1930s vacationers built the small cottages that characterize the community today. The U.S. Army Corps of Engineers dredged a deep water channel at Bodega Bay in 1943, and a major fishing industry was established relatively quickly. By the early 1950s, Taylor Tract was largely developed and many of the homes were rented to fishermen. While Bodega Bay had become a thriving fishing village, tourism and recreation continued to play an important role in its development. Bodega Bay grew steadily, with larger homes being constructed north and west of the main town.

Most homes in Bodega Bay are similar in scale, design, and construction. They are modest single-story structures with pitched roofs, vertical windows, and vertical front elevations painted brown, beige, green, and white with contrasting trim. Small informal yards are devoted to lawns, gardens, and parking areas. Many yards are bordered by traditional picket fences. The small scale of its bay oriented development, historical significance, and importance to recreation and the fishing industry qualify Bodega Bay as a special coast community worthy of protection. To maintain and protect the fishing village character of Bodega Bay and to provide needed affordable housing, new residential development adjacent to the original town is proposed to be similar in scale and design to that in the existing town, especially in the area

between the Harbor View and Pelican Plaza developments.

With Bodega Bay expected to absorb the bulk of new commercial growth on the Sonoma County Coast, it is important to promote good design in keeping with the scale and character of the existing town. Commercial development in and near Bodega Bay encompasses a wide variety of styles and colors - mainly single-story wood structures with gable roofs and no unifying design features. With the absence of a predominant architectural style in this community, it would be appropriate for new commercial construction to reflect the nautical character of the harbor with wooden buildings of simple design.

Bodega Harbour Subdivision. Bodega Harbour Subdivision, located just south of Bodega Bay, is a second home development begun in 1969. The subdivision has a design review procedure that is evident in the existing development. The residences relate to one another, with few homes dominating. Structures are large one and one-half to two-story structures with unpainted wood exteriors and various modern architectural designs.

The Bodega Harbour Subdivision design guidelines, in the CC&Rs for the subdivision and applied by the Bodega Harbour Design Review Committee, are summarized below:

- 1) No detached structures.
- 2) Exterior walls of redwood or cedar boards, plywood of specific finished considered on a case by case basis.
- 3) Roof slope and scale to respect that of adjacent houses, pitched roofs encouraged.
- 4) Specific standards for location, height, glass, material, and color of windows and doors.
- 5) Skylights flat with dark color or bronzed aluminum frame.
- 6) Garages and decks of architecture, material, and finish consistent with and connected to house.
- 7) Enclosures and screen walls of simple construction and same materials as house.
- 8) Indirect or shielded light sources.
- 9) Specific standards for location, height, material, finish, and color of chimney flues and spark arresters.
- 10) Exposed masonry surfaces limited to local stone.
- 11) Specific standards for material, finish, and color of exposed metals, gutters, and downspouts.

- 12) Fencing or screening of outside storage areas, fuel tanks, utilities, and hot tubs.
- 13) Specific standards for size, color, and location of antennae.
- 14) Solar panels mounted on a plane parallel to roof or wall, framing only of bronzed aluminum, redwood, or cedar.

Rural Communities

Timber Cove. Timber Cove is a low density subdivision of second homes established in the early and middle 1960s that remains partially undeveloped. Most of the subdivision is heavily forested. Few lots are visible east of State Highway 1. The most visible lots are along Ninive Drive west of State Highway 1 and in meadow areas. The homes have subdued exterior colors, indigenous landscaping, and are generally well-screened behind trees and landforms. In two locations high fences adjacent to State Highway 1 block views to the ocean.

The Timber Cove Architectural Guidelines, in the CC&Rs for the subdivision and applied by the Timber Cove Homes Association, are summarized below:

- 1) Permitted and prohibited roof materials.
- 2) Specific requirements for roof pitch, overhangs, skylights, and venting.
- 3) Permitted and prohibited materials for exterior walls and fireplaces/chimneys.
- 4) Exterior colors and finishes of natural tones; no glaring or shiny finishes; no white paint or vinyl windows.
- 5) Window arrangement compatible with overall building design; no exposed aluminum window frames.
- 6) No exterior lighting visible from road or building areas of other properties.
- 7) Screening for parking, utility meters, tanks, and trash storage.
- 8) Accessory buildings compatible in design and materials with house.
- 9) Specific requirements for setback and building areas.
- 10) Fences in building area compatible in design and materials with house.
- 11) Specific requirements for landscaping and trees.

Jenner. Jenner is a second home development platted in 1914. The town has grown slowly. New development is constrained by restrictions on water system connections and the limited area for septic systems on the small lots. As the community is highly visible from State

Highway 1, it is important that new development be compatible in design and scale with existing development. Most homes are of one and two-story conventional construction with large windows overlooking the river and ocean, some with terraced gardens. Roofs are pitched and exteriors are painted wood except at the north end of town where some newer homes are unpainted with flat roofs. Roads are narrow and steep with no curbs, gutters, or sidewalks. Jenner does not have design guidelines.

Duncans Mills. Duncans Mills, a County Historic District, was a railroad depot and commercial center established in the 1880s. The western false front commercial buildings have been preserved, and several new buildings of similar design have been constructed to serve the summer and weekend tourist population. Commercial uses have been developed by private interests that want to continue to expand development along the old west theme. Duncans Mills does not have design guidelines.

Sereno Del Mar. Sereno Del Mar, platted between 1970 and 1972, is a residential subdivision of large homes on large lots north of Bodega Bay. About one-half of the approximately 200 lots have been developed. The subdivision is highly visible on gently sloping hills east of State Highway 1. Existing homes are sited randomly with minimal landscaping to provide screening. While the majority of homes have unpainted wood exteriors, some exteriors are of painted stucco. Architectural forms range from modern cubes, triangles, and octagons to barn and contemporary ranch styles. Most have pitched shake roofs, but the roof lines appear to have no relation to one another. Homes are large on large lots and are generally one to one and one-half stories high due to a 16 foot height limitation. Some six foot fences delineate property lines and detract from the open flow of the hillside.

The Sereno del Mar design guidelines, in the CC&Rs for the subdivision and applied by the Sereno del Mar Design Review Committee, are summarized below:

- 1) Maximum building height of 16 feet.
- 2) Specific requirements for building location.
- 3) Maximum of 150 cubic yards cut or fill per dwelling unit, no benched cuts or fills.
- 4) Garages for no more than three cars.
- 5) Fuel or gas tank storage not unsightly or obstruct or impair views from other lots.
- 6) Trees not of an unusual height or obese density so as to obstruct or impair views from other lots.
- 7) Limitations on height of fences, walls, hedges, trees, and shrubs so as not to obstruct specific sight lines on corner lots.

- 8) Undergrounding of power and communications conductors.
- 9) No use of rear yards for access.
- 10) No oil facilities on any lots.
- 11) Limitations on number and size of signs.
- 12) No noxious, offensive, or annoying uses.
- 13) No mercantile or commercial uses.
- 14) Limitations on type and number of animals.
- 15) Limitations on storage of boats, vehicles, equipment, and construction materials.

Carmet. Carmet is a residential subdivision of 60 lots developed in the late 1940s. Density is approximately four units per acre with homes set squarely on the gently sloping lots east of State Highway 1. Homes are one-story with flat gravel roofs and painted wood exteriors. Landscaping is suburban with lawns, flowers, and a few trees. Most of the remaining lots are unbuildable due to septic system constraints on the small lots. Any new development should be compatible with existing homes as there is a distinct design unity to the subdivision. Carmet does not have design guidelines.

Salmon Creek. Salmon Creek is a compact second home subdivision developed in the 1920s and 1930s. Although vacation home use still predominates, many of the dwellings house full time occupants. Homes generally have painted wood exteriors and gable roofs. The private roads are very narrow and poorly surfaced. Landscaping is minimal since yards are small and used primarily for parking. Community boundaries are well defined by Salmon Creek, State Highway 1, and State Parks property. Sewer and water constraints limit new development. The type and scale of new development should be compatible with the existing character of the community as well as to the area's very sensitive natural features. Salmon Creek does not have design guidelines.

Valley Ford. Valley Ford received its name from the old Indian and Spanish ford across the Estero Americano. This historic community has evolved over the years and has no distinct architectural theme. Styles include Greek Revival, Queen Anne, Western Falsefront, Italianate, and bungalow. Many of the existing buildings date to the 1870s and 1880s. Valley Ford does not have design guidelines.

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

guidelines.

Rancho del Paradiso. Located along the south side of the Russian River, Rancho del Paradiso is a second home development on small lots platted in the 1930s. New development is constrained by restrictions on water system connections and the limited area for septic systems on the small lots. The community is not very visible from State Highway 1. Rancho del Paradiso does not have design guidelines.

Bridgehaven Resort. Bridgehaven Resort is located on the south bank of the Russian River near the junction of State Highways 1 and 116, and is visible from Vista Points on State Highway 1. Dating from the 1930s, the resort includes summer cabins, a store and café, and a trailer park with permanent residents. The campground is no longer in use, and the trailer park is not screened from view. Although new development is severely constrained by inadequate water supply, any modifications to existing development should include design and landscaping improvements.

Landforms

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

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

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

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

views to the east have been significantly degraded by the ridgetop development.

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

Vegetation

A substantial amount of change to vegetation has occurred on the Sonoma County Coast over the last couple hundred years. Logging in particular has eliminated forest land close to the coastline. Prairie grassland is the characteristic landscape along State Highway 1. Other vegetation changes include the planting of Windbreaks, comprised predominantly of cypress trees; and the planting of pine trees between State Highway 1 and the coastline. Landscape planting can add complexity to the view and screen unnatural elements. However, the planting of non-native species can detract from the natural coastline landscape, and the planting of certain tree varieties west of State Highway 1 may block views to the coastline.

The Sea Ranch Association staff and volunteers work to control invasive non-native plants (fireweed, French broom, German ivy, pampas grass, non-native thistles, and ice plant) and poisonous plants (poison oak and hemlock) at The Sea Ranch. The Native Plant Committee helps property owners identify invasive plant species and select effective methods to eradicate them. Since 2011 the ten stewardship groups of the Commons Landscape Committee have been removing invasive plants and replanting appropriate native plants. In addition, some property owners have been working together to keep properties free of invasive plant species. According to The Sea Ranch Comprehensive Environmental Plan (2013), “the challenge is to reach consensus about what plants are considered invasive and how to best manage them.”

Goal C-OSRC-4: **Preserve, retain, and enhance the unique character of each of the communities on the Sonoma County Coast, while accommodating projected growth and housing needs.**

Objective C-OSRC-4.1: Establish community character as a primary criterion for review of projects in coastal communities.

Objective C-OSRC-4.2: Protect and preserve community character by developing Community Design Guidelines which call for development that preserves existing site features, contributes to community character, sites buildings and development features so they blend in with the surrounding landscape, provides connections to surrounding development, provides opportunities for community interaction and pedestrian activity, provides attractive public views, provides safe and comfortable infrastructure and streetscape improvements for bikes and pedestrians, and maintains or increases public safety.

The following policies shall be used to achieve these objectives:***General Design Guidelines***

Policy C-OSRC-4a: ~~Require~~ Design review shall be required for all new development in ~~Urban and Rural Community Service Areas~~ coastal communities. ~~This requirement may be waived by~~ The Director of PRMD may waive this requirement on parcels not visible from and east of State Highway 1. **(Existing LCP Revised)**

Policy C-OSRC-4b: The following Sonoma County Coast Community Design Guidelines shall be used for new development in coastal communities until Design Guidelines specific to each community are adopted:

- (1) Development shall be concentrated within existing communities.
- (2) The following design components shall be incorporated into site planning for new development:
 - (a) open space for important historic and natural features
 - (b) pedestrian use and movement
 - (c) spaces and opportunities for social interaction with community members
 - (d) visibility of access/entrances to buildings and use areas
 - (e) landscaping
- (3) Passive solar design shall be used for new development. Passive solar design involves the use of various techniques in siting and designing new buildings to capitalize on heat and light from the sun and reduce the need for mechanical and electrical systems for internal lighting, heating, and cooling. These techniques shall include placing buildings to maximize solar orientation for both winter heating and summer cooling; placing windows or other openings and reflective surfaces so that during the day natural light provides effective internal lighting (i.e., daylighting); large south-facing windows; natural shading and ventilation; and building materials that absorb heat from the sun and slowly release it to warm the building.
- (4) Development shall be designed to complement and be in scale with the site and the surrounding environment and community.
- (5) New development shall be sited and designed to minimize the impacts of noise, light,

glare, and odors on adjacent properties and the larger community.

- (6) The following guidelines shall be used for grading/topographic alteration:
- (a) Roads, buildings, and other structural improvements shall be designed and constructed to fit the natural topography.
 - (b) Development shall be concentrated on level areas so that steeper hillsides are left undisturbed. Grading and development shall be discouraged on hillsides with a slope of more than 30 percent.
 - (c) Grading shall be minimized to the extent necessary to site new structures.
 - (d) Grading and construction shall follow the natural contours of the landscape.
 - (e) Alteration of natural landforms as a result of grading, cutting, or filling shall be minimized. New development which requires grading, cutting, or filling that would significantly alter or destroy the appearance of natural landforms shall be prohibited.
 - (f) On hillsides, structures shall be designed to fit the site rather than altering the natural landforms to accommodate buildings designed for level sites.
 - (g) Natural landforms shall be restored as completely as possible after any permitted temporary alteration during construction.
- (7) The following guidelines shall be used for design and siting of new structures and development:
- (a) Passive solar design shall be used for new development. Passive solar design involves the use of various techniques in siting and designing new development to capitalize on heat and light from the sun and reduce the need for mechanical and electrical systems for internal lighting, heating, and cooling.
 - (b) Structures shall be sited and designed to preserve unobstructed broad views of the ocean and minimize visual impacts.
 - (c) Development in open fields shall be prohibited.
 - (d) In inland valleys, development outside of existing communities shall be located on the edge of the valley or within or behind existing tree stands or groupings, leaving the valley floor and agricultural land open.

- (e) Structures shall be clustered to the extent feasible.
 - (f) Structures shall be sited behind or near existing vegetation or topographic relief to screen them from view from public roads and use areas; if not possible, native trees and shrubs which will not grow to block views to the coastline but will provide full screening of structures within 5 years shall be planted.
 - (g) New development shall be sited and designed to minimize removing trees. Trees shall be retained to the extent possible. Structures shall be located within or behind wooded areas, tree stands, or tree groupings to screen them from view.
 - (h) On ridgelines, pruning or removing tree stands or groupings shall be prohibited if doing so would make structures more visible from public roads and use areas. Removing tree Windbreaks shall be prohibited unless it is necessary to remove diseased trees.
 - (i) On hillsides, new structures shall be sited and designed such that they do not project above the hillside or silhouette against the skyline. On ridgelines, development which would project above the ridgeline shall be prohibited.
- (8) Paved and other impervious surfaces shall be minimized to allow for infiltration of stormwater to groundwater.
- (9) Development shall be designed for sharing of private roads and driveways.
- (10) The following criteria shall be used for building height:
- (a) West of State Highway 1: Building height shall be limited to 16 feet. An increase in height to a maximum of 24 feet shall be permitted if (a) the structure is no higher than 16 feet above grade directly across from the building site, and (b) the structure will neither affect views to the ocean or rivers nor be out of character with surrounding structures.
 - (b) East of State Highway 1: Building height shall be limited to 24 feet. An increase in height to a maximum of 35 feet shall be permitted if (a) the structure is no higher than 24 feet above grade directly across from the building site, and (b) the structure will neither affect views to the ocean or rivers nor be out of character with surrounding structures.
- (11) The following guidelines shall be used for design of buildings:
- (a) Passive solar design shall be used for new buildings. Passive solar design

involves use of various techniques in designing buildings to capitalize on heat and light from the sun that reduces the need for mechanical and electrical systems for internal lighting, heating, and cooling.

- (b) Traditional architectural styles of the Sonoma County Coast shall be used in older development areas and contemporary styles in newer subdivisions.
 - (c) Structures shall be designed to be compatible with the characteristics of the community; and shall be related in size, scale, shape, and style to that of existing adjacent and nearby structures and to natural features.
 - (d) Non-reflective, pitched roofs shall be used, and roof slopes shall be related to those on existing adjacent and nearby structures.
 - (e) Accessory buildings shall be designed to be consistent with the architecture and exterior finish materials and colors of the main building.
- (12) The following guidelines shall be used for design of commercial buildings:
- (a) Buildings shall be compatible with the predominant design of existing buildings in the area.
 - (b) Building height shall be limited to 24 feet unless a greater height would not have an adverse impact on coastal views and there are overriding considerations.
 - (c) Wood or shingle siding and natural or earth colors shall be used.
 - (d) Pitched, non-reflective roofs shall be used unless the building is an historic reproduction.
 - (e) Exterior lighting shall be functional, subtle, and integrated architecturally with the building style, materials, and colors.
 - (f) Parking areas shall be screened from view through siting, design, and landscaping.
- (13) The following guidelines shall be used for exterior finish materials and colors:
- (a) Non-reflective, natural materials and earth colors that blend with the vegetation shall be used on the site unless the building is historic or an historic reproduction, in which case the colors shall be in keeping with the historic style.
 - (b) Composition shingle and shake roofs in darker natural or earth colors compatible with the exterior finish colors of the buildings shall be used.

- (c) Wood or shingle siding shall be used.
 - (d) Metal window frames shall not be used unless they are bronze anodized aluminum or baked enamel.
 - (e) Dark and non-reflective driveway materials shall be used.
- (14) The following guidelines shall be used for landscaping:
- (a) Landscaping shall be used to integrate the manmade and natural environments and to screen and soften the visual impact of new development.
 - (b) Landscaping shall be designed to blend in with the character of the site and area.
 - (c) Existing vegetation, topography, rock outcrops, and natural water bodies shall be incorporated into the landscaping plan.
 - (d) Native and drought-tolerant plant materials shall be used in landscaping, especially where it is visible from public roads.
 - (e) Planting lawn areas shall be avoided. If lawn is to be planted, it shall be kept to a minimum, and consolidated to minimize visual and other impacts, and planting it along narrow walkways and median strips shall be avoided.
 - (f) To reduce water and energy use, landscaping shall be designed, established, and maintained in compliance with the Sonoma County Water Efficient Landscape Ordinance (Ordinance No. 5872) and in accordance with the water efficient landscaping principles of the U.S. Environmental Protection Agency's Water Sense Program and the Sonoma County Water Agency's "Qualified Water Efficient Landscaper" certification. ~~Group~~ Plants shall be grouped by hydrozone and ~~place~~ each hydrozone shall be placed on a separate irrigation valve. A hydrozone is a grouping of plants with similar water and microclimate needs and tolerances (e.g., soil type, drainage, elevation, shade, sun, exposure/slope, and wind).
 - (g) An automatically controlled, water efficient underground drip or sprinkler system shall be used for irrigation. A weather-based self-adjusting irrigation controller with a rain sensor is preferred.
 - (h) The following features shall be shown on the landscaping plan: outdoor lighting, signs, trash bins, fencing, utility equipment, paving, and outdoor furniture.

