

# Open Space and Resource Conservation Element:

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# Open Space and Resource Conservation Element

## **INTRODUCTION**

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

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

## **PURPOSE**

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

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

## **RELATIONSHIP TO OTHER ELEMENTS**

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

## **RELATIONSHIP TO THE CALIFORNIA COASTAL ACT**

### **Section 30001.2 Legislative findings and declarations; economic development**

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

### **Section 30107.5 Environmentally sensitive area**

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

### **Section 30108 Feasible**

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

### **Section 30230 Marine resources; maintenance**

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

### **Section 30231 Biological productivity; water quality**

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

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

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

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

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

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

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

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

### **Section 30234 Commercial fishing and recreational boating facilities**

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

### **Section 30234.5 Economic, commercial, and recreational importance of fishing**

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

### **Section 30240 Environmentally sensitive habitat areas; adjacent developments**

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

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

### **Section 30243 Productivity of soils and timberlands; conversions**

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

### **Section 30251 Scenic and visual qualities**

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

### **Section 30703 Protection of commercial fishing harbor space**

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

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

## I. SCENIC RESOURCES

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### Scenic Landscape Units and Vista Points

A Scenic Landscape Unit is a landscape of special scenic importance in Sonoma County which provides important visual relief from urban densities. The Coastal Zone is an exceptionally attractive landscape that has benefited from almost 50 years of protection and controlled development. The entire Coastal Zone outside of developed communities is designated as a Scenic Landscape Unit. Major Views are long views of unique visual interest, focus, or variety. Major Views are located throughout the Coastal Zone and include islands, rock headlands, coves, lagoons, estuaries, rivers, expansive beaches, white water, coastal hills, and historic settings. Refer to Figures C-OSRC-1a-k for locations of major views.

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

### Scenic Corridors

The primary impression of any 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 Sonoma Coast are State Highway 1, Stewarts Point-Skaggs Springs Road, State Highway 116, Coleman Valley Road, Petaluma-Valley Ford Road, Bodega Highway, Fort Ross Road, Meyers Grade/Seaview Road, Bay Hill Road, and a paved portion of Willow Creek Road. Along Scenic Corridors, all development shall be set back 30 percent of the depth of the lot to a maximum of 200 feet.

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



## **I.1 Goal, Objectives, and Policies**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## **1.2 Programs**

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

## **2. OUTDOOR LIGHTING**

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

## 2.1 Goal, Objectives, and Policies

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

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

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

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

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

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

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

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

### Impacts of artificial night lighting

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

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

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

### 3. COMMUNITY CHARACTER AND DESIGN

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

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

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

#### *Urban Service Areas*

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

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

#### *Rural Communities*

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

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

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

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

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

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

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

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

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

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

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

### ***Landforms***

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

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

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

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

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

### *Vegetation management*

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

A large scale vegetation management program has been implemented by The Sea Ranch Association promote and enhance native plants while controlling and removing invasive non-native plants at The Sea Ranch.

## **3.1 Goal, Objectives, and Policies**

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

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

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

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

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

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

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



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

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

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

## **4. STREAMS AND RIPARIAN CORRIDORS**

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

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

Coastal rivers and streams in Sonoma County provide habitat for several wildlife species. The California giant salamander lives in many different coastal creeks and streams, while the California freshwater shrimp is known to occur only within Salmon Creek within the coastal region of Sonoma

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

## **4.