- (i) Landscaping shall be used to screen parking areas from view.
 - (j) Planting vegetation west of State Highway 1 which could grow to block views to the coastline shall be prohibited.
- (15) Fences shall be discouraged on property lines. Fences shall be designed to be extensions of the main building, constructed of materials that complement the main building, and to be less than six feet unless they are used for screening service areas or for privacy.
- (16) Exterior lighting shall be designed to be functional, subtle, and architecturally integrated with the style and exterior finish materials and colors of the buildings.
- (17) Parking areas shall be sited and designed so that they are out of view or screened from view. Screening may include planting of trees and shrubs.
- (18) Large agricultural structures shall be sited out of view. Encourage use of designs and exterior finish materials and colors that blend with the natural vegetation.
- (19) The following guidelines shall be used for signs:
- (a) The use of outdoor signs shall be minimized.
 - (b) The number of signs on a site shall be limited to one attached sign per building side which faces the site access road(s).
 - (c) Signs shall be designed in terms of location, size, height, shape, color, and illumination so that they relate to and are compatible with the surrounding land uses, complement the design of existing and proposed buildings, and are compatible with nearby conforming signs. Signs shall be designed to be unobtrusive.
 - (d) Signs shall be designed to be simple and easy to read.
 - (e) Signs shall be designed to be vandal-proof and weather-resistant.
 - (f) Signs not attached to buildings shall be of monument style and have landscaping at the base.
 - (g) Signs attached to buildings shall be integral to the building design. Attaching signs on towers, spires, roofs, or roof fascias shall be avoided.
 - (h) On attached signs, signs comprised of individual letters applied directly to the building surface ~~are~~ shall be preferred over attached box or cabinet signs.

- (i) Use of struts, braces, kickbacks, or guy wires to support signs shall be avoided.
 - (j) On internally illuminated signs, illumination shall be limited to letters and graphic elements with an opaque background.
 - (k) On externally illuminated signs, the source of illumination shall be shielded from adjacent roads and properties.
 - (l) For multiple occupancy buildings a Master Sign Program shall be developed to promote design consistency and facilitate processing permits.
- (20) All extensions of utility distribution lines to serve new development shall be placed underground. **(Existing LCP Revised: Recommendations 4-25 on pages 173-180)**

Policy C-OSRC-4c: Develop design guidelines for discretionary projects (Coastal Permits, Use Permits, Design Review, etc.) in rural areas that protect and reflect the rural character of the Sonoma County Coast. The following general design principles shall be used until these Design Guidelines are adopted, while assuring that design guidelines for agricultural support uses on agricultural lands are consistent with Policies AR-4f-g of the Agricultural Resources Element.

- (1) New structures shall blend into the surrounding landscape, rather than stand out.
- (2) Landscaping comprised of native and drought-tolerant plants shall be included, and designed to blend in with the character of the area.
- (3) Adequate space shall be provided for natural site features which ~~are~~ shall be preserved and incorporated into the site plan.
- (4) Fencing shall be minimized and the site shall remain open to the extent practicable.
- (5) Paved areas and other impervious surfaces shall be minimized and shall provide informal parking areas.
- (6) Exterior lighting and signage shall be minimized. **(GP2020 Revised)**

Policy C-OSRC-4d: ~~Promote retention and proper management of Existing tree~~ Windbreaks which are oriented predominantly east-west ~~oriented~~ and do not block ~~extensive coastal views~~ or interrupt views to the coast shall be retained; and development of discourage new tree Windbreaks ~~that~~ which would block or interrupt ~~coastal~~ views to the coast shall be discouraged. (Existing LCP Revised)

- ~~14. — Apply site and design guidelines contained in the visual section to development in urban areas and coastal zone scenic view sheds. (Existing LCP)~~
- ~~15. — Encourage Coastal Conservancy projects or other programs to protect certain lands having high public benefit. (Existing LCP)~~
- ~~16. — Encourage consolidations of lots in high hazard areas and visually or environmentally sensitive areas. (Existing LCP)~~

Design Guidelines Specific to Each Coastal Community

Policy C-OSRC-4e: Develop Design Guidelines which reflect the character of the community appropriate for each community on the Sonoma County Coast. **(GP2020 Revised)**

Policy C-OSRC-4f: For Bodega Bay excluding the Core Area, the following design guidelines in addition to the Sonoma County Coast Community Design Guidelines shall be used. In the case of conflict, the Bodega Bay Design Guidelines shall supersede the Coast Community Design Guidelines:

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

Policy C-OSRC-4g: For the Bodega Bay Core Area (area includes including Taylor Tract and the planned residential area between south of Taylor Tract between State Highway 1 and the area that was proposed for the former State Highway 1 Bypass), the following design guidelines shall be used in addition to the Sonoma County Coastal Zone Community Design Guidelines, the following guidelines will be applied to Bodega Bay development. Where In the case of conflicts occur, these Bodega Bay Core Area Design Guidelines shall supersede the general Coast Community Design Guidelines.

- (1) ~~Site and design~~ Structures shall be sited and designed to take advantage of bay views without blocking bay views of neighboring structures.
- (2) ~~Limit~~ Building height shall be limited to 16 feet except that in major developments up to 15 percent of the units may exceed the height limit. Height for residential structures is measured as the vertical distance from the average level of the highest and lowest points of that portion of the lot covered by the building to the topmost point of the roof. ~~Where these requirements conflict with the height, site, and bulk criteria of Appendix B (Bane Bill), for those properties listed, the requirements of Appendix B shall be followed.~~

- (3) The following guidelines shall be used for building design:
- (a) ~~Encourage~~ The traditional building forms of Sonoma County Coast buildings shall be used, including Greek Revival, Salt Box, and simple cottage styles similar to existing homes.
 - (b) ~~Encourage~~ Pitched roofs shall be used. Flat roofs may be appropriate where compatible with the roofs on existing structures.
 - (c) Where a building is between two existing structures, the design of that building should act as a transition between the two existing structures.
- (4) The following guidelines shall be used for exterior finish materials and colors:
- (a) ~~Encourage~~ Wood or shingle siding shall be used.
 - (b) ~~Encourage~~ Painted exteriors in colors similar to those existing on structures in the town of Bodega Bay shall be used (i.e., rust, red, white, green, beige, brown, gray, yellow, and blue). ~~Other colors must be approved by The Design Review Committee~~ must approve other colors. Natural wood exteriors may be intermixed with painted exteriors but shall not dominate the new development area.
 - (c) ~~Encourage~~ Wood trim windows frames painted in a contrasting but harmonizing color shall be used.
- (5) ~~Discourage~~ Fences over three feet high shall be discouraged on property lines. ~~Encourage~~ Traditional picket fences shall be encouraged.
- (6) ~~Encourage~~ A minimum paved street widths for paved streets shall be encouraged, consistent with circulation, safety, and parking requirements, to provide a sense of continuity between ~~the~~ new development and the original town of Bodega Bay.
- (7) ~~Require~~ Separated bike paths and pedestrian walkways shall be required on one side of the street in areas of new development ~~areas~~.
- (8) ~~Encourage~~ Variation in setbacks shall be encouraged.
- (9) ~~Encourage~~ Detached garages shall be encouraged in and adjacent to the Taylor Tract. Single-car garages may be appropriate. **(Existing LCP Revised)**

Policy C-OSRC-4h: For The Sea Ranch, Timber Cove, and Sereno del Mar, the applicable Design Guidelines in addition to the Sonoma County Coast Community Design Guidelines shall

be used. In the case of conflict, The Sea Ranch, Timber Cove, and Sereno del Mar Design Guidelines shall supersede the Coast Community Design Guidelines. **(New)**

~~27. **Bodega Harbor.** Continue to enforce Design Guidelines and Construction Regulations for Bodega Harbor Subdivision. Where homes within view corridors do not meet Bodega Harbor height, bulk and location conditions, the County Design Review Committee will review proposed plans for conformance with Coastal Plan view protection objectives. **(Existing LCP)**~~

~~28. **The Sea Ranch.** Continue to enforce The Sea Ranch Design Guidelines, incorporating the specified Height, Site, and Bulk Criteria provided for in Section 30610.6 (d) of the Public Resources Code. If a proposed residence does not meet the Height, Site and Bulk Criteria, the County may issue a variance as allowed in the adopted Height, Site and Bulk Criteria. **(Existing LCP)**~~

3. BIOTIC RESOURCES POLICY

Background

Sonoma County's varied natural landscapes range from the marine environments of the Coastal Zone to the extensive forests, woodlands, and grasslands of the Coast Range mountains and foothills to the vernal pools and freshwater marshes of the Santa Rosa Plain and other valley floors to the extensive marshlands along San Pablo Bay. Areas of natural vegetation support many native plant and animal species and encompass habitat for special-status species, wetlands, and sensitive natural communities. The vegetative cover also helps reduce surface runoff, protect water quality, maintain air quality, retain soil, and maintain stream channels. These areas together create a varied natural environment important to the quality of life and the unique character of the County.

The Sonoma County Coast is rich in natural resources. It supports over 15 types of upland, wetland, riparian, coastal, and open water habitats that support over 30 animal species and 48 plant species that are designated as rare, threatened, or endangered and are protected under state and federal laws and regulations. Use of the coastline by shorebirds, seabirds, and waterfowl, as well as numerous terrestrial and marine mammals, reptiles, and amphibians has been documented over the last several decades.

The Biotic Resources section of the Open Space and Resource Conservation Element provides an inventory of biological resources on the Sonoma County Coast, particularly those which are sensitive to disturbance, and methods to protect these resources. The section is separated into two sections on Environmentally Sensitive Habitat Areas (ESHA) - a section which addresses protection of several types of ESHA on the Sonoma County Coast; and a section which focuses on one type, the Riparian Corridor.

California Coastal Act

The 1976 California Coastal Act (Coastal Act) policies encourage the protection and continued biological productivity of marine resources and environmentally sensitive areas, defined in the Coastal Act as follows:

***30107.5.** "Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

The following Sections of the Coastal Act are relevant to biological resources in the Coastal Zone:

***30230.** Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

***30231.** The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

30233.

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

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
- (2) Maintaining, existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public*

recreational piers that provide public access and recreational opportunities.

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

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

(6) Restoration purposes.

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

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

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

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

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

30236. *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.*

30240.

(a) Environmentally sensitive habitat areas shall be protected against any significant

disruption of habitat values, and only uses dependent on such resources shall be allowed within those areas.

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

California Floristic Province

The Sonoma County Coast is part of the California Floristic Province (CFP), a zone of Mediterranean-type climate located on the Pacific Coast of North America with a unique flora (the group of plants of a particular region, habitat, or period) that bears similarities to floras found in other regions which experience a winter rainfall, summer drought climate similar to the Mediterranean Basin. In 1996 the CFP was designated as a “world biodiversity hotspot” by Conservation International because it contains an unusually high concentration of endemic plant species - plant species that cannot be found anywhere else in the world. To qualify as a world biodiversity hotspot, a region must meet two criteria: it must contain at least 1,500 species of plants as endemics, and it has to have lost at least 70% of its original vegetation or habitat. A hotspot contains irreplaceable areas to the plants and animals that live there.

The California Floristic Province is home to over 3,500 different species of plants, 61% of which are endemic (native or confined to a certain region). As defined by Conservation International, the CFP has an area of 293,804 square kilometers and includes 70% of California. It extends into southwestern Oregon, a small part of western Nevada, and northern Baja California. It is one of only five areas in the world with a Mediterranean-type climate - characterized by hot, dry summers and cool, wet winters - all of which are biodiversity hotspots. The CFP contains a wide variety of vegetation communities, including sagebrush steppe, prickly pear shrubland, coastal sage scrub, chaparral, juniper-pine woodland, upper montane-subalpine forest, alpine forest, riparian forest, cypress forests, mixed evergreen forest, Douglas fir forest, sequoia forest, redwood forest, coastal dune, and salt marsh. The Sonoma County Coast contains the riparian forest, coastal sage scrub, coastal dune, and salt marsh vegetation communities of the CFP. In 2013 about 80,000 square kilometers or 24.7 percent of the original vegetation communities of the CFP remain in more or less pristine condition (Conservation International website 2013). Almost every one of the biodiversity hotspots is subject to its endemic plant and animal species being at greater risk than the other species from the impact of humans.

California has an economy that ranks it among the top seven countries in the world, it is the most populated and fastest growing state in the nation, and it supplies one-half of all the agricultural products consumed in the United States each year. However, human population pressures have rendered California one of the four most ecologically degraded states in the country, with all or part of the nation's eight most threatened ecosystems represented. The greatest threats to the ecosystems of the California Floristic Province are expansion of urban

areas, habitat encroachment, and pollution; expansion of large-scale agriculture; strip mining and oil extraction; road construction; livestock grazing; logging; increasing use of off-road vehicles; invasive, non-native plant species; and suppression of natural fires (Conservation International website 2013).

Climate Change – Potential Impacts

The following discussions of the potential impacts of climate change on ecosystems and forests are based on information on the U.S. Environmental Protection Agency's 2013 Website.

Ecosystems. Climate is an important environmental influence on ecosystems. Climate changes and the impacts of climate change affect ecosystems in a variety of ways. For instance, warming could force species to migrate to higher latitudes or higher elevations where temperatures are more conducive to their survival. Similarly, as sea level rises, saltwater intrusion into a freshwater system may force some key species to relocate or die, thus removing predators or prey that were critical in the existing food chain.

Climate change not only affects ecosystems and species directly, it also interacts with other human stressors such as development. Although some stressors cause only minor impacts when acting alone, their cumulative impact may lead to dramatic ecological changes. For instance, climate change may exacerbate the stress that land development places on fragile coastal areas. Additionally, recently logged forested areas may become vulnerable to erosion if climate change leads to increases in heavy rain storms.

For many species, the climate where they live or spend part of the year influences key stages of their annual life cycle such as migration, blooming, and mating. As the climate has warmed in recent decades, the timing of these events has changed in some parts of the country.

As temperatures increase, the habitat ranges of many North American species are moving northward in latitude and upward in elevation. While this means a range expansion for some species, for others it means a range reduction or a movement into less hospitable habitat or increased competition. Some species have nowhere to go because they are already at the northern or upper limit of their habitat.

Climate change and shifts in ecological conditions could support the spread of pathogens, parasites, and diseases, with potentially serious effects on human health, agriculture, and fisheries.

Climate change, along with habitat destruction and pollution, is one of the important stressors that can contribute to species extinction. The Intergovernmental Panel on Climate Change (IPCC) estimates that 20-30% of the plant and animal species evaluated so far in climate change studies are at risk of extinction if temperatures reach levels projected to occur by the

end of this century.

Forests. Climate influences the structure and function of forest ecosystems and plays an essential role in forest health. A changing climate may worsen many of the threats to forests, such as pest outbreaks, fires, human development, and drought.

Climate changes directly and indirectly affect the growth and productivity of forests - directly due to changes in atmospheric carbon dioxide and climate, and indirectly through complex interactions in forest ecosystems. Climate also affects the frequency and severity of many forest disturbances.

In conjunction with the projected impacts of climate change, forests face impacts from land development, suppression of natural periodic forest fires, and air pollution. Although it is difficult to separate the effects of these different factors, the combined impact is already leading to changes in our forests. As these changes are likely to continue in the decades ahead, some of the valuable goods and services provided by forests may be compromised.

Many aspects of projected climate change will likely affect forest growth and productivity. Warming temperatures could increase the length of the growing season and shift the geographic ranges of some tree species. Habitats of some types of trees are likely to move northward or to higher altitudes. Other species may be at risk locally or regionally if conditions in their current geographic range are no longer suitable.

Climate change will likely increase the risk of drought in some areas and the risk of extreme precipitation and flooding in others. Increased temperatures would alter the timing of snowmelt, affecting the seasonal availability of water. Although many trees are resilient to some degree of drought, increases in temperature could make future droughts more damaging than those experienced in the past. In addition, drought increases wildfire risk, since dry trees and shrubs provide fuel to fires.

Climate change could alter the frequency and intensity of forest disturbances such as insect outbreaks, invasive species, wildfires, and storms. These disturbances can reduce forest productivity and change the distribution of tree species. In some cases, forests can recover from a disturbance. In other cases, existing species may shift their range or die out. In these cases, the new species of vegetation that colonize the area create a new type of forest.

It is not possible to predict with any accuracy the impacts of climate change on Sonoma County Coast ecosystems and forests in the next 20 years.

Environmentally Sensitive Habitat Areas

As defined by Section 30107.5 of the California Coastal Act, Environmentally Sensitive Habitat

Area (ESHA) means any area in which plant or animal life or their habitats are either rare or especially valuable because of their specific nature or role in an ecosystem, and which could be easily disturbed or degraded by human activities and developments. However, the policies below provide for protecting biotic habitats both within and outside ESHA. Currently available information on the location and value of native habitats and sensitive resources is incomplete and changes over time as sites are assessed, new occurrences are reported, and additional locations are identified. As more habitat mapping information becomes available in the future, changes in designations will be considered along with possible policy changes. Regular collecting and updating of reliable information and refining best management practices are necessary to protect the biotic resources on the Sonoma County Coast over the long-term.

Protecting ESHA is necessary because they are sensitive to change and the adverse effects of human activities. Forests have been logged, natural areas converted to urban and agricultural uses, non-native species introduced, and barriers created as a result of development, constructing roadways, installing fencing, etc. These changes in the natural landscape have forced wildlife into smaller areas and marginal habitat and limited the dispersal and movement of native plants and animals.

Figures C-OSRC-2a-k show the ESHA of the ten SubAreas of the Sonoma County Coastal Zone. They include the “Environmentally Sensitive Areas” identified in the previous Local Coastal Plan.

ESHA Categories

Marshes and Other Wetlands. As defined by Section 30121 of the California Coastal Act, “wetland” means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Below is the U.S. Fish and Wildlife Service’s definition and technical criteria for wetlands used by the California Coastal Commission. There is one exception to the technical criteria – drainage ditches as defined herein are not considered wetlands. A drainage ditch is defined as a narrow (usually less than 5 feet wide), man-made, non-tidal ditch excavated from dry land.

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface of the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: 1) at least periodically, the land supports predominantly hydrophytes; 2) the substrata is predominantly undrained hydric soil; and 3) the substrata is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Wetlands are defined herein to include lands that are identified under other categories in

some land use classifications. For example, wetlands and farmlands are not necessarily exclusive. Many areas that we define as wetlands are farmed during dry periods, but if they are not tilled or planted to crops, a practice that destroys the natural vegetation, they will support hydrophytes.

Drained hydric soils that are now incapable of supporting hydrophytes because of a change in water regime are not considered wetlands by our definition. These drained hydric soils furnish a valuable record of historic wetlands, as well as an indication of areas that may be suitable for restoration.

The upland limit of a wetland is designated as: 1) the boundary between land with predominantly hydrophytic cover; 2) the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric; or 3) in the case of wetlands without vegetation or soil, the boundary between land that is flooded or saturated at some time each year and land that is not.

Wetlands are recognized for their high fish and wildlife habitat values, occurrences of unique plant and animal species, and importance in water recharge and filtration. Wetlands meeting certain criteria are subject to regulations of the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife (CDFW), or applicable Regional Water Quality Control Board. Detailed delineations are typically necessary to confirm the presence and extent of any jurisdictional wetlands. The ESHA included under “Marshes and Wetlands” include but are not limited to the following (some were identified as “Environmentally Sensitive Areas” in the previous Local Coastal Plan). Detailed site-specific surveys are typically necessary to confirm the presence or absence of Wetlands.

- Coastal Brackish Marsh
- Coastal and Valley Freshwater Marsh
- Northern Coastal Salt Marsh
- Pond or Reservoir

Sensitive Natural Communities. CDFW has identified certain natural habitats as sensitive natural communities which are rare and vulnerable to further degradation and loss. Many of these communities support populations of special status plant species and are important to native wildlife. The ESHA included under “Sensitive Natural Communities” include but are not limited to the following (some were identified as “Environmentally Sensitive Areas” in the previous Local Coastal Plan). Detailed site-specific surveys are typically necessary to confirm the presence or absence of Sensitive Natural Communities.

- Bodega Harbor Tideflat
- Coastal Bluff
- Coastal Terrace Prairie
- Coastal Woodland
- Dunes/Coastal Strand
- Eelgrass Bed
- Kelp Canopy
- Mendocino Pygmy Cypress Forest
- Offshore Rocks
- Open Water
- Rocky Intertidal Shoreline
- Sand Beach, Spit, or Bar

Special Status Species. Special status species are plants and animals which are listed or candidate species under the state or federal Endangered Species Acts and other species considered rare enough to warrant special consideration (i.e., state or federal Species of Concern and plant species on the California Native Plant Society (CNPS) List 1B. Reported occurrences of special status species are compiled by the California Natural Diversity Data Base (CNDDB) of the CDFW and are routinely updated as new information becomes available. Detailed site-specific surveys are typically necessary to confirm the presence or absence of special status species.

The ESHA included under “Special Status Plants” (common names) include but are not limited to the following (some were identified as “Environmentally Sensitive Areas” in the previous Local Coastal Plan):

- Baker’s Goldfields (*Lasthenia californica ssp. bakeri*)
- Baker’s Larkspur (Critical Habitat) (*Delphinium bakeri*)
- Blasdale’s Bent Grass (*Agrostis blasdalei*)
- Blue Coast Gilia (*Gilia capitata ssp. chamissonis*)
- Bristly Sedge (*Carex comosa*)

- Coast Lily (*Lilium maritimum*)
- Coastal Bluff Morning Glory (*Calystegia purpurata ssp. saxicola*)
- Coastal Triquetrella (*Triquetrella californica*)
- Dark-Eyed Gilia (*Gilia millefoliata*)
- Deceiving Sedge (*Carex saliniformis*)
- Franciscan Onion (*Allium peninsulare var. franciscanum*)
- Franciscan Thistle (*Cirsium andrewsii*)
- Golden Larkspur (*Delphinium luteum*)
- Hoffman's Bristly Jewel-Flower (*Streptanthus glandulosus var. hoffmanii*)
- Kneeland Prairie Penny-cress (Critical Habitat) (*Noccaea fendleri ssp. californicum*)
- Long-Beard Lichen (*Usnea longissima*)
- Maple-Leaved Checkerbloom (*Sidalcea malachroides*)
- Marin Checkerbloom (*Sidalcea hickmanii ssp. viridis*)
- Marin Knotweed (*Polygonum marinense*)
- Napa False Indigo (*Amorpha californica var. napensis*)
- Oregon Polemonium (*Polemonium carneum*)
- Perennial Goldfields (*Lasthenia californica ssp. macrantha*)
- Pink Sand Verbena (*Abronia umbellata ssp. breviflora*)
- Point Reyes Bent Grass (*Agrostis clivicola var. punta-reyesensis*)
- Point Reyes Bird's-Beak (*Cordylanthus maritimus ssp. palustris*)
- Point Reyes Checkerbloom (*Sidalcea calycosa ssp. rhizomata*)
- Point Reyes Horkelia (*Horkelia marinensis*)
- Purple-Stemmed Checkerbloom (*Sidalcea malviflora ssp. purpurea*)
- Pygmy Cypress (*Cupressus goveniana ssp. pigmaea*)

- Robust Monardella (*Monardella villosa* ssp. *globosa*)
- Roderick's Fritillary (*Fritillaria roderickii*)
- Rose Leptosiphon (*Leptosiphon rosaceus*)
- Rose Linanthus (*Linanthus rosaceus*)
- Running Pine (*Lycopodium clavatum*)
- San Francisco Bay Spineflower (*Chorizanthe cuspidata* var. *cuspidata*)
- Seaside Tarplant (*Hemizonia congesta* ssp. *congesta*)
- Secund Jewel Flower (*Streptanthus glandulosus* var. *hoffmanii*)
- Short-Leaved Evax (*Hesperrevax sparsiflora* var. *brevifolia*)
- Showy Indian Clover (*Trifolium amoenum*)
- Sonoma Alopecurus (*Alopecurus aequalis* var. *sonomensis*)
- Sonoma Spineflower (*Chorizanthe valida*)
- Supple Daisy (*Erigeron supplex*)
- Swamp Harebell (*Campanula californica*)
- Tidestrom's Lupine (*Lupinus tidestromi*)
- Yellow Larkspur (*Delphinium luteum*)
- Woolly-Headed Gilia (*Gilia capitata* ssp. *tomentosa*)
- Woolly-Headed Spineflower (*Chorizanthe cuspidata* var. *villosa*)

The ESHA included under "Special Status Animals" (common names) include but are not limited to the following (some were identified as "Environmentally Sensitive Areas" in the previous Local Coastal Plan):

- American Badger (*Taxidea taxus*)
- Bank Swallow (*Riparia riparia*)
- Behren's Silverspot Butterfly (*Speyeria zerene behrensii*)

- Bumblebee Scarab Beetle (*Lichnanthe ursina*)
- Burrowing Owl (*Athene cunicularia*)
- California Brackishwater Snail (*Tryonia imitator*)
- California Freshwater Shrimp (*Syncaris pacifica*)
- California Red-Legged Frog (*Rana aurora draytonii*)
- California Red-Legged Frog (Critical Habitat)
- Chinook Salmon (*Oncorhynchus tshawytscha*)
- Coho Salmon (*Oncorhynchus kisutch*)
- Double-Crested Cormorant (*Phalacrocorax auritus*)
- Foothill Yellow-Legged Frog (*Rana boylei*)
- Great Blue Heron (*Ardea herodias*)
- Gualala Roach (*Lavinia symmetricus parvipinnus*)
- Hoary Bat (*Lasiurus cinereus*)
- Marbled Murrelet (Critical Habitat) (*Brachyramphus marmoratus*)
- Monarch Butterfly (*Danaus plexippus*)
- Myrtle's Silverspot Butterfly (*Speyeria zerene myrtleae*)
- Northern Spotted Owl (*Strix occidentalis caurina*)
- Northern Spotted Owl (Critical Habitat)
- Northwestern Pond Turtle (*Clemmys marmorata marmorata*)
- Osprey (*Pandion haliaetus*)
- Sonoma Arctic Skipper (*Carterocephalus palaemon magnus*)
- Sonoma Tree Vole (*Arborimus pomo*)
- Steelhead Salmon (*Oncorhynchus mykiss*)
- Tidewater Goby (*Eucyclogobius newberryi*)

- Western Pond Turtle (*Actinemys marmorata*)
- Western Snowy Plover (*Charadrius alexandrinus nivosus*)
- Western Snowy Plover (Critical Habitat)

The ESHA included under “Other Special Status Animals” include but are not limited to the following (some were identified as “Environmentally Sensitive Areas” in the previous Local Coastal Plan):

- Egret or Heron Rookery
- Marine Mammal Haul-Out Ground
- Osprey Nest Site
- Seabird Nest Site
- Smelt Spawning Area

Riparian Corridors. Areas along streams that naturally support native vegetation and wetlands are referred to as “Riparian Corridors.” The abundant vegetation in the streamside environment provides food and water and creates breeding, egg deposition, and nesting areas for insects, fish, amphibians, reptiles, birds, and mammals. The diversity of plant and animal species in riparian areas is among the highest of Sonoma County’s natural landscapes. The dense vegetation provides protective cover and shade and contributes woody debris to stream channels, providing critically important habitat for salmon, steelhead, freshwater shrimp, and other protected aquatic species.

Riparian vegetation contributes to water quantity and quality in several ways. Vegetation filters sediment and pollutants in stormwater runoff, slows flood flows, provides erosion protection for streambanks, and facilitates groundwater recharge. Elimination of natural plant communities along streams can increase surface run-off and siltation; contribute to water temperatures too warm for steelhead, salmon, and other fish; and reduce long-term water availability.

Protecting riparian areas can create conflicts with agricultural and urban uses. Riparian corridors often contain prime soils for crops, provide water and shade for livestock, and provide a source of irrigation water and locations for agricultural wells. Riparian areas may support insect pests, wildlife, invasive plants, and plant diseases which may adversely affect adjacent agricultural uses. In turn, vegetation removal, mowing, fencing, spraying, discing and other agricultural practices can reduce the habitat support functions of nearby riparian areas. In urban areas, streamside areas provide natural open space and opportunities for recreation, education, and aesthetic appreciation; but these areas and their habitat value are often restricted by buildings, yards, landscaping, fencing, and trails.

ESHA Sensitivity Designation

This Local Coastal Plan has one sensitivity designation for Environmentally Sensitive Habitat Areas: “Preservation.” The “Preservation” designation is similar to the “Sanctuary-Preservation” designation established in the previous Local Coastal Plan. Preservation Areas are the most environmentally sensitive ESHA in the Coastal Zone.

The following 17 ESHA are designated “Preservation”:

- Bodega Harbor Tideflat
- Coastal Brackish Marsh
- Coastal and Valley Freshwater Marsh
- Dunes/Coastal Strand
- Egret or Heron Rookery
- Marine Mammal Haul-Out Ground
- Mendocino Pygmy Cypress Forest
- Northern Coastal Salt Marsh
- Offshore Rocks
- Open Water
- Osprey Nest Site
- Riparian Corridor
- Rocky Intertidal Shoreline
- Sand Beach, Spit, or Bar
- Seabird Nest Site
- Special Status Animals
- Special Status Plants

SubAreas. ESHA designated “Preservation” in each SubArea of the Sonoma County Coastal Zone include but are not limited to the following:

The Sea Ranch North: Coastal Brackish Marsh; Coastal and Valley Freshwater Marsh; Riparian Corridor; Rocky Intertidal Shoreline; Seabird Nest Site; Special Status Animals; and Special Status Plants.

The Sea Ranch South: Rocky Intertidal Shoreline; Seabird Nest Site; Special Status Animals; and Special Status Plants.

Stewarts Point: Rocky Intertidal Shoreline; Seabird Nest Site; Special Status Animals; and Special Status Plants.

Salt Point/Horseshoe Cove: Coastal and Valley Freshwater Marsh; Marine Mammal Haul-Out Ground; Mendocino Pygmy Cypress Forest; Osprey Nest Site; Riparian Corridor; Rocky Intertidal Shoreline; Special Status Animals; and Special Status Plants.

Timber Cove/Fort Ross: Osprey Nest Site; Riparian Corridor; Rocky Intertidal Shoreline; Seabird Nest Site; Special Status Animals; and Special Status Plants.

The High Cliffs/Muniz/Jenner: Offshore Rocks; Riparian Corridor; Rocky Intertidal Shoreline; Seabird Nest Site; Special Status Animals; and Special Status Plants.

Duncans Mills: Coastal and Valley Freshwater Marsh; Osprey Nest Site; Riparian Corridor; Special Status Animals; and Special Status Plants.

Pacific View/Willow Creek: Coastal Brackish Marsh; Coastal and Valley Freshwater Marsh; Egret or Heron Rookery; Riparian Corridor; Rocky Intertidal Shoreline; Sand Beach, Spit, or Bar; Special Status Animals; and Special Status Plants.

State Beach/Bodega Bay: Bodega Bay Tideflat; Coastal and Valley Freshwater Marsh; Dunes/Coastal Strand; Open Water; Riparian Corridor; Rocky Intertidal Shoreline; Sand Beach, Spit, or Bar; Seabird Nest Site; Special Status Animals; and Special Status Plants.

Valley Ford: Open Water; Riparian Corridor; Special Status Animals; and Special Status Plants.

ESHA Identification

ESHA are identified at the time a proposed development or Local Coastal Plan Amendment is under review, using the following procedures: review of existing resource maps (e.g., **Figures C-OSRC-2a-k**) and aerial photography; site field surveys; site biological resource assessments; and application of LCP habitat definitions and technical criteria (e.g., wetland delineations).

Where, during the course of review of a proposed project, staff discovers an ESHA that is not on the existing resource maps, Planning staff shall use the LCP habitat definitions and technical criteria and the California Coastal Commission Guidelines for wet ESHA to define and delineate

the ESHA.

ESHA Allowable Uses

Under Section 30240 of the California Coastal Act, the only uses allowed in ESHA are those which are dependent on the resources of the ESHA:

Section 30240. Environmentally sensitive habitat areas; adjacent developments

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

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

"Development" is defined as on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511). As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.

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

Goal C-OSRC-6: Protect and enhance the natural habitats and diverse plant and animal communities on the Sonoma County Coast.

Objective C-OSRC-6.1: Identify and protect native vegetation and wildlife, particularly

occurrences of special status species, wetlands, sensitive natural communities, and areas of essential habitat connectivity.

Objective C-OSRC-6.2: Designate important Environmentally Sensitive Habitat Areas and update designations regularly using credible data sources.

Objective C-OSRC-6.3: Establish development guidelines to protect designated Environmentally Sensitive Habitat Areas and assure that their quality is maintained.

Objective C-OSRC-6.4: Where appropriate, support regulatory efforts by other agencies to protect biotic habitats.

Objective C-OSRC-6.5: Maintain connectivity between natural habitat areas.

Objective C-OSRC-6.6: Establish standards and programs to protect native trees and plant communities.

Objective C-OSRC-6.7: Support use of native plant species and removal of invasive exotic plant species.

Objective C-OSRC-6.8: Encourage voluntary efforts to restore and enhance biotic habitat.

Objective C-OSRC-6.9: Preserve and restore major marshes and wetlands.

Objective C-OSRC-6.10: Promote production of native marine and shoreline plant and animal habitats.

The following policies shall be used to achieve these objectives:

Environmentally Sensitive Habitat Area Designation

Policy C-OSRC-6a: Designate as Environmentally Sensitive Habitat Areas in the Open Space and Resource Conservation Element: a) the known locations of Environmentally Sensitive Habitat Areas shown on **Figures C-OSRC-2a-k** and identified as Marshes and Wetlands, Sensitive Natural Communities, Special Status Plant Species, Special Status Animal Species, and Other Sensitive Resources; b) the actual extent of Environmentally Sensitive Habitat Areas identified through aerial photography, site field survey, site biological resource assessment, or other site assessment method; and c) new occurrences of biotic resources reported on state or federal databases (e.g., California Natural Diversity Database) or in biological resource assessments. **(GP2020 Revised)**

Policy C-OSRC-6b: Rezone to the Biotic Habitat (BH) Combining Zoning District all areas of land or water designated as an Environmentally Sensitive Habitat Area. **(GP2020 Revised)**

Policy C-OSRC-6c: The Zoning Database shall guide determinations whether the Biotic Habitat (BH) Combining Zoning District applies to any area of land or water. The boundary of an Environmentally Sensitive Habitat Area shall consist of: a) the known locations of the Environmentally Sensitive Habitat Area as shown on **Figures C-OSRC-2a-k**; and b) the actual extent of the biological resources as determined by aerial photography, field survey, biological resource assessment, or other assessment methods. **(GP2020 Revised)**

Development Policy, Guidelines, and Standards

Policy C-OSRC-6d: Prepare and adopt an ordinance that provides for protection of Environmentally Sensitive Habitat Areas in conformance with the following principles. Until this ordinance is adopted, land use and development which could have an adverse impact on Environmentally Sensitive Habitat Areas (ESHA), including land use and development both inside and outside the boundaries ESHA, shall be required to comply with these principles:

- (1) **Ministerial Projects.** Review, approval, and implementation or construction of all ministerial development and uses shall be conducted according to the following principles:
 - (a) **State and Federal Requirements.** PRMD shall inform the project applicant about the plant and animal species and habitats protected by state and federal agencies; the required permits or clearances from these agencies; and the responsibilities of the project applicant to obtain the required permits or clearances.
 - (b) **Setbacks and other Development Standards.** The project shall comply with the required setbacks from streams, lakes, ponds, and wetlands; and other development standards in Sonoma County Code Chapter 11 (Grading, Drainage, and Vineyard and Orchard Site Development).
- (2) **Discretionary Projects.** Review, approval, and implementation or construction of discretionary uses and development shall be conducted according to the following principles:
 - (a) **State and Federal Requirements.** Project applicants shall provide evidence of permits and clearances required by state and federal agencies before PRMD issues building or grading permits.
 - (b) **Setbacks and Other Standards.** A minimum setback of 100 feet from the edges of wetland ESHA (a greater setback may be established after consultation

with resource agencies) shall be required for all development, uses, and activities, including but not limited to structures, roads, utility lines, parking lots, grading, and vegetation removal. A minimum setback (buffer) from non-wetland ESHA shall be established in consultation with resource agencies.

- (c) **Biotic Resource Assessment.** A biotic resource assessment shall be required for any project which could have an adverse impact on ESHA, including projects outside the ESHA boundaries. The biotic resource assessment shall be performed by a qualified professional and include the following at a minimum:
- (i) A comprehensive analysis of biotic resources on the project site, including general topography, vegetation, geology and soils, and drainage; general wildlife and fish habitats; general wildlife movement and migration corridors; location, size, quality, and other characteristics of special status animal species habitats, special status plant species occurrences, and sensitive plant communities (including delineation of wetlands and riparian corridors); location, water flow, water quality, and bank stability of creeks and streams; location and characteristics of other water features; and identification and mapping of ESHA.
 - (ii) A comparison of pre-project and post-project conditions and identification of potential project impacts on ESHA and other biotic resources both on and off the project site.
- (d) **Restoration and Monitoring Plan.** A Restoration and Monitoring Plan shall be required for any habitat restoration project.

The Restoration and Monitoring Plan shall:

- (i) Be a stand-alone document that describes actual methods and practices to be employed.
- (ii) Avoid such things as marginal notes on large format engineering or landscaping plans; simple tables and bulleted lists; or mere references to information in other planning documents or to literature on field or statistical methods.
- (iii) Be able to be implemented by a technical specialist who has not been involved in the project.
- (iv) Be written in such a way that an educated layman could understand and evaluate the plan.

The Restoration and Monitoring Plan shall include the following key components:

- (i) A clear statement of the goals of the restoration for all habitat types.

- (ii) Characterization of the desired habitat, including an actual sampled habitat, that can act as both as a model for the restoration and as a reference site for developing success criteria.
- (iii) Sampling of reference habitat using the methods that will be applied to the restoration site with reporting of results data.
- (iv) A quantitative description of the chosen restoration site.
- (v) Requirements for designation of a qualified restoration biologist as the Restoration Manager who will be personally responsible for all phases of the restoration.
- (vi) Prohibition on assignment of different phases of the restoration to different contractors without onsite supervision by the Restoration Manager.
- (vii) A specific Grading Plan if the topography must be altered.
- (viii) A specific Erosion Control Plan if soil or other substrate will be significantly disturbed during the course of the restoration.
- (ix) A Weed Eradication Plan designed to eradicate existing weeds and to control future invasion by exotic species that is carried out by hand weeding and supervised by a restoration biologist.
- (x) A Planting Plan that specifies a detailed plant palette based on the natural habitat type that is the model for the restoration, and using local native stock and requiring that if plants, cuttings, or seed are obtained from a nursery, the nursery must certify that they are of local origin and are not cultivars. The Planting Plan shall provide specifications for preparation of nursery stock and include technical details of planting methods (e.g., spacing, mycorrhizal inoculation, etc.).
- (xi) An Irrigation Plan that describes the method and timing of watering, and ensures removal of watering infrastructure by the end of the monitoring period.
- (xii) An Interim Monitoring Plan that includes maintenance and remediation activities and interim performance goals, assessment methods, and schedule.
- (xiii) A Final Monitoring Plan to determine whether the restoration has been successful that specifies: the basis for selection of the performance criteria, types of performance criteria, procedure for judging success, formal sampling design, sample size, approval of a final report, and provision for possible further action. **(GP2020 Revised/New)**

Policy C-OSRC-6e: On Coastal Bluffs, removal of sand or rock except for that necessary for road maintenance; public access off established steps, trails, or paths; and off-road motor vehicles shall be prohibited. Equestrian use shall be restricted in areas where ground compaction and erosion from use of horses would not have an adverse impact on bluff stability. **(Existing LCP Revised: Recommendations 40-44 on page 31)**

Policy C-OSRC-6f: The following guidelines shall be used for developing public access on Coastal Bluffs:

- (1) Steps, trails, and paths shall be sited and designed so as to minimize disruption to vegetation and erosion;
- (2) In areas of heavy recreational use, surfaced steps, trails, and paths shall be constructed; and
- (3) In areas of moderate recreational use, local materials shall be used to construct steps, trails, and paths. **(Existing LCP Revised: Recommendations 45-46 on page 31)**

Policy C-OSRC-6g: Public access to Offshore Rocks used by seabirds to breed or nest or which provide habitat for seals and sea lions shall be prohibited. **(Existing LCP Revised: Recommendation 39 on page 31)**

Policy C-OSRC-6h: In Open Water, the following activities shall be prohibited: dredging, except in winter and in accordance with Section 30233 of the California Coastal Act; and deposition of fill or dredge spoils, except in accordance with Section 30233 of the California Coastal Act. **(Existing LCP Revised: Recommendation 76 on page 34)**

~~Recommendations 58-59, 67, and 78 on pages 32-34 (Existing LCP)~~

~~Recommendations 17-22 and 24-27 on pages 29-30 (Existing LCP)~~

~~Recommendations 28 and 31-33 on page 30 (Existing LCP)~~

~~Recommendations 70-71 on page 33 (Existing LCP)~~

~~Recommendations 4-8 on page 28 (Existing LCP)~~

~~Recommendations 65-66 on page 33 (Existing LCP)~~

~~Recommendations 39 and 72 on pages 31 and 33 (Existing LCP)~~

~~Recommendations 54-55 on page 32 (Existing LCP)~~

~~Recommendations 62-64 on page 32 (Existing LCP)~~

~~Recommendations 34-35 on pages 30-31 (Existing LCP)~~

~~Recommendations 1-3 on page 28 (Existing LCP)~~

~~Recommendation 39 on page 31 (Existing LCP)~~

~~Recommendations 7-8 on page 28 (Existing LCP)~~

~~Recommendation 65 on page 33 (Existing LCP)~~

~~Recommendation 72 on page 33 (Existing LCP)~~

Recommendations 60-61 on page 32 (Existing LCP)

Policy C-OSRC-6i: The use of native plant species in landscaping shall be encouraged. For discretionary projects, the use of native or compatible non-native species for landscaping where consistent with fire safety shall be required. The use of invasive exotic plant species shall be prohibited. **(GP2020 Revised)**

Policy C-OSRC-6i: Carry-out the following activities to preserve Chinook and Coho Salmon Habitat (Anadramous Fish Stream):

- (1) ~~Maintain flows in streams identified as anadramous fish habitat at a~~ The minimum stream flow level as required to continue their ~~shall be maintained in an Anadramous Fish Stream, i.e., the minimum level of flow necessary for use of the stream as an anadramous fish spawning area (i.e., the minimum flow standard); and~~
- (2) ~~Stop~~ All stream diversions shall be stopped when the stream flow in an Anadramous Fish Stream falls below the minimum flow standards until the stream flows returns to a level above the minimum flow standard.
- (3) Allow and encourage maintenance of summer base flow in an Anadramous Fish Stream to ensure survival of fish in all life cycle phases. **(Existing LCP Revised)**

Policy C-OSRC-6j: Carry-out the following activities to preserve Coastal Terrace Prairie:

- (1) ~~Provide areas for public observation of local cormorant population on~~ At Bodega Head and Stump Beach, sites shall be developed for the public to observe cormorants and other seabirds; and
- (2) ~~Encourage use of the upland area of~~ At Stillwater Cove County Park as a suitable area for educational facilities concerning coastal grassland or prairie, use of the upland area for habitat education activities shall be encouraged. **(Existing LCP Revised)**

Re-Evaluation of Policy, Guidelines, and Standards

Policy C-OSRC-6k: In coordination with resource agencies, landowners and affected public, review Environmentally Sensitive Habitat Area designations and related policy issues periodically, but at least every five years. If warranted, develop recommendations for additional policies that may be needed to ensure appropriate protection of biotic resources. Include consideration of methods to identify and monitor cumulative habitat loss and establish thresholds to protect sensitive resources. **(GP2020 Revised)**

Policy C-OSRC-6l: Conduct a comprehensive habitat identification and mapping program for

use in future policy determinations. **(GP2020)**

Agency Coordination

Policy C-OSRC-6m: ~~To the extent consistent with all applicable provisions of law, including but not limited to Section 30260 of the Coastal Act,~~ Encourage the appropriate pertinent state and federal jurisdictions agencies to carry-out the following activities to preserve Kelp Beds:

- (1) Monitor ~~the~~ their size and ~~habitat~~ viability of ~~kelp beds and their associated~~ as fisheries resources habitat;
- (2) ~~Monitor and Regulate~~ and monitor activities ~~such as sewage disposal, dredging, and renewable energy development and projects~~ which may ~~adversely affect~~ could degrade nearshore marine water quality ~~and thus and hence have an adverse impact on kelp resources habitat, including wastewater disposal, dredging, and renewable energy development;~~
- (3) Prohibit petroleum and other forms of energy development which may significantly have a significant impact the environment through on kelp beds as a result of normal operations or accidents (e.g., oil spills, and well blow-outs, etc.); and
- (4) Require ~~specific site investigations prior to any~~ applicants for commercial or industrial kelp harvesting to conduct studies, in consultation with the agency, of the specific sites or areas proposed for kelp harvesting. **(Existing LCP Revised)**

Policy C-OSRC-6n: Request that the State Department of Parks and Recreation carry-out the following activities to preserve Rocky Intertidal Coastline:

- (1) Designate important rocky intertidal areas as a Marine Reserve or Ecological Reserves; ~~and encourage maintenance of such public agencies or private groups to maintain these areas by appropriate public agencies or private groups.~~
- (2) Designate the ~~offshore, mouth, and banks of the Estero Americano~~ and offshore area as an Ecological Reserve. ~~Sonoma County should act as the "lead public agency" to preserve this area as a~~ and representative of the coastal estuarine environment of Northern California; and
- (3) Encourage ~~utilization~~ use of the public shoreline at Salt Point State Park, Kruse Ranch, and the non-historic areas of Fort Ross State Park to ~~remove some~~ reduce pressure on the underwater marine resources at Stillwater Cove Regional Park. **(Existing LCP Revised)**

Policy C-OSRC-6o: Recommend that the California Department of Fish and Wildlife carry out the following activities to preserve Bodega Harbor Tideflat:

- (1) ~~Recommend periodic closing of portions~~ Establish a system in which sections of the tideflats on the west side of the Bodega Harbor are open to shellfish harvesting. A rotation system allowing opening of each section of the tide flats on a rotating basis of every three to five years has been suggested. The County should request evaluation of this proposal by the Department of Fish and Game; and
- (2) ~~Encourage~~ Establish more restrictive bag and possession limits and gear restrictions for ghost shrimp (*Callinassa californiensis*), mud shrimp (*Upogebia pugettensis*), and blood worms (*Urechis caupo*). **(Existing LCP Revised)**

Policy C-OSRC-6p: ~~Encourage annual monitoring by the California Department of Fish and Game Wildlife to monitor of designated Marine Mammal Hauling-Out Grounds on an annual basis to determine the their condition of hauling out grounds and level of use by to take counts of marine mammals; and to incorporate this information into its for long-term management of plan for~~ Encourage annual monitoring by the California Department of Fish and Game Wildlife to monitor of designated Marine Mammal Hauling-Out Grounds on an annual basis to determine the their condition of hauling out grounds and level of use by to take counts of marine mammals; and to incorporate this information into its for long-term management of plan for marine mammals. **(Existing LCP Revised)**

Policy C-OSRC-6q: Continue to actively participate in the FishNet4C program and work cooperatively with participating agencies to implement recommendations to improve and restore aquatic habitat for listed anadromous fish species and other fishery resources. **(GP2020)**

Policy C-OSRC-6r: Support acquisition of conservation easements or fee title by the Sonoma County Agricultural Preservation and Open Space District of designated Environmentally Sensitive Habitat Areas. **(GP2020)**

~~22. Continue the County predatory animal control program, using humane methods that have a reasonable assurance of affecting predators while not affecting other wildlife. (Existing LCP)~~

Native Trees and Woodlands

Policy C-OSRC-6s: For discretionary projects (projects in which a governmental agency can exercise its judgment in deciding whether and how to approve it or carry it out) , the identification, preservation, and protection of native trees and woodlands shall be required; to the maximum extent practicable, the removal of native trees and fragmentation of woodlands shall be minimized; any trees removed shall be replaced, preferably on the site; and permanent protection of other existing woodlands shall be provided where replacement planting does not provide adequate mitigation. **(GP2020 Revised)**

Policy C-OSRC-6t: Identify important oak woodlands; assess current protection of oak

woodlands; identify options to provide greater protection of oak woodlands and their role in connectivity, water quality, and scenic resources; and develop recommendations for regulatory protection and voluntary programs to protect and enhance oak woodlands through education, technical assistance, easements, and incentives. **(GP2020)**

Policy C-OSRC-6u: Designate important valley oak habitat areas, reevaluate current designations, and apply a Valley Oak Habitat Combining Zoning District that requires adequate mitigation for trees removed and monitoring of replacement tree survival. **(GP2020)**

Policy C-OSRC-6v: Identify and consider designation of old growth Redwood and Douglas Fir forests as Sensitive Natural Communities. Encourage preservation and public acquisition by the County of remaining old growth Redwood and Douglas Fir forests in private ownership. Because of their rarity and biological importance, these Sensitive Natural Communities should be made priorities for protection through conservation easements, fee title purchase, or other mechanisms. **(GP2020 Revised)**

Habitat Connectivity

Policy C-OSRC-6w: In coordination with resource agencies, landowners, and the affected public, conduct a comprehensive study of the cumulative impacts of habitat fragmentation and connectivity loss and the effects of exclusionary fencing on wildlife movement. If warranted, identify essential habitat connectivity corridors and develop recommendations or policies to protect essential habitat corridors and linkages and to restore and improve opportunities for native plant and animal dispersal. **(GP2020)**

Habitat Enhancement and Restoration

Policy C-OSRC-6x: Develop a comprehensive program for preservation and restoration of the freshwater, brackish, and tidal marshes in the Coastal Zone. Include mechanisms for preservation and enhancement such as land acquisition; zoning restrictions; public and private conservation easements; regulating filling, grading, or construction; floodwater retention; and wetland restoration. **(GP2020 Revised)**

~~16. Encourage restoration of marshlands where feasible. (Existing LCP)~~

Public Outreach

Policy C-OSRC-6y: Notify discretionary and ministerial permit applicants of possible requirements of state and federal regulatory agencies related to jurisdictional wetlands and special status species. **(GP2020)**

Policy C-OSRC-6z: Establish a clearinghouse of information for public use related to biotic

habitat protection and management, and work toward making this information available by computer. **(GP2020)**

Policy C-OSRC-6aa: In all areas outside Urban Service Areas, encourage property owners to use wildlife friendly fencing and to minimize the use of outdoor lighting that could disrupt native wildlife movement activity. **(GP2020)**

Policy C-OSRC-6bb: Encourage landowners to voluntarily participate in a program that protects officially designated individual trees or groves that either have historical interest or significance or have outstanding size, age, rarity, shape, or location. **(GP2020)**

Policy C-OSRC-6cc: In cooperation with resource agencies, encourage the landowners to erect fencing of around springs, seeps, and ponds areas surrounded by lands used for located on grazing land and to develop water for livestock should be piped watering areas outside of the these wetlands for use by livestock. **(Existing LCP Revised)**

Policy C-OSRC-6dd: Support voluntary programs for habitat restoration and enhancement, hazardous fuel management, removal and control of invasive exotics, native plant revegetation, treatment of woodlands affected by Sudden Oak Death, use of fencerows and hedgerows, and management of biotic habitat. **(GP2020)**

Policy C-OSRC-6ee: Support the Native Plant Committee and Commons Landscape Committee of The Sea Ranch Association, and The Sea Ranch property owners in their efforts to identify and eradicate non-native invasive plants and planting native plants at The Sea Ranch. **(New)**

~~8. Utilize the Open Space Easement Act for designated Open Space and Sensitive and Hazardous lands to provide reasonable taxation. (Existing LCP)~~

Goal C-OSRC-7: **Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values.**

Objective C-OSRC-7.1: Designate all streams shown on USGS 7.5 minute quadrangle topographic maps as of March 18, 2003 as Riparian Corridors, and establish streamside conservation areas along these designated corridors.

Objective C-OSRC-7.2: Provide standards for land use and development in streamside

conservation areas that protect riparian vegetation, water resources, and habitat values while considering the needs of residents, agriculture, businesses, and other land users.

Objective C-OSRC-7.3: Recognize and protect riparian functions and values of undesignated streams during review of discretionary projects.

The following policies shall be used to achieve these objectives:

Riparian Corridor Designation and Classification

Policy C-OSRC-7a: Classify “Riparian Corridors” designated in the Open Space and Resource Conservation Element as follows:

- (1) “Russian River Riparian Corridor” is the corridor adjacent to the main stem of the Russian River, excluding lands located within the Urban Residential, Commercial, Industrial, or Public/Institutional land use categories.
- (2) “Other Riparian Corridors” are the corridors adjacent to all designated streams not included in (1) above. **(GP2020 Revised)**

Policy C-OSRC-7b: Establish streamside conservation areas along both sides of designated Riparian Corridors measured on each side of the stream as: a) within riparian habitat as defined by the County Permit & Resource Management Department (PRMD) or a certified biologist, b) 100 feet from the lowest line of riparian vegetation as defined by PRMD or a certified biologist, or c) 100 feet (200 feet for the Russian River), out from the top of the bank on each side of the stream, whichever is greatest. Where there is more than one bank on a side of the stream, the measurement shall be from the top of the higher bank on that side. **(GP2020 Revised) (Existing LCP Revised: Recommendation 9 on page 28)**

Development Policy, Guidelines, and Standards

Policy C-OSRC-7c: Use the Riparian Corridor (RC) Combining Zoning District for all lands within designated streamside conservation areas. Develop and adopt regulations establishing standards applicable to Riparian Corridors along designated streams consistent with Policy C-OSRC-7d. Until the regulations are adopted, land use and development shall be required to comply with Policy C-OSRC-7d. **(GP2020 Revised)**

Policy C-OSRC-7d: The following uses and development shall be allowed within any streamside conservation area only where it can be shown that construction, operation, and maintenance of the use or development would not result in significant, long-term adverse impacts on the functions and values of the riparian habitat:

- (1) Timber harvest operations conducted in accordance with an approved timber harvest plan.
- (2) Vegetation removal, including as part of an integrated pest management program administered by the Sonoma County Agricultural Commissioner, necessary for continued viability of the riparian habitat.
- (3) Streamside maintenance and restoration necessary for continued viability of the riparian habitat.
- (4) Fire fuel management where vegetation removal is limited to the minimum required for fire safety.
- (5) Grazing and similar agricultural activities not involving structures or agricultural cultivation, except as defined by (6) below, and conducted in accordance with water quality protection guidelines of the Sonoma County Agricultural Commissioner, Resource Conservation Districts, or Regional Water Quality Control Boards.
- (6) Agricultural cultivation and related planting, seeding, fertilizing, weeding, irrigation, and harvesting:
 - (a) located no closer than 100 feet from the top of the bank of the “Russian River Riparian Corridor”.
 - (b) located no closer than 50 feet from the top of the bank of “Other Riparian Corridors”.
- (7) Parks, public access, trails, bikeways, and other recreational facilities dependent on the riparian resources where it can be shown there would be no long-term impacts on the viability of the riparian habitat from construction, maintenance, and public use of the facilities.
- (8) Grading, road crossings, and utility line crossings only under one or both of the following conditions:
 - (a) It can be clearly demonstrated to County Permit & Resource Management Department (PRMD) Planning staff through photographs and/or other information that the area to be disturbed does not have substantial functions or values as riparian habitat; and the proposed development would not have a significant, adverse impact on the functions and values of adjacent riparian habitat.

- (b) A conservation plan is approved by County PRMD Planning staff that provides for the appropriate protection of biotic resources, water quality, flood management, bank stability, groundwater recharge, and other functions of riparian habitat.

Until the County adopts mitigation standards and procedures for specific land uses and riparian functions, prior to approval of the conservation plan, the County Permit & Resource Management Department shall consult with the California Department of Fish and Wildlife, pertinent Resource Conservation District, Sonoma County Agricultural Commissioner, and other pertinent resource agencies regarding adequacy of the conservation plan. **(GP2020 Revised) (Existing LCP Revised: Recommendations 9-13 on pages 28-29)**

Policy C-OSRC-7e: The applicable creek setback of the Sonoma County Water Agency Flood Control Design Criteria shall be applied to development along streams where necessary to protect against streambank erosion. **(GP2020 Revised)**

Re-Evaluation of Development Policy, Guidelines, and Standards

Policy C-OSRC-7f: In coordination with resource agencies, landowners, and the affected public, regularly review Riparian Corridor designations; ephemeral drainage; the requests, approvals, and required mitigation for setback reductions; any cumulative effect of the approved reductions; and other protection issues and, if warranted, develop recommendations for County policies that may be needed to ensure appropriate protection of Riparian Corridors. **(GP2020)**

Policy C-OSRC-7h: In coordination with resource agencies, landowners, and the affected public, conduct a comprehensive study of Riparian Corridors in grazing areas and, if warranted, develop recommendations for County policies that may be needed to ensure appropriate protection of such corridors. These policies should include development of livestock watering areas away from and special range management practices within Riparian Corridors. **(GP2020 Revised) (Existing LCP Revised: Recommendations 14-15 on page 29 and Recommendation 15 on page 55)**

Policy C-OSRC-7i: Implement standards, guidelines, best management practices, and setbacks of the 2014 Riparian Corridor Ordinance to protect Riparian Corridors. **(GP2020 Revised)**

Agency Coordination

Policy C-OSRC-7j: As part of the environmental review process, refer discretionary permit

applications near streams to the California Department of Fish and Wildlife and other agencies responsible for natural resource protection. **(GP2020)**

Policy C-OSRC-7k: Work with the Sonoma County Water Agency and other entities to identify all streams with “bed-and-bank” channels and consider Riparian Corridor designation for all such streams. **(GP2020)**

Public Outreach

Policy C-OSRC-7l: Support non-regulatory programs for protection of streams and riparian functions, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources. **(GP2020)**

Policy C-OSRC-7m: Notify permit applicants of possible state and federal permit requirements in areas near streams, and notify landowners whose property overlaps or touches a designated Riparian Corridor regarding the public hearings on the proposed regulations affecting them. **(GP2020)**

4. COMMERCIAL FISHING AND SUPPORT FACILITIES POLICY

The previous Local Coastal Plan had a separate chapter on Harbors. The harbor and marina facilities, commercial fishing, and harbor construction and maintenance sections of that chapter have been incorporated into the Open Space and Resource Conservation Element under this Commercial Fishing and Support Facilities section.

Background

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

California Coastal Act

The 1976 California Coastal Act supports coastal-dependent development stressing protection of commercial and sport fishing and necessary support facilities. Below are the applicable sections of the Coastal Act:

30001.5 (d). Assure priority for coastal-dependent development over other development

on the coast.

30220. *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

30221. *Ocean front land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreation activities that could be accommodated on the property is already adequately provided for in the area.*

30224. *Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non water-dependent land uses that congest access corridors and preclude boating support facilities providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.*

30233 (a). *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and, where feasible, mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

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

30234. *Facilities serving the commercial fishing and recreational boating industries shall be protected, and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and location in such a fashion as not to interfere with the needs of the commercial fishing industry.*

30254 (Part). *Where existing or planned public works facilities can accommodate only a limited number of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.*

30255. *Coastal-dependent developments have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.*

Climate Change

The following discussion of the potential impacts of climate change on fisheries is based on information on the U.S. Environmental Protection Agency's 2013 Website:

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

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

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

Oil Exploration and Development

Oil exploration and development on the Sonoma County Coast may adversely affect sensitive areas identified in the Local Coastal Plan. Streams and estuaries serve as nursery areas and

habitats for commercial fish species and are especially vulnerable to damage by an oil spill. Offshore activities such as oil platforms, pipelines, and tankers could interfere with commercial fishing activities. Ocean disposal of wastewater could adversely affect nursery areas and the commercial fishing industry. See the “Outer Continental Shelf Development Policy” section of the Land Use Element for information and policy on oil exploration and development on the Sonoma County Coast.

Bodega Bay and Harbor

Bodega Bay is a natural coastal embayment located in southwestern Sonoma County, about 58 miles north of the entrance to San Francisco Bay and 20 miles west-southwest of Santa Rosa. The bay is shaped like a crescent and bound by an abrupt hill, Bodega Head, on the north; and Tomales Bluff on the south. A lagoon, commonly known as Bodega Harbor, is located at the northern end of Bodega Bay, and is separated from the Bay proper by a natural sand spit commonly known as Doran Spit; and from the Pacific Ocean by an extensive area of sand dunes just north of Bodega Head. The entrance to the harbor is protected from the prevailing northwesterly and westerly winds and seas by Bodega Head and is safe for passage of fishing and recreational boats throughout the year.

Bodega Harbor is home to a major commercial fishing fleet - about 300 commercial fishing vessels with 250 permanent berths at the Spud Point Marina. During the commercial salmon season, an additional 200 vessels and 600 sport boats use Bodega Harbor. It is the largest fishing port between San Francisco and Fort Bragg. As an all-weather port, Bodega Harbor serves as a safe harbor of refuge during winter storms. Existing fishing industry facilities at the harbor include two berth installations, three boat launch ramps, commercial fish receiving piers, and a federal navigation channel maintained by the U.S. Army Corps of Engineers (**Table C-OSRC-2**). Public dock and berth facilities are provided at Doran County Park, Westside County Park, and Bodega Bay Dunes State Beach. Other facilities at Bodega Harbor include The Tides Wharf and Lucas Wharf, multifaceted facilities with an hotel, restaurant, and fish market where hundreds of vessels offload their catch each year; a U.S. Coast Guard Search and Rescue Base on the navigation channel; and the University of California Bodega Marine Life Reserve on the west side of the harbor.

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

The Feasibility Study for a Small Craft Harbor for the Commercial Fishing Fleet at Spud Point,

Bodega Harbor prepared in 1976/77 by Moffatt & Nichol Engineers and Williams-Kuebelbeck and Associates, Inc. concluded that additional berth facilities for commercial fishing is needed. At that time the Sonoma County Regional Parks Department proposed that the additional berths be constructed at a marina at Spud Point. The 1980 *Draft Spud Point Marina Master Plan* prepared by Moffatt & Nichol Engineers shows 238 berths, fueling and pump-out dock, mobile lift, loading pier, boat repair yard, harbormaster building, coffee shop, and parking area. County Regional Parks completed Spud Point Marina in 1985, which consists of 244 berths and the facilities identified in the Master Plan, with the addition of a laundromat and restrooms with showers.

The Sonoma County Regional Parks Department (County Regional Parks) operates three County facilities at Bodega Bay: Spud Point Marina, Mason's Marina, and the Sport Fishing Center. Spud Point Marina generates the majority of its revenue on berthing, fuel sales, and ice sales to commercial salmon and crab fishermen. These revenues are heavily dependent on the availability and quality of salmon and crab each season. Other dependencies include state and federal approvals for the fishing season as well as the economy in general. In past years, entire fishing seasons have been closed due to sparse fish populations. Without a robust salmon and crab season, a good economy, and high selling prices for the fishermen, the revenue stream will not be sufficient to support Spud Point Marina. Mason's Marina was leased to a private operator for forty years ending in 2013 and is now operated by Regional Parks. The marina was able to generate some revenue, however required maintenance (the responsibility of the lessee) was not performed, and there are significant deferred maintenance issues. The Sport Fishing Center uses the staff of Spud Point Marina and has historically operated within budget. The required repairs to the three marina facilities, recent efforts to improve and reduce the cost of marina operations and increase revenue, and potential long-term opportunities for the future of Bodega Bay are described in the 2013 *Bodega Bay Opportunities: Business Improvement Proposal and Potential Long-term Strategies* prepared by County Regional Parks.

Commercial Fishing Industry

Chinook ("king") salmon and Dungeness crab are the major fish species of the commercial fishery on the Sonoma County Coast, centered at Bodega Bay. Other fish species of this commercial fishery include rockfish, albacore tuna, sole, red urchin, California halibut, lingcod, sablefish, thornyhead, and cabezon. The Sacramento River winter-run chinook salmon was listed as a federal threatened species in 1990. Populations of these commercial fish species, particularly salmon, are on a precipitous decline. The California coastal chinook salmon and the central CA coast coho salmon, which inhabit the Russian River, were listed as federal endangered species in 1990 and 1996, respectively.

Bodega Bay's commercial fishing industry, which took off during World War I and focused primarily on salmon, drove the local economy and structured life in the area. Deposition of silt

in Bodega Bay in the late 1930s and early 1940s threatened the sustainability of the fishing industry, but it bounced back after the Bay was dredged in 1943. By the early 1980s the fishing fleet grew to about 300 boats, and during this period the value of commercial fish landings reached more than 15 million dollars. After record catches in the late 1980s, the salmon industry again came upon hard times as the number and value of salmon landings plummeted. Many fishermen left commercial fishing as their livelihoods were jeopardized. Following a resurgence in the area's salmon populations in the middle 1990s, the deposition of silt in Bodega Bay again became a problem. A 2004 community profile prepared by the Northwest Fisheries Science Center of the National Oceanic and Atmospheric Administration (NOAA) indicates the problem of siltation is paramount to the community as Bodega Bay is the only port between San Francisco and Fort Bragg that is large enough for many ocean-going vessels.

The organization Ecotrust reported that between 1981 and 2004, overall commercial fish landings and revenues at ports declined in the study area comprised of the Bodega Bay, San Francisco Bay, and Half Moon Bay areas. Some ports had steeper declines, most likely as a result of changing market opportunities as processors have closed or relocated, while other ports have maintained their relative position in the study area's overall landings and revenues. Bodega Bay area port landings and revenues have fluctuated around their long-term averages, with landings and revenues accounting for 20 and 25 percent, respectively, of the total landings and revenues in the study area. However, landings and revenues at the port at Bodega Bay has declined from around 10 million pounds and dollars in the 1980s to half that in the 1990s. Sonoma County Agricultural Crop Reports show commercial fish landings on the Coast have generally declined over 45 percent from 3,515,333 pounds in 2002 to 1,802, 346 pounds in 2008.

The causes for the ecological and economic decline of commercial fisheries on the North Coast has been the subject of debate among fishermen, scientists, and environmentalists and include habitat degradation from timber harvesting, agriculture, and hydroelectric dams; non-point source pollution; overfishing by commercial and sport fishermen; and regulatory restrictions. The specific causes for the precipitous decline in Chinook salmon populations are also subject to debate and include a collapse of the Sacramento-San Joaquin Delta's ecosystem. The demise of fish in the Delta has been attributed to increased pumping of fresh water to farmers in the Central Valley and urban customers in Northern and Southern California, rising salinity, pollution from pesticides and wastewater, regional drought, and poor ocean conditions. Furthermore, a NOAA report released in spring 2009 cited poor ocean conditions, which among other things resulted in a decrease in the food supply, as a major factor in the sharp decreases in Chinook salmon, Coho salmon, seabird, and marine mammal populations along the California Coast.

The Sonoma County Water Agency (SCWA) is charged with balancing Russian River water demands by its urban and agricultural customers and at the same time protecting the endangered Coho salmon. In 2008 the National Marine Fisheries Service issued a Biological

Opinion that requires the SCWA to take specific measures to preserve these three species. As of 2009 a habitat enhancement program within Dry Creek and a pipeline project to bypass the creek and bring water directly to the Russian River are being designed and implemented. In addition, water stored in Lake Mendocino is carefully managed so there is enough water in the Russian River for fall Chinook salmon migrations.

Table C-OSRC-2. Existing Dock and Berth Facilities for the Commercial Fishing Industry in Bodega Harbor

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

According to North Coast fishermen, 2008 and 2009 were the worst fishing seasons in many years. Salmon accounts for roughly half of the average fisherman's income. As the salmon populations decline, so does the commercial salmon fishery and the livelihood and survival of commercial fishermen. Some fishermen have and will find other ways to survive such as doing more crab fishing; fishing for smaller fish such as rock cod, herring, or albacore tuna; or fishing for the giant Humboldt squid or the slime eel that is a popular delicacy in Korea. Some fishermen will barely survive, and others will give up their livelihood. The number of small fishermen on the Pacific Coast has been steadily declining for years. The Pacific Coast Federation of Fishermen's Associations had 1,400 members in 2009, compared to more than 3,000 when it was founded in 1976.

In 2009 the federal government allocated \$53 million for disaster relief for California and Oregon salmon fishermen - the remaining portion of \$170 million that was approved by Congress in 2008 to help the ailing salmon industry.

Bodega Harbor Maintenance Dredging

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

described above.

Constructing the federal navigation channel and turning basins entailed dredging 1,814,100 cubic yards of sediment. Since the channel and basins were completed in 1943, maintenance dredging has been conducted on a cycle of 10-12 years, reflecting a very low sediment deposition rate in the channel of 10,000-12,000 cubic yards per year. Past maintenance dredging of the federal navigation channel and turning basins was conducted in 1948 (275,000 cubic yards), 1961 (383,000 cubic yards), 1968 (100,000 cubic yards), 1980 (70,000 cubic yards), 1992 (69,000 cubic yards), and 2004 (< 1,000 cubic yards). The next maintenance dredging is planned for 2016. About 209,000 cubic yards of sediment were dredged in 1984 to construct Spud Point Marina. County Regional Parks dredged near Spud Point Marina B Dock in Fall 2009. The October 2003 *Bodega Bay Harbor: Dredged Material Management Plan* prepared by the USACOE concludes that available upland sites for disposal of dredge spoils are insufficient to adequately maintain the federal navigation channel.

In 2003 the USACOE was directed, under a cost share project with the Sonoma County Regional Parks Department, to rehabilitate the Old Airport Disposal Site (see Disposal Site Alternatives below), used in the past for disposal of spoils from maintenance dredging of the federal navigation channel; initiate a program for maintenance dredging of the federal navigation channel; and make suitable dredged material available to County Regional Parks for development of public facilities (see the New Airport/Community Park Disposal Site under Disposal Site Alternatives below).

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

Sediment deposited in Bodega Harbor consists of two types. The first type is relatively clean sand that deposits in the Entrance Channel near the mouth of the harbor. Historically this sand has comprised about 20-25 percent of total material deposited in Bodega Harbor and in general has been disposed of at Doran Spit. In 1992 Doran Spit was not used as a dredge spoils disposal site because testing revealed that the Entrance Channel deposits were unusually silty thus unsuitable for beach disposal. The second type of sediment is fine-grained silty mud that deposits along the entire length of the inner reach of the federal navigation channel and near the head of Bodega Bay. Historically this mud has been disposed of at various upland sites, although mainly at the Confined Disposal Facility (CDF), known locally as the Old Airport Disposal Site.

Section 404(B) of the Clean Water Act (CWA) requires that before dredge spoils from maintenance dredging or construction projects can be disposed of in an aquatic environment, potential alternatives must be analyzed. The alternatives must prove to be either environmentally unacceptable or infeasible. Therefore, in order for the USACOE to recommend

aquatic disposal of dredge spoils there can be no practicable alternative with less adverse impacts on the aquatic environment.

The USACOE analyzed eleven alternatives for disposal of material dredged from Bodega Harbor, of which seven alternatives involve upland disposal, in their October 2003 *Bodega Bay Harbor: Dredged Material Management Plan (Table C-OSRC-3)*. The analysis compared the reuse permit requirements, available disposal volume, distance to the disposal site from the dredging site, timing, technical and logistical issues, project cost, monitoring cost, and environmental impacts of these alternatives.

Since 2003 the New Airport Site has been developed the Coastal Prairie Trail (part of the CCT) and is no longer available to receive dredge materials. Likewise, the Marina Parking area at Spud Point has been developed and can no longer function as a dredge disposal site. Available upland dredge disposal sites include the Old Airport site (Birdwalk Coastal Access) and several dune sites including Doran Spit and State Park Sand Dune site.

Ocean Disposal Alternatives. The Section 102 San Francisco Deep Ocean Disposal Site (SF-DODS; Alternative 2a) is the permanently designated ocean disposal site closest to Bodega Bay Harbor. It is located about 65 nautical miles offshore from Bodega Harbor, off the Continental Shelf in about 8,200 to 9,800 feet of water; and encompasses about 6.5 square miles. It is permitted to receive 4,800,000 cubic yards of dredge spoils per year, but currently receives less than one-eighth this volume per year. The current capacity of the SF-DODS far exceeds Bodega Bay Harbor's current and estimated future disposal needs for the next 25 years.

Table C-OSRC-3. Alternatives for Disposal of Material Dredged From Bodega Harbor

USACOE ALTERNATIVE #	DISPOSAL METHOD	DISPOSAL SITE
1	No Action	Not Applicable
2a	Ocean	SF-DODS
2b	Ocean	New Sites
3	Upland	Old Airport
4	Upland	New Airport/Community Park
5	Upland	County Central Landfill
6	Upland	Hole-in-the Head
7	Upland	Canyon Site
8	Upland	State Park
9	Beach	Doran Spit
10a	Ocean and Beach	SF-DODS and Doran Spit
10b	Beach and Upland	Doran Spit and Old Airport
10c	Ocean and Upland	SF-DODS and Old Airport
11	Volume Reduction	Not Applicable

NOTE: SF-DODS = Section 102 San Francisco Deep ocean Disposal Site

The 2003 *Bodega Bay Harbor Dredged Material Management Plan* indicates that the SF-DODS was specifically located as far as feasible from the National Marine Sanctuaries, unique aquatic habitats, important commercial or recreational fishery areas, and shipping lanes. Constraints to use of this site include: a) the need for large barges to transport dredged material; b) the possibility that the large barges may not be able to enter Bodega Bay, and the dredged material would need to be re-handled from small to large barges; c) the high potential for degradation and loss of habitat for aquatic organisms; d) the high potential for degradation of water quality; and e) the testing required to determine whether the dredged material meets certain standards and is suitable for placing at the site.

No other existing ocean disposal site would be more feasible for disposal of dredge spoils from Bodega Bay Harbor than the SF-DODS. Designating a new ocean disposal site closer to Bodega Bay Harbor (Alternative 2b) would not be feasible due to the high cost and long time period necessary for designating a new site. It is unlikely that a new ocean disposal site would be identified because: a) the Continental Shelf is about 15 miles wide at Bodega Bay Harbor, and the U.S. Environmental Protection Agency requires that ocean disposal sites be located beyond the Continental Shelf; and b) Bodega Bay is close to the Cordell Bank and Gulf of the Farrallones National Marine Sanctuaries. It is not likely that disposal of dredge spoils at a new ocean disposal site would have less adverse environmental impacts than disposal of dredge

spoils at SF-DODS. Therefore, the USACOE does not further analyze or consider a new ocean disposal site in the *2003 Bodega Bay Harbor Dredged Material Management Plan*.

Upland Disposal Alternatives. The Sonoma County Regional Parks Department owns and operates the upland disposal site known as the Old Airport Disposal Site (Alternative 3), encompassing about 20 acres and located in the southeastern corner of Bodega Harbor, about 3,600 feet east of the federal navigation channel and about 1,000 feet from the turning basin. The Old Airport Disposal Site was a diked marsh contained by dikes and now consists of two separate disposal ponds. The ponds have been filled with material dredged from the federal channel to an elevation of about 12 feet above low tide. The site also contains silty bottom sediments dredged from the Inner Harbor and sandy sediments dredged from the entrance channel. The Bird Walk Access Trail was constructed on the site as mitigation for the dredging of Bodega Harbor in 1992 and construction of the two disposal ponds. It consists of a public trail with an access road, parking lot, and picnic area constructed on top of the containment dikes.

The Old Airport Disposal Site has a capacity of 121,000 cubic yards and could accommodate about 69 percent of the material to be dredged from the federal navigation channel in 2005 after accommodating material disposed of by County Regional Parks. With rehabilitation the Old Airport Disposal Site could accommodate 100 percent of the material dredged from that dredge cycle. Future federal use of the Old Airport Disposal Site as a site for disposal of dredge spoils would require the continued removal of material placed at the site from previous dredge cycles to accommodate the dredge spoils to be placed at the site from future dredge cycles. Therefore, additional upland disposal sites would be necessary to accommodate the continued removal of dredge spoils from the Old Airport Disposal Site. Additional constraints to use of this site include: a) the need to rehabilitate the site by replacing culverts and weirs, regrading and compacting dikes, and excavating dredged material; b) the long distances to the additional upland disposal sites; c) the presence of a tidal creek and wetland abutting the outer dike slope; d) the presence of a rock outcrop with diverse plant species; and e) potential seepage of effluent into the groundwater and Bodega Bay.

The New Airport Disposal Site (Alternative 4) has been developed and is no longer an option for long-term upland disposal of dredge spoils.

The Sonoma County Central Landfill (Alternative 5) is located about 20 miles east of Bodega Bay on Meacham Road in Petaluma. The Central Landfill has the capacity to accept enough dredged material from the Old Airport Disposal Site for about 25 years. The Central Landfill accepts sediment at all times. If the sediment is provided when the Landfill needs topping soil, it takes the sediment free of charge. At other times the Central Landfill charges a relatively high fee to take the sediment. Additional constraints to use of this site include: a) the testing required to determine whether the dredged material meets certain standards and can be placed at the site; b) the unpredictability of when the Landfill will need topping soil and accept the

sediment free of charge; c) potential delays in transporting dredged material; d) the need for excavation and transport of dredged material in stages, and the inefficient use of excavation and hauling equipment; e) the long distance between Bodega Bay and the Central Landfill; and f) the degradation of air quality and other nuisances to nearby residents associated with the large volume of truck traffic needed to transport dredged material.

The Hole-in-the-Head Site (Alternative 6) is located on the east side of the southern tip of Bodega Head about 500 feet from the entrance to Bodega Bay. It consists of a large pit that was excavated for a proposed nuclear power plant project and later abandoned. The site has the capacity to accommodate dredge spoils from two dredge cycles. This site is currently not available for use as a dredge spoils disposal site because the California Department of Fish and Wildlife uses the freshwater pool that formed in the pit as a salmon hatchery.

The Canyon Site (Alternative 7) is a narrow, shallow ravine close to Spud Point Marina about 1,200 feet west of the federal navigation channel. The site has the capacity to accommodate dredge spoils from less than one dredge cycle. Use of the site for disposal of dredge spoils would require the construction of new containment structures. Another constraint to the use of this site is the presence of significant archaeological sites.

The Sand Dunes Site (Alternative 8) is located on a west-facing sand slope in a State Park north of the University of California Bodega Marine Laboratory. It consists of a square plot of 1,000 square feet that can accommodate about 370,000 cubic yards of dredge spoils. Constraints to the use of this site include the location within a State Park and the presence of a high quality groundwater aquifer.

Beach Disposal Sites. Doran Spit is a stubby peninsula that fronts Bodega Harbor on the north, east, and west. The Doran Spit Site (Alternative 9) is immediately north of the RV campground on County land operated by the County Regional Parks Department. Most of the remainder of Doran Spit has been developed into campsites. The Doran Spit Site is the historical disposal site for the predominantly sandy material from the Entrance Channel to Bodega Harbor. While the site has the capacity to accommodate a large quantity of dredge spoils, the quantity of sediment that can be placed at the site is limited by the quality of the sediment. Only sandy sediment (sediment in which greater than 80 percent of particles are of sand grain size) can be placed at the site. Sandy sediment comprises only about 20 percent of the sediment at the Entrance Channel. Additional constraints to use of this site are the presence of habitat for rare plant species and the presence of critical habitat for the endangered western snowy plover.

Effects of Dredging and Disposal of Dredged Material

Dredging and the disposal of dredged material (filling) have both short-term and long-term adverse impacts on the estuarine and marine environments. Short-term effects include the

degradation of water quality due to increased turbidity, decreased dissolved oxygen, and elevated water temperature; the suspension of toxic contaminants (e.g., heavy metals) contained within the sediments; and the physical removal of organisms. Long-term effects include the cumulative disturbance caused by periodic maintenance; the removal of soft bottom sediments that provide habitat for organisms, some of which are important economically or for recreation; the loss of habitat for organisms as a result of progressive habitat modification; and the possible acceleration of adjacent shoreline erosion. The quality of the dredged material will adversely affect the existing characteristics and habitat value of a proposed dredged material disposal site, whether that site is inland or open water. Dredging and disposal of dredged material can result in a change in type of habitat or elimination of habitat. For example, areas which were formerly shallow water habitats are changed to deep water habitats with dredging, with a corresponding alteration in the plant and animal communities of these habitats. Filling is particularly crucial when the area being covered is a marsh or intertidal zone. These habitats are among the most productive of natural communities and, more importantly, lie at the foundation of several ecosystems. Therefore, an impact at this level has ramifications throughout the estuarine and marine environments.

In a 1975 report on the natural resources of Bodega Harbor, the California Department of Fish and Wildlife indicates that of any human activities, the filling of wetlands has had the most detrimental effect on the natural resources of Bodega Harbor (*The Natural Resources of Bodega Harbor*, 1975). The report states that over the last century, about one fifth of the harbor has been lost to fill; and the majority of this loss occurred between 1931 and 1974. Of this loss, most was the result of dredge spoils disposal at Westside Park, Doran Spit, and the mouth of Cheney Gulch.

Marine Debris

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

In 1975, the National Academy of Sciences estimated that ocean-based sources, such as cargo ships and cruise liners, dumped 14 billion pounds of garbage into the ocean. In 1988, the U.S. signed onto MARPOL Annex V, joining 64 other countries that signed the international protocol that regulates ocean dumping and made it illegal to dump plastic into the ocean. Laws like

MARPOL have reduced the amount of trash on our beaches and in our ocean. Even so, pollution from plastics is still a major problem. A recent study found an average of 334,271 pieces of plastic per square mile in the North Pacific Central Gyre, which serves as a natural eddy system to concentrate material (Moore et al. 2001). Results of more than 10 years of volunteer beach cleanup data indicate that 60 to 80 percent of beach debris comes from land-based sources.

Trash on beaches and in the ocean is unsightly and reduces tourism in the area and subsequently tourist revenue, so communities are forced to spend millions of dollars each year to clean their beaches. Debris in the marine environment means hazards for humans and wildlife. It endangers the safety of beach visitors and scuba divers and endangers the safety and livelihood of fishermen and recreational boaters. Beach visitors have required stitches from stepping on broken pieces of glass and metal buried in the sand, and scuba divers have become entangled in lost fishing gear. Nets and monofilament fishing line can obstruct boat propellers and plastic sheeting and bags can block boat engine cooling intakes. Such damage is hazardous and costly in terms of repair and lost fishing time.

Marine debris not only harms humans, it can be fatal to marine wildlife. Plastic marine debris affects at least 267 species worldwide, including 86 percent of all sea turtle species, 44 percent of all sea bird species, and 43 percent of marine mammal species (Laist 1997). Marine mammals, sea turtles, birds, and fish can become entangled in plastic fishing line, plastic strapping bands, six-pack rings, and other plastic trash. Once entangled, they may spend energy trying to get free and may have trouble eating, breathing, or swimming, all of which can cause them to become sick or weak, and even die. Plastics take hundreds of years to breakdown and may continue to trap and kill animals year after year. Birds, fish, and mammals often mistake plastic for food and may die as a result of eating it. Some birds mistake small pieces of plastic for fish eggs and feed it to their young. With plastic filling their stomachs, animals have a false feeling of being full, and may die of starvation. Sea turtles mistake plastic bags for jellyfish, one of their favorite foods. Even gray whales have been found dead with plastic bags and sheeting in their stomachs (California Coastal Commission Website 2013 - Coastal Issues - The Problem with Marine Debris).

State and Federal Programs. The California Coastal Commission and National Oceanic and Atmospheric Administration (NOAA) have Marine Debris Programs.

The NOAA Marine Debris Program supports national and international efforts to research, prevent, and reduce the impacts of marine debris. It serves as a centralized capability within NOAA, coordinating and supporting activities within NOAA and with other federal agencies, as well as using partnerships to support projects carried out by state and local agencies, tribes, non-governmental organizations, academia, and industry. The NOAA Marine Debris Program has launched the Marine Debris Clearinghouse, a new online tool for tracking and researching

marine debris projects and resources. Currently this database allows users to browse or search records of past, current, and future projects which are funded by the Marine Debris Program and focus on marine debris removal, research, and outreach. NOAA plans to expand this database to include information from federal partners and the broader marine debris community. The site will grow to include a library of best practices, regional action plans, technical documents, and papers that reflect the state of knowledge of a given topic area within the study of marine debris.

The California Coastal Commission Marine Debris Program consists of California Coastal Cleanup Day, the Adopt-A-Beach program, public education about marine debris, and collaboration with state and regional agencies on developing new programs and policies to help prevent and reduce marine debris.

Every year on the third Saturday in September, people join together at sites all over California to take part in the State's largest volunteer event, California Coastal Cleanup Day, organized by the California Coastal Commission and Coastwalk. Families, friends, coworkers, scout troops, school groups, service clubs, and individuals come together to celebrate and share their appreciation of California's beautiful coast and waterways. California Coastal Cleanup Day is part of the larger International Coastal Cleanup, the largest volunteer event on the planet. In 2012, over 65,000 volunteers removed almost 770,000 pounds of trash and recyclables from California's beaches, lakes, and waterways. In Sonoma County, Coastwalk arranged cleanups at 15 sites, including: Blind Beach, Bodega Dunes, Bodega Head, Doran Beach, Goat Rock Beach, North Jenner Beach, North Salmon Creek Beach, Pinnacle Gulch, Portuguese Beach, Russian Gulch, Schoolhouse Beach, Shell Beach, South Salmon Creek Beach, Wrights Beach, and South Salmon Creek Beach.

Goal C-OSRC-8: **Support the commercial fishing industry in Bodega Bay. Protect and conserve the quality of ocean, marine, and estuarine environments for their scenic, economic, and environmental values.**

Objective C-OSRC-8.1: Provide adequate facilities and services to serve the commercial fishing industry in Bodega Bay.

Objective C-OSRC-8.2: Conduct dredging in a manner that minimizes impacts on the ocean, marine, and estuarine environments.

Objective C-OSRC-8.3: Conduct the disposal of dredged material in a manner that minimizes impacts on the ocean, marine, estuarine, and terrestrial environments; and minimizes impacts to groundwater and water supply.

Objective C-OSRC-8.4: Support the Marine Debris Programs of the National Oceanic and Atmospheric Administration and California Coastal Commission.

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

Commercial Fishing Industry Facilities

Policy C-OSRC-8a: Encourage the development of support facilities and the provision of support services for the commercial fishing industry, including fish processing, in areas designated fishing-commercial Marine Industrial on the Land Use Plan Map. **(Existing LCP Revised)**

Policy C-OSRC-8b: Total marina development in Bodega Bay shall be restricted ~~to a possible maximum of 700 berths in conjunction with the Phase II Land Use Plan for Bodega Bay.~~ Expansion beyond the 300 new berths in Phase I shall be approved only in conjunction with Phase II, and only after based on the following: 1) a review of the Bodega Harbor operations, with special emphasis on whether activities ~~not dependent upon~~ that do not depend on a harbor location can be relocated to preclude or minimize the need for additional dredging and filling; 2) a determination has been made of whether adequate appropriate locations for dredge spoils disposal exist, and whether other environmental constraints can be successfully observed in the ~~utilization of~~ use of such sites; and 3) an assessment of the adequacy of the fisheries resources to support the additional pressure anticipated to result from such expansion, performed in conjunction with appropriate management agencies, demonstrates that the resources are adequate and would not be expected to be harmed by ~~such an increased effort~~ increasing the availability of berths for the commercial fishing industry. **(Existing LCP Revised)**

Policy C-OSRC-8c: Develop a mooring plan for Bodega Harbor. **(Existing LCP)**

Policy C-OSRC-8d: Encourage the development of the following services and additional support facilities and the provision of additional support services at Spud Point Marina: ~~ice and fuel; gear storage; gear loading; fish off-loading; electricity and fresh water outlets; pump out stations; and laundry and washrooms~~ necessary to adequately serve the commercial fishing industry. **(Existing LCP Revised)**

Policy C-OSRC-8e: ~~Institute~~ Establish and implement measures to control pollution of Bodega Harbor in connection with any ~~marina expansion of~~ Spud Point Marina. **(Existing LCP Revised)**

Bodega Harbor Dredging Regulations

Policy C-OSRC-8f: Dredging shall be required to occur only in the winter, when most marine and estuarine animals are not migrating or spawning and are least sensitive to turbidity. **(Existing LCP Revised: Recommendation 77 on page 34 and Recommendation 13 on page 123)**

Policy C-OSRC-8g: ~~Prohibit~~ The deposition of fill or dredge spoils in Bodega Harbor shall be prohibited except in accordance with according to Section 30233 of the California Coastal Act. **(Existing LCP Revised)**

Policy C-OSRC-8h: ~~Prohibit~~ The deposition of dredge spoils shall be prohibited outside Bodega Harbor in Bodega Bay (outside the harbor), east of a the line extending from the tip of Tomales Point, to the tip of Bodega Head since Bodega Bay is an important crab nursery area. **(Existing LCP Revised)**

Policy C-OSRC-8i: Give preference to the transport of dredge spoils to sites outside the Bodega Harbor. **(Existing LCP Revised)**

Policy C-OSRC-8j: ~~Require~~ Approval of a detailed reclamation plan shall be required for a dredge spoils disposal sites prior to commencing any dredging that would generate dredge spoils to be disposed of at that site. **(Existing LCP Revised)**

Policy C-OSRC-8k: Initiate the process of identifying and designating an off-shore dredge spoils disposal site. **(Existing LCP Revised)**

Policy C-OSRC-8l: Consider sea level rise adaptation strategies when evaluating dredge disposal options and evaluate the feasibility of using dredge material for beach sand augmentation and dune restoration **(New)**.

Upland Disposal Sites

Policy C-OSRC-8i: ~~Require that~~ Any dredge spoils disposal project shall be designed and implemented to protect groundwater resources and existing and potential domestic water supplies, and to be consistent with all policies of this Local Coastal Plan for protection of wetlands and other Environmentally Sensitive Habitat Areas (ESHA). **(Existing LCP Revised)**

Policy C-OSRC-8m: Route the dredge spoils conveyance pipeline to this selected upland disposal sites from Bodega Harbor along the right-of-way of existing roads, where possible. **(Existing LCP Revised)**

Policy C-OSRC-8n: ~~Protect~~ Riparian corridors at dredge disposal sites shall be protected.

Diked ponds for disposal of dredge spoils ~~must~~ shall be sited and designed to avoid the riparian area ~~and assure, such~~ that no dredge spoils would be deposited in the drainage and ~~that~~ no runoff would enter the drainage or the freshwater wetland area; and to be consistent with all policies of this Local Coastal Plan for protection of wetland and other Environmentally Sensitive Habitat Areas (ESHA). **(Existing LCP Revised)**

Policy C-OSRC-8o: At upland disposal sites, limit the operation of construction equipment across the drainages between the dredge spoils disposal ponds shall be limited to one haul road. Following the disposal of dredge spoils disposal and consistent with all policies of this Local Coastal Plan for protection of wetland and other Environmentally Sensitive Habitat Areas (ESHA), this the road shall be removed, and the area shall be regraded to natural drainage contours, and seeded for quick establishment of vegetation shall be re-established. **(Existing LCP Revised)**

Policy C-OSRC-8p: ~~Implement~~ A reclamation plan shall be implemented for any upland disposal site that will which assures rapid recovery re-establishment of vegetation, minimize visual impacts, and improve the wildlife habitat, consistent with all policies of this Local Coastal Plan for protection of wetland and other Environmentally Sensitive Habitat Areas (ESHA). **(Existing LCP Revised)**

~~24. Prohibit disposal of dredge spoils from maintenance dredging on this site.~~ **(Existing LCP)**

Policy C-OSRC-8q: Prior to approval of a plan for a large, one-time dredge spoils disposal at the Old Airport Disposal Site, Require a full evaluation shall be required of the potential visual, water quality, and reclamation problems issues associated with raising the dikes to accommodate a large one-time disposal prior to approving such a plan the dredge spoils. **(Existing LCP Revised)**

Policy C-OSRC-8r: ~~Protect~~ The rare plants in the marsh south of the Old Airport Disposal Site shall be protected during the course of any construction on the site. **(Existing LCP Revised)**

Policy C-OSRC-8s: ~~Reclaim and restore~~ The Old Airport Disposal Site shall be reclaimed and restored to the maximum extent feasible following each maintenance dredging. **(Existing LCP Revised)**

Marine Debris

Policy C-OSRC-8t: Support the Marine Debris Programs of the National Oceanic and Atmospheric Administration (NOAA) and California Coastal Commission, including California Coastal Cleanup Day and Adopt-A-Beach Program. Use NOAA's Marine Debris Clearinghouse to identify best practices for preventing and reducing marine debris. Consider implementation of these best practices on the Sonoma County Coast. **(New)**

5. SOIL RESOURCES POLICY

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

Agricultural and Timber Soils

Important farmland soils are located throughout the County but are concentrated primarily in the Sonoma Valley, west Sebastopol, west Santa Rosa, Alexander Valley, and Dry Creek Valley areas. Important farmland soils on the Sonoma County Coast include grassland suitable for sheep and cattle grazing along the coastal terrace and lower slopes on the North Coast and throughout the County Coast south of Jenner. Soil, climate, topography, and water combine to make these lands highly productive agricultural areas. However, lands with good agricultural soils are often desirable for building sites as they are generally located in flat valleys with few physical constraints. Important timberland soils are located primarily in the northwest County and Russian River area. Important timberland soils on the County Coast are located primarily north of Russian Gulch and in the Willow Creek watershed.

Goal C-OSRC-9: Encourage the conservation of soil resources to protect their long-term productivity and economic value.

Objective C-OSRC-9.1: Preserve lands containing prime agricultural and productive woodland soils and avoid their conversion to incompatible residential, commercial, or industrial uses.

The following policies, in addition to those in the Land Use and Agricultural Resources Elements, shall be used to achieve these objectives:

Policy C-OSRC-9a: Apply the "Agriculture" land use category to areas with productive agricultural soils. **(GP2020 Revised)**

Policy C-OSRC-9b: Apply the "Timber" land use category to all lands with timberland production zoning. **(GP2020 Revised)**

~~10. Require that land divisions and development proposals outside urban service boundaries conform to the resource capabilities of the land as recommended in the Resources chapter. (Existing LCP)~~

~~16. Promote use of sensitive soils as watershed and wildlife habitat. (Existing LCP)~~

Soil Erosion

Although some types of soils are more susceptible to erosion, all soils benefit from conservation practices. Erosion results in the loss of topsoil which may reduce crop yields and cause sedimentation problems downstream. Sediment can fill reservoirs and stream channels, reduce water quality and storage capacity, and damage fish and wildlife habitats. Erosion is caused by a combination of high rainfall, lack of cover, erodible soils, and steep slopes. Activities which may increase erosion include urban development, road and general construction activities, logging, mining, agriculture, and recreational activities.

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

Goal OSRC-10: Promote and encourage soil conservation and management practices that maintain the productivity of soil resources.

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

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

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

Erosion and Sediment Control Plan

Policy C-OSRC-10a: Prepare and submit an erosion and sediment control plan for the Coastal Zone to the Board of Supervisors. **(GP2020 Revised)**

New Development Design Standards

Policy C-OSRC-10b: Discretionary projects shall be subject to the following requirements for reducing erosion and erosion control:

- (1) Projects shall be designed so that structures and roads are not located on slopes of 30 percent or greater. This requirement is not intended to make any existing parcel unbuildable if the requirements of County Health and Building Codes can be met.

- (2) Erosion control measures shall be incorporated as part of projects involving construction or grading near waterways or on lands with slopes over 10 percent.
- (3) A soil conservation program shall be incorporated as part of projects which could increase erosion of waterways or hillsides.
- (4) New roads and driveways for residential, ranch, and timber harvest uses shall be designed and constructed to retain natural vegetation and topography to the extent feasible.
- (5) Improvements near waterways or in areas with a high risk of erosion as noted in the *Sonoma County Soil Survey* shall be designed and constructed to retain natural vegetation and topography to the extent feasible. **(GP2020 Revised) (Existing LCP Revised: Recommendation 49 on page 31, Recommendations 11-12 on page 38, Recommendation 40 on page 31, Recommendations 52-53 on page 32, and Recommendation 11 on page 54)**

Policy C-OSRC-10c: Continue to enforce the Uniform Building Code to reduce soil erosion and slope instability problems. **(GP2020)**

Agency Coordination

Policy C-OSRC-10d: Encourage agricultural management practices land owners to work closely with the Natural Resource Conservation Service (NRCS) and local Resource Conservation Districts which minimize to reduce soil erosion, sedimentation and siltation and encourage soil restoration. **(GP2020 Revised) (Existing LCP Revised)**

6. TIMBER RESOURCES POLICY

Background

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

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

Timberland Resources

About 513,000 acres (about 50% of the County land area) in Sonoma County are devoted to forest and woodlands. These lands include 72,000 acres (7%) of conifer forest, 284,000 acres (28%) of hardwoods, and 157,000 (15%) acres of conifer mixed with hardwoods. These areas are often interspersed with grasslands, shrublands or agricultural lands and residences.

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

Forests also provide commercial timber as a renewable resource. Sonoma County is unique among many counties in California in having a majority (94 percent) of the timberlands as privately owned. In Sonoma County timberlands are predominantly in the northwest part of the County. There are about 232,000 acres of timberland in the County. In 2000 a total of 24,157,000 board feet of lumber valued at roughly 19.5 million dollars was harvested in Sonoma County. This amount was roughly 1.2% of the timber harvested in the State during that year.

About 75% of the land on the Sonoma County Coast is used as timberland, sheep and cattle grazing land, or dairy land. The Coast is equally divided between land suitable for timber production and land suitable for grazing or pasture.

The County Coast exhibits the diversity of tree species found throughout the County. Soil, climate, topography, and human activity are the important factors which determine the growth and distribution of tree species. Redwood predominates in the coastal fog belt, with Douglas fir and grand fir the other principal forest trees. Commercial forest on the Coast is found primarily north of Russian Gulch and in the Willow Creek watershed. Forests occur generally east of State Highway 1 and in coastal gulches. Commercial hardwood harvesting of tan oaks is becoming more important for masonite chips, firewood, and the crafts industry. Other native, generally non-commercial trees on the Coast are Bishop pine, oak, madrone, bay, and the southern extent of the pygmy forest in California. Rows of eucalyptus and cypress trees have been planted as a buffer against the wind, and fast growing Monterey pine screen many homes from the view of State Highway 1. Dense forests of these trees have been planted by the developers of The Sea Ranch and Timber Cove subdivisions.

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

About 20,500 acres of the 232,000 acres of timberland in the County are on the County Coast. These timberlands are comprised of about 14,000 acres of Site Class IV soils and about 6,500 acres of Site Class I, II, and III soils combined. Site Class is a reference to the productivity of timberland, determined by the interaction of soil fertility and climate; the lower the site class, the greater the timberland productivity.

Timberland Regulations

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

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

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

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

In 1982 the California Legislature adopted the California Timberland Productivity Act. That Act required counties to designate and zone lands for the primary use of timber production in order to protect properly conducted timber operations from being prohibited or restricted due to conflict or apparent conflict with surrounding land uses. The County applied local "Timberland Production" (TP) zoning to all parcels previously placed in the TPZs under the 1976 Forest Taxation Reform Act.

As of March 2002 the County had 93,874 acres, or 41 percent of land zoned TP. About 11,000 acres of the 20,500 acres of timberland in the Coastal Zone are zoned TP. The acreage in TP is about one-half of the Site Class I, II, III, and IV timberland in the Coastal Zone. Timberlands not in TP range in size from forty-acre parcels north of Salt Point State Park to large acreages in the upper Willow Creek watershed and east of The Sea Ranch.

Rezoning timberland parcels to TP establishes ten-year use restrictions and the requirement for a forest management plan which should provide for timber harvesting within a reasonable period of time and set timber restocking standards. Sonoma County's implementing TP Ordinance allows parcels of 40 acres or more of Site Class I and II soils, and 80 acres or more of Site Class III and IV soils to be zoned TP. The annual tax paid on acreage of timberland zoned TP is based on the value of the land without the standing timber and is substantially less than if zoned at fair market value. Taxes on the value of the cut timber are paid at the time of harvest.

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

Timberland Issues

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

Logging activities, if improperly managed, can be detrimental to the forest environment, including loss of riparian habitat and soil erosion, and a resulting diminishing of all forest values. Sustainable logging practices and forest management should result in a forest resource which regenerates itself and allows for perpetuating related forest values. Keeping forest lands in production and preventing a further incursion of incompatible adjacent lands uses will benefit the public and the timber industry. Over the past several years there has been more interest in the planting of vineyards and the associated concern over conversion of oak forests and timberland.

Since State law gives primary regulatory responsibility for timber operations to CAL FIRE, the County's land use authority is limited. Instead, the County has focused its policy directives on maintaining a sustainable supply of timber resources in the future by reducing the potential for converting timberland to incompatible uses.

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

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

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

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

Policy C-OSRC- 11a: ~~Exempt~~ A Coastal Permit shall not be required for timber harvesting from coastal permit requirements only where in accordance with a timber harvest plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practices Act of 1973 and regulated by the Forest Practices Act and the California Department of Forestry and Fire Protection. **(Existing LCP Revised)**

Timberland Production Zone Designation

Policy C-OSRC-11b: Apply the "Timber" land use category to designate all lands in a "Timberland Production Zone" and adjacent parcels with timber soils or commercial timber stands. **(GP2020 Revised)**

Timber Harvest Plans

Policy C-OSRC-11c: Review all timber harvest plans for compatibility with Local Coastal Plan policies and economic viability of the industry. **(GP2020 Revised)**

Policy C-OSRC-11d: Where applicable, comment on timber harvest plans in support of increased protection of Class III streams. **(GP2020)**

Policy C-OSRC-11e: Review timber harvest plans adjacent to designated Riparian Corridors and request that clear cutting not occur within streamside conservation areas. Where clear

cutting along designated Riparian Corridors is approved by the applicable state or federal agency, ensure that at least 50 percent of the overstory canopy and at least 50 percent of the understory vegetation be retained. **(GP2020)**

~~13. Promote a high level of agricultural and forestry management practices which protect environmental values to help insure the long term use and conservation of coastal resources.~~
(Existing LCP)

~~26. Formalize the County's review of Timber Harvest Plans with submittal of written comments to the California Department of Forestry in the coastal zone.~~ **(Existing LCP)**

Timberland Conversions

Policy C-OSRC-11f: Revise the Zoning Districts of the Coastal Zoning Ordinance which implement the "Timber" land use category to reduce the potential for conversion of timberland to non-timber uses. **(GP2020 Revised)**

Agency Coordination

Policy C-OSRC-11g: Request that the State Board of Forestry ~~to~~ consider developing and enforcing Special Treatment Area stocking and clear cutting standards on all forest lands in the Coastal Zone. **(Existing LCP Revised)**

7. MINERAL RESOURCES POLICY

Although various minerals have been mined in Sonoma County during the past century, mining operations at the current time consist almost exclusively of the extraction and processing of rock, sand, and earth products for use in construction and landscaping. From 1995 to 2002, an average of 4.84 million tons of construction aggregate was mined and marketed each year to meet local needs and a share of the North Bay regional needs. Approximately 75 to 112 million tons are likely to be needed over the next 20 years. The Bodega Bay Quarry is the only mining operation in the Coastal Zone. It ceased mining operations in 2002 and is scheduled to be closed after reclamation has been completed and approved in 2006.

The potential impacts of mining activities include, but are not limited to, noise, dust, air emissions, truck traffic, erosion, siltation, and loss of agricultural land. These impacts create conflicts with nearby residential, agricultural, and recreational uses and may impact habitat and fishery resources.

The State Geologist classifies or inventories mineral lands throughout the State and has designated certain mineral bearing areas as being of regional significance. By law, local

agencies must adopt mineral management policies that recognize mineral information provided by the State, assist in the management of land use that affect areas of statewide and regional significance, and emphasize the conservation and development of identified mineral deposits.

Accordingly, Sonoma County has adopted the Aggregate Resources Management (ARM) Plan to set forth the State mandated mineral management policy for the County. During the process of adopting the plan, the County considered the aggregate resource areas classified as MRZ-2 by the State Geologist.

Land use policies have been formulated with full recognition and consideration of the classification and designation information transmitted by the State (State Department of Conservation, California Geological Survey Special Report 175 and subsequent amendments) and incorporated by reference herein. Sonoma County has considered the importance of its aggregate resources to the regional market and not just to the County.

Goal C-OSRC-12: Provide for production of aggregates to meet local needs and contribute the County's share of demand in the North Bay production-consumption region. Manage aggregate resources to avoid needless resource depletion and ensure that extraction results in the fewest environmental impacts.

Objective C-OSRC-12.1: Use the Aggregate Resources Management Plan to establish priority areas for aggregate production and to establish detailed policies, procedures, and standards for mineral extraction.

Objective C-OSRC-12.2: Minimize and mitigate the adverse environmental effects of mineral extraction and reclaim mined lands.

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

Policy C-OSRC-12a: Consider lands designated in the Aggregate Resources Management (ARM) Plan as priority sites for aggregate production and mineral extraction and review requests for additional designations for conformity with the Local Coastal Plan and the ARM Plan. **(GP2020)**

Policy C-OSRC-12b: Review projects for environmental impact and land use conflicts and consider the following minimum factors when approving mining permits: topsoil salvage; vegetation, fisheries and wildlife impacts; noise impacts; erosion control; roadway conditions and capacities; reclamation and bonding; air quality impacts; energy consumption; engineering and geological surveys; aggregate supply and replenishment; drainage; and the need for economical aggregate materials. **(GP2020)**

Policy C-OSRC-12c: Review projects that are on or near sites designated "Mineral Resources" in the Aggregate Resources Management Plan for compatibility with future mineral extraction. (GP2020)

8. ENERGY RESOURCES POLICY

Background

Sonoma County Coast residents and businesses consume energy in many forms and for many uses, but primarily oil and gas for transportation and electricity for home and business. Residents and businesses also produce energy in individual, small scale uses. Therefore, energy resources are addressed in two sections. The first section addresses how citizens can reduce future energy demand through conservation and efficiency measures. The second section addresses how the County can contribute to future energy supplies.

Climate Change

The following discussion of the potential impacts of climate change on energy resources is based on information on the U.S. Environmental Protection Agency's 2013 Website.

Changes in temperature, precipitation, sea level, and the frequency and severity of extreme storm events will likely affect how much energy is produced, delivered, and consumed in the United States.

Energy plays an important role in many aspects of our lives. For example, we use electricity for lighting and cooling. We use fuel for transportation, heating, and cooking. Our energy production and use is interconnected with many other aspects of modern life, such as water consumption, use of goods and services, transportation, economic growth, land use, and population growth. Our production and use of energy (most of which comes from fossil fuels) also contributes to climate change, accounting for more than 80% of U.S. greenhouse gas emissions.

Temperature, Energy Demand, and Energy Supply. Increases in temperature will likely change how much energy we consume, as well as our ability to produce electricity and deliver it reliably. In a warmer climate, Americans would use more electricity for air conditioning and less natural gas, oil, and wood for heating. Heating demand would decrease the most in the northern United States, and cooling demand would increase the most in the southern United States. Changes in energy demand will likely affect greenhouse gas emissions, but the net effect depends on which energy sources are used for electricity and heating.

Warming is likely to increase summer peak electricity demand in most regions of the United States. Meeting increases in this peak demand could require investments in new energy infrastructure. A warmer climate may reduce the efficiency of power production for many existing fossil fuel and nuclear power plants because these plants use water for cooling. The colder the water, the more efficient the generator. Thus, higher air and water temperatures could reduce the efficiency with which these plants convert fuel into electricity.

Water Availability and Energy. Energy is needed to pump, transport, and treat drinking water and wastewater. Cooling water is needed to run many of today's power plants. Hydroelectricity (electricity produced by running water) is itself an important source of power in some parts of the United States. Changes in precipitation, increased risk of drought, reduced snowpack, and changes in the timing of snowmelt in spring will likely influence our patterns of water and energy use.

Power plants can require large amounts of water for cooling. Parts of the United States face increased competition for water to meet the demands of population and economic growth while also protecting natural ecosystems. Consequently, these regions are already slowing or stopping plans for new power plants that require large withdrawals of water due to concerns about adequate availability of cooling water. More frequent and severe heat waves will likely increase the demand for electricity in these areas. At the same time, decreased rain and/or increased temperature and evaporation would likely result in reduced water supplies. Since water is necessary for electricity production, these combined effects could stress water resources. Growing crops for biomass and biofuel energy could stress water resources in certain regions, depending on the type of crop, where it is grown, agricultural production in the region, and current water and nutrient management practices. Rising temperatures, increased evaporation, and drought may increase the need for energy-intensive methods of providing drinking and irrigation water. For example, desalinization plants can convert salt water into freshwater, but consume a lot of energy. Climate change may also require irrigation water to be pumped over longer distances, particularly in dry regions across the western United States.

Sea Level Rise, Storm Surge, and Extreme Events. A large portion of U.S. energy infrastructure is located in coastal areas and therefore sensitive to sea level rise and storm surge. For example, fuel ports and the generation and transmission lines that bring electricity to major urban coastal centers are at risk. Changes in the frequency and severity of storms and other extreme events may also damage energy infrastructure. Disruptions to energy supply due to compromised infrastructure can affect many activities, depending on the destination and final use of the fuel. Disruptions in the supply of oil would affect the production of transportation fuels. Disruptions in natural gas supply could affect electricity generation, residential and commercial heating, and industrial processes. Offshore oil drilling platforms are vulnerable to extreme weather events.

Flooding and intense storms can damage power lines and electricity distribution equipment. These events may also delay repair and maintenance work. Electricity outages can have serious impacts on other energy systems as well. Sea level rise adaptation policies are also found in the Public Safety Element of the LCP.

Wind Speed, Cloud Cover, and Renewable Energy. Climate change could impact wind and solar power, but there is little research in this area. Impacts will depend on how wind and cloud cover patterns change, which are very difficult to project using current climate models.

Energy Conservation and Demand Reduction

Reducing energy demand can be achieved in many ways. Land use strategies include compact development form and promoting mixed uses. Energy used for transportation can be reduced through increased use of pedestrian and bicycle travel, public transit, and alternative fuels. Other strategies include improved construction standards and agricultural practices, solid waste management, and education.

Sonoma County has led the way in programs designed to conserve energy in County operations, including building audits, lighting retrofits, and electric and hybrid fleet vehicles. The County has also initiated the Sustainable Policies and Practices Project that aims to monitor and reduce energy use in all County operations on an ongoing basis. In 2005, Sonoma County became the first county in the nation where the County and all of its Cities pledged to measure and reduce their greenhouse gas emissions by 25 percent below 1990 levels by 2015. Reducing energy demand is the primary strategy for meeting this target. Much more work is needed to ensure that the County's efforts are coordinated with evolving state and federal initiatives.

Goal C-OSRC-13: Promote energy conservation and contribute to energy demand reduction.

Objective C-OSRC-13.1: Increase energy conservation and improve energy efficiency in County government operations.

Objective C-OSRC-13.2: Encourage residents and businesses to increase energy conservation and improve energy efficiency.

Objective C-OSRC-13.3: Reduce the generation of solid waste and increase solid waste reuse and recycling.

Objective C-OSRC-13.4: Reduce greenhouse gas emissions by 25 percent below 1990 levels by 2015.

The following policies, in addition to those in the Land Use and Circulation and Transit Elements, shall be used to achieve these objectives:

Greenhouse Gas Emissions Reduction Program

Policy C-OSRC-13a: Develop a Greenhouse Gas Emissions Reduction Program to include the following as a high priority:

- (1) A methodology to measure baseline and future Vehicle Miles Travelled (VMT) and greenhouse gas emissions;
- (2) Targets for various sectors including existing development and potential future development of commercial, industrial, residential, transportation, and utility sources;
- (3) Collaboration with local, regional, and State agencies and other community groups to identify effective greenhouse gas reduction policies and programs in compliance with new state and federal standards;
- (4) Adoption of development policies or standards that substantially reduce emissions for new development;
- (5) Creation of a task force of key department and agency staff to develop action plans, including identified capital improvements and other programs to reduce greenhouse gases and a funding mechanism for implementation; and
- (6) Monitoring and annual reporting of progress in meeting emission reduction targets. **(GP2020)**

Strategic Planning for County Operations

Policy C-OSRC-13b: Continue to provide strategic planning for energy conservation and efficiency in County operations. **(GP2020)**

Policy C-OSRC-13c: Continue to purchase and use hybrid, electric, or other alternative fuel vehicles for the County vehicle fleet; and encourage County residents and businesses to do the same. **(GP2020)**

New Development Design Standards

Policy C-OSRC-13d: Develop energy conservation and efficiency design standards for new development. **(GP2020)**

Policy C-OSRC-13e: The latest green building certification standards, such as the CalGreen Tier_1 standards, shall be used for new development. **(GP2020 Revised)**

Agency Coordination

Policy C-OSRC-13f: Continue to participate in the International Council of Local Environmental Initiatives (ICLEI) Program. **(GP2020)**

Policy C-OSRC-13g: Encourage the Sonoma County Water Agency and other water and wastewater service providers to reduce energy demand from their operations. **(GP2020)**

Public Outreach

Policy C-OSRC-13h: Continue to support educational programs that promote energy conservation; energy efficiency; and solid waste reduction, reuse, and recycling opportunities for County operations, residents and businesses, and local utilities. **(GP2020)**

Policy C-OSRC-13i: Support project applicants in incorporating cost effective energy efficiency design that may exceed State standards. **(GP2020)**

Manage Timberlands to Reduce Greenhouse Gas Emissions

Policy C-OSRC-13j: Manage timberlands for their value both in timber production and offsetting greenhouse gas emissions. **(GP2020)**

Energy Production and Supply

Energy production in Sonoma County is dominated by the electricity generated from geothermal resources at The Geysers. This source generates about 5,000,000 megawatt-hours per year. Additional sources include hydroelectric power, methane gas, and solar photovoltaics. Additional opportunities exist for individual and small scale production from other renewable energy sources, including passive solar collection, wind energy, hot water, and biomass. These sources have distinct advantages over the more traditional fossil fuel sources such as oil and gas in that they typically have lower up-front costs, better efficiency, and minimal environmental impacts.

Goal C-OSRC-14: **Contribute to the supply of energy primarily by increased reliance on renewable energy sources.**

Objective C-OSRC-14.1: Increase the development of renewable energy and distributed energy generation systems and facilities for County operations.

Objective C-OSRC-14.2: Promote the use of renewable energy and distributed energy generation systems and facilities in new development.

Objective C-OSRC-14.3: Establish guidelines and standards for development of energy generation systems and facilities.

Objective C-OSRC-14.4: Encourage exploration of the extent and potential use of hot water geothermal resources.

The following policies, in addition to those in the Land Use and Circulation and Transit Elements, shall be used to achieve these objectives:

Energy Strategic Plan

Policy C-OSRC-14a: Develop a Sonoma County Energy Strategic Plan that addresses the activities and operations of both County government and private residents and businesses. **(GP2020)**

Energy Facility Siting Policy

Policy C-OSRC-14b: Incorporate energy facility siting policies into the Coastal Zoning Ordinance that would:

- (1) Define small scale energy facilities as those less than 20 MW, and large scale energy facilities as those 20 MW or larger.
- (2) Allow small scale renewable energy generation systems and facilities close to the end energy users in all zoning districts where visual and other environmental impacts can be mitigated.
- (3) Allow large scale energy generation facilities in commercial and industrial areas and not in residential, agricultural, and recreational areas.
- (4) Discourage large scale energy facilities in Scenic Resource Areas and Geologic Hazard Areas unless essential to meet energy demand from renewable or distributed energy generation systems. **(GP2020 Revised)**

Energy Production Projects

Policy C-OSRC-14c: Review and condition proposed natural gas wells through the use permit process. **(GP2020)**

Policy C-OSRC-14d: The use of hot water geothermal resources shall be allowed in all land use designations if it can be demonstrated that it will be compatible with surrounding land uses

and is not located within an Environmentally Sensitive Habitat Area (ESHA). **(GP2020 Revised)**

Renewable Energy and Distributed Energy Systems

Policy C-OSRC-14e: Encourage and promote the development of renewable energy and distributed energy generation systems and facilities for County operations. **(GP2020)**

Policy C-OSRC-14f: Encourage and promote the use of renewable energy and distributed energy generation systems and facilities that are integral to and contained within existing and new development (e.g., solar thermal installations to provide space and water heating or solar electric installations for small commercial buildings or residences in rural areas, small wind energy systems to provide electricity to agricultural accessory structures, etc.). **(GP2020)**

9. AIR RESOURCES POLICY

Air pollutants include both gases and particulates. The automobile is the most common source of smog. Particulates come from residential, industrial, and agricultural sources, mainly during grading and construction activities.

Sources of air pollution are both stationary and mobile. Mobile sources, such as motor vehicles, produce most of the air pollutants in the County. Air pollution from mobile sources is regulated by the State through exhaust emissions standards, but can be reduced by proper management of the transportation system. The Geysers power plants are the largest stationary pollutant source. Other stationary sources include mining operations, industrial and agricultural activities, and lumber mills. Residential wood stoves are a contributor to particulate levels in urban areas in Northern Sonoma County.

Improved air quality and decisions on air quality standards and mitigation measures are balanced with competing interests for production efficiency, energy costs, and ease of transportation while meeting all the requirements of the state and federal Clean Air Acts.

Goal C-OSRC-15: **Preserve and maintain good air quality and provide for an air quality standard that will protect human health and preclude crop, plant, and property damage in accordance with the requirements of the state and federal Clean Air Acts.**

Objective C-OSRC-15.1: Minimize air pollution and greenhouse gas emissions.

Objective C-OSRC-15.2: Encourage reduced motor vehicle use as a means of reducing

resultant air pollution.

The following policies, in addition to those of the Circulation and Transit Element, shall be used to achieve these objectives:

Project Review

Policy C-OSRC-15a: Development projects shall be designed to minimize air pollutant emissions. Direct emissions shall be reduced by using construction techniques that decrease the need for space heating and cooling. **(GP2020 Revised)**

Policy C-OSRC-15b: Proposed changes in land use shall be denied unless they are consistent with projected air quality levels. **(GP2020 Revised)**

Policy C-OSRC-15c: Development within the Bay Area Air Quality Management District that generates high numbers of vehicle trips, such as shopping centers and business parks, shall be required to incorporate air quality mitigation measures in their design. **(GP2020 Revised)**

Policy C-OSRC-15d: Any proposed new sources of toxic air contaminants or odors shall provide adequate buffers to protect sensitive receptors and comply with applicable health standards. Buffering techniques such as landscaping, setbacks, and screening in areas where such land uses abut one another shall be used to promote land use compatibility. **(GP2020 Revised)**

Policy C-OSRC-15e: Odor impacts shall be considered when evaluating discretionary land uses and development projects near wastewater treatment plants or similar uses. **(GP2020 Revised)**

Geothermal Development Impacts

Policy C-OSRC-15f: Encourage the adoption of standards, development of new technology, and retrofitting to reduce air pollution resulting from geothermal development. **(GP2020)**

Wood-Burning Devices Regulations

Policy C-OSRC-15g: Residential units shall be required to install only fireplaces, woodstoves, or any other residential wood-burning devices that meet the grams-per-hour Environmental Protection Agency or Oregon Department of Environmental Quality wood heater emissions limits (exempt devices are not allowed). **(GP2020)**

Air Quality Management Districts Coordination

Policy C-OSRC-15h: Refer projects to the Northern Sonoma County Air Quality Management District for review. **(GP2020 Revised)**

Policy C-OSRC-15i: Work with the Northern Sonoma County Air Quality Management District to adopt a diesel particulate ordinance. The ordinance should prioritize on-site over off-site mitigation of diesel particulate emissions in order to protect neighboring sensitive receptors from these emissions. **(GP2020 Revised)**

Policy C-OSRC-15j: Cooperate with the Northern Sonoma County Air Quality Management District to monitor air pollution and enforce mitigations in areas affected by emissions from fireplaces and wood burning stoves. **(GP2020 Revised)**

Alternative Transportation

Policy C-OSRC-15k: Encourage public transit, ridesharing, van pooling, shortened and combined motor vehicle trips to work and services, use of bicycles, and walking. Minimize single passenger motor vehicle use. **(GP2020)**

Public Outreach

Policy C-OSRC-15l: Provide education and outreach to the public regarding the “Spare the Air” Program of the Northern Sonoma County Air Quality Management District. **(GP2020 Revised)**

10. ARCHAEOLOGICAL AND HISTORIC RESOURCES POLICY

Background

Historic preservation is intended to maintain reminders of the County's heritage and development. Historic building surveys of the Sonoma County Coast, Sebastopol, Healdsburg, and Sonoma Valley areas provide an inventory of the County's historic resources, some of which may be threatened by development or a lack of maintenance. Archaeological sites provide information on the history and culture of Sonoma County's earliest residents and can be disturbed by development activities. Heritage and Landmark trees enhance the quality of the environment and have historical significance.

A goal of the Local Coastal Plan is to protect the historic resources of the County Coast to maintain reminders of the area's heritage and development. This section of the Open Space and Resource Conservation Element contains a brief history of the Sonoma County Coast, a

description of the Coastal Zoning Ordinance provisions designed to protect historic resources, an inventory of historic resources on the Coast, and policies for protection of historic resources.

History of Sonoma County Coast

The Coast has a rich and varied history. Many of the activities of the 1700's and 1800's - fishing, farming, and timber harvesting - remain important today.

Native Americans. Native American settlement began on the coast of California about 6,000-10,000 years ago. These populations were primarily hunting and gathering tribes. More recent populations around 1000 B.C.–500 A.D. were involved in complex trading systems between groups. Both groups occupied a narrow territory extending from the coast several miles inland. The Kashaya Pomo lived on the Russian River and northern coast. The Coast Miwok lived south of the River; their region included southern Sonoma County and Marin County. Pomo territory extended from Stewarts Point to Duncans (about 30 miles) and ranged about 5-10 miles inland. The Pomo appear to have had more contact with Russians at Fort Ross and became somewhat acculturated to European ways. By the 1870's the Pomo survived in three villages. By 1915 a reservation was granted for their permanent residence. The Miwok were subjected to European influence by the San Francisco and Sonoma Missions.

Early English and Spanish Explorers. The earliest explorers to the Sonoma County Coast were English and Spanish sailors, including Juan Rodriguez Cabrillo in 1542, Drake in 1579, and Cermeno in 1595. In October 1775, Lieutenant Don Juan Francisco de la Bodega y Quadra sailed his ship, the *Sonora*, to sheltered Anchorage. The log of this voyage named the Bay for the young Lieutenant "Bodega".

Russians. In 1809 the Russians came south from Alaska seeking furs and a food source. The colonizing group of Russians and Aleutian fur hunters built warehouses on Bodega Head and a village at the upper reaches of Salmon Creek. They located the village near what is now the town of Bodega. They also built a fort twenty miles to the north and called it Fort Ross. The Russian American Fur Company prospered for thirty years by harvesting the sea for seal and otter furs. After the destruction of the sea otter, the Russians began to fail financially and sold to Captain John Sutter in 1841.

Mexicans. The intrusion of the Russians forced the Spanish and Mexican governments to occupy the North Bay. General Vallejo, in particular, blocked Russian expansion toward warmer valleys by granting land grants to those who would settle near the Russians. When the Russians left in 1841, the Mexican government quickly monopolized the coastal access by giving land grants from Estero de San Antonio to the Gualala River. In 1841, a Yankee ship captain named Stephen Smith was in Monterey. The Mexicans, concerned about the westward advance of Captain Sutter, were anxious to resettle the area vacated by the Russians, and suggested that Smith become a Mexican citizen and carve out such land as he chose. By 1844, Captain

Smith was granted Bodega Bay and a huge rancho; the captain became a Mexican citizen and moved to Bodega.

1800's-1900's. The Gold Rush brought population and statehood to California. New settlers sought free land that did not require irrigation. Squatters broke up the great ranchos, as in the Bodega Squatters War of 1859. The route of the North Pacific Coast Railroad, completed in 1877, and the location of lumber activity and mills shaped the course of development in western Sonoma County. The first center of population was the southern coast near present day Marin County. By 1851 Valley Ford became a community.

The commercial marketing of lumber and lumber products began when Captain Smith brought the first steam saw mill in the 1840's. The mills followed a rapidly dwindling virgin redwood forest. Railroads, sailboats, and steam schooners were used to get the timber products from the mills to market. Landings occupied Del Mar and Black Point at The Sea Ranch, Stewarts Point, Fisk Mill, Salt Point, Walsh's Landing (now Ocean Cove), Stillwater south of Stillwater Cove, Timber Cove, Fort Ross, Russian Gulch, Rules Landing, and Duncans. The great redwoods were almost logged by the 1880's. All landings ceased operation in the 1920's. Forest products and second growth mills continued until 1930. In the 1930's the railroads for transporting lumber products were abandoned.

In 1853 the ranch owned by Captain Smith was renamed Bodega Corners, present day Bodega Bay. Long popular with explorers like Vancouver, American whalers, smugglers, and fishermen, Smith developed the ranch as a harbor. The coastal roads met at the harbor, and the New England style town became the center of several coastal valleys. Bodega Bay had several periods of interest and decline. In the 1870's it was the largest town that included three stores, one hotel, and three lodges. St. Theresa's church, built by Yankee shipbuilders, served many local Irish. The Potter School, once the "finest in the county", had dances, social gatherings, and a Dramatic Society formed in 1874. The town flourished with agriculture, lumber, and particularly potatoes. Eventual silting of the harbor curtailed further commercial expansion.

The narrow gauge railroad came to the area of Bodega Bay in 1876, but bypassed the town, which subsequently began to decline. The lumber mills were the first to leave. However, tourism saved the harbor from total decline. By 1900 Salmon Creek was the model for communities supported by tourists. The State Park system began to expand north to the Russian River as more people visited the Coast beaches. In 1877 the railroad reached the Russian River, and the town of Duncans Mills was selected as the location of the terminus. In the spring of 1877 Mr. Duncan moved his mill to its present location, and the North Pacific Coast Railroad constructed a bridge across the Russian River below the mill and erected a train station.

In 1873 Fort Ross was purchased by George W. Call, whose family maintained the property for generations. Call's ranch exported lumber, dairy products, hides, beef, and abalone on his

schooner. An hotel opened at Fort Ross in 1878. By 1906 the fort was sold for a State Park. Timber Cove was named in the 1850's as a lumber shipping point. Salt Point had a saw mill as early as 1853. Stewarts Point was founded in 1857 as a shipping port and remains a village with the original buildings and families. The last boat to load at Stewarts Point was the steamer Vanguard in 1929.

Agriculture in various forms was the major economic interest replacing lumber on the Coast. To the north on the coastal plain before the Gualala River, livestock ranchers held large properties which were later purchased for The Sea Ranch. In the south was the potato boom which peaked in 1854. Wheat and livestock were also major agricultural products. Overgrazing and soil erosion forced the farmers to dairy products. Dairying by the Swiss in the 1870's and later by the Italians transformed the area. The railroads and later better roads brought butter, cheese, and fish to San Francisco. The boom caused by the railroad brought dairy herds throughout the Coast.

Sportsmen and later tourists took advantage of the area opened by the railroads. A triangular route from San Francisco meant a trip could be made in one day to the Russian River from San Francisco. By 1894 Inverness, the model ocean community in Marin County, brought attention to the Coast. By 1900, wealthy residents of Santa Rosa bought summer homes at Bodega Bay. The tourist industry flourished after construction of roads like State Highway 1 built in the 1920's. In the 1930's the Russian River area was popular, offering name bands and summer camps. People from the Sacramento Valley discovered Bodega Bay and the cool coast, and planned annual visits. Fishing was a year round business, and local fishermen would visit for the day. Bodega Bay was dredged in 1943, opening the bay for pleasure boats and commercial fishing. The fishing industry grew rapidly, and Bodega Bay became a fishing village. The tourist industry boomed after World War II and is today a major activity the full length of the Sonoma County Coast.

Historic Zoning District

An Historic Combining Zoning District (HD) was established by Ordinance No. 1768 on April 23, 1974. The purpose of the HD zoning is to protect those structures, sites, and areas that are reminders of past eras, events, and persons important in local, state, or national history; that provide significant examples of architectural styles of the past; or that are unique and irreplaceable assets to the County and its communities. In 1976 the Board of Supervisors created the Sonoma County Landmarks Commission for the purpose of implementing the HD Ordinance.

There are two types of Historic Districts created by HD zoning. One type is for an individual structure or site or an integrated group of structures and sites on a single parcel or group of parcels which have special historical, architectural, or aesthetic interests or values. These structures are designated as a County Historic Landmark. The other type is for a group of

parcels in an area which has special historical, architectural, or aesthetic interests or values. This group of parcels is designated as a County Historic District. These structures, sites, or parcels are zoned HD only after a recommendation by the County Landmarks Commission and approval by the Planning Commission and Board of Supervisors.

Sonoma County Landmarks Commission. The Landmarks Commission reviews projects involving new construction, demolition, or exterior alteration of County Historic Landmarks, historic resources in County Historic Districts, and historic resources on the County Historic Resources Inventory to ensure maintenance of their historic and architectural values and compatibility with existent development. The HD Zoning also protects historic structures from demolition for a period of at least six months, allowing time to explore alternatives to demolition.

Survey of Historic Resources

A comprehensive survey of historic resources on the Sonoma County Coast was conducted prior to adopting the 1981 Local Coastal Plan. The survey identified about 90 individual historic resources, some of which have been designated as Historic Landmarks; and three areas of special historic or architectural interest that have been designated as Historic Districts, described below.

Stewarts Point. This community, a County Historic District, contains a collection of simple, early Greek Revival styles. The buildings include the store, hotel, one-room school, and a series of barns and outbuildings which together illustrate a nineteenth century coastal town.

Plantation. This community was once a vacation spot built around a sag pond, a topographic feature related to fault zones. The remaining features are the Druid's Hall, barn, and small cottages.

Fort Ross. Fort Ross has been well documented by other sources and is already protected and owned by the State of California as a State Historic Park.

Duncans Mills. This community, a County Historic District, is primarily a lumber town that was connected with shipping points in the San Francisco Bay by means of a narrow-gauge railroad system which served communities such as Occidental, Freestone, Valley Ford, Tomales, and Point Reyes Station. All of the buildings in Duncans Mills represent the early origins of the town, and the new buildings emulate that character to maintain the sense of place.

The communities of Stewarts Point, Fort Ross, and Duncans Mills and many of the individual historic structures or sites associated with these communities were zoned HD with adoption of the 1981 Local Coastal Plan.

The County maintains an inventory of historic resources. The Historic Resources Inventory includes Historic Landmarks, Historic Districts, and other historic resources (e.g., structures, buildings, bridges, roads, cemeteries, landscaping, trees, and sites) without HD zoning. Future historic resources may be identified as new surveys are conducted. These historic resources may be designated as a County Historic Landmark or County Historic District.

Goal C-OSRC-16: **Protect and preserve significant archaeological and historical sites that represent the ethnic, cultural, and economic groups that have lived and worked in Sonoma County, including Native American populations. Preserve unique or historically significant heritage or landmark trees.**

Objective C-OSRC-16.1: Encourage the preservation and conservation of historic buildings and structures by promoting their rehabilitation or adaptation to new uses.

Objective C-OSRC-16.2: Encourage preservation of historic buildings, structures, sites, cemeteries, features, and objects by maintaining a Landmarks Commission to review projects that may affect these historic and cultural resources.

Objective C-OSRC-16.3: Encourage the protection and preservation of archaeological and cultural resources by reviewing all development projects in archaeologically sensitive areas.

Objective C-OSRC-16.4: Identify and preserve heritage and landmark trees.

Objective C-OSRC-16.5: Encourage the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Ensure appropriate treatment of Native American and other human remains discovered during a project.

Objective C-OSRC-16.6: Develop and employ procedures to protect the confidentiality and prevent inappropriate public exposure of sensitive archaeological resources and Native American cultural resources, sacred sites, places, features, or objects.

The following policies shall be used to achieve these objectives:

Landmarks Commission Role

Policy C-OSRC-16a: Designate the Sonoma County Landmarks Commission to review projects within designated County Historic Districts. **(GP2020)**

Policy C-OSRC-16b: Refer proposals for County Historic Landmark designation and rezoning to the Historic Combining District to the Sonoma County Landmarks Commission. **(GP2020 Revised)**

Policy C-OSRC-16c: The Sonoma County Landmarks Commission shall review Historic Resource Surveys and Evaluations and make recommendations for designation of buildings, structures, sites, cemeteries, features, or objects as County Historic Landmarks. **(GP2020 Revised)**

Policy C-OSRC-16d: Designate the Sonoma County Landmarks Commission to administer a preservation program for stabilization, preservation, rehabilitation, and restoration of historic buildings and structures. **(GP2020 Revised)**

Policy C-OSRC-16e: Refer lists of historic buildings, structures, sites, cemeteries, features, and objects proposed for designation as County Historic Landmarks to the Sonoma County Landmarks Commission for its recommendation. **(GP2020 Revised)**

Project Review

Policy C-OSRC-16f: Refer applications for discretionary permits to the Northwest Information Center at Sonoma State University to determine if the project site may contain archaeological or historic resources. If a site is likely to have archaeological resources, a field survey and an archaeological resources report that contains the results of the survey and includes appropriate mitigation measures shall be required. If the site is likely to have historic resources, a field survey and an historic resources report that contains an evaluation of whether the historic resources are significant under state and federal criteria shall be required. **(GP2020 Revised) (Existing LCP Revised: Recommendations 79-80 on page 34)**

Policy C-OSRC-16g: Refer applications for discretionary permits that involve the removal, demolition, or alteration of a building, structure, site, cemetery, feature, or object identified in an Historic Resource Survey to the Sonoma County Landmarks Commission for review and mitigation. Measures for removal or demolition may include reuse, relocation, preparation of “as-built” drawings, and photo-documentation. **(GP2020 Revised)**

Policy C-OSRC-16h: Use the Heritage or Landmark Tree Ordinance and the design review process to protect trees. **(GP2020)**

Historic Resource Protection Programs

Policy C-OSRC-16i: Develop an historic resources preservation program for stabilizing, rehabilitating, and restoring historic structures and buildings. **(GP2020 Revised)**

Policy C-OSRC-16j: Develop an historic resources preservation program that provides for an ongoing process of updating the County Inventory of Historic Resources. Such a program should include:

- (1) Periodic Historic Resource Surveys;
- (2) Formal recognition of the County Inventory of Historic Resources as recommended by the State Office of Historic Preservation, including rezoning properties to the Historic Combining Zoning District (HD); and
- (3) Procedures for the protection of recognized historic resources for both ministerial and discretionary permits. **(GP2020 Revised)**

Policy C-OSRC-16k: Develop an archaeological and paleontological resource protection program that provides:

- (1) Guidelines for land uses and development on parcels identified as containing such resources;
- (2) Standard project review procedures for protection of such resources when discovered during excavation and site disturbance; and
- (3) Educational materials for the building industry and the general public on the identification and protection of such resources. **(GP2020)**

Policy C-OSRC-16l: Encourage, support, and pursue grant funding for the preparation and periodic updating of Historic Resource Surveys. **(GP2020 Revised)**

Native American Tribes Consultation

Policy C-OSRC-16m: If a project site is determined to contain Native American cultural resources such as sacred sites, places, features, or objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites, notify and offer to consult with the tribe or tribes that have been identified as having cultural ties and affiliation with that geographic area. **(GP2020)**

Policy C-OSRC-16n: Develop procedures for consulting with appropriate Native American tribes during the Local Coastal Plan adoption and amendment process. **(GP2020 Revised)**

Policy C-OSRC-16o: Develop procedures for complying with the provisions of State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, if applicable, in the event of the discovery of a burial or suspected human bone. Develop procedures for consultation with the Most Likely Descendant as identified by the California Native American Heritage Commission, in the event that the remains are determined to be Native American.
(GP2020)

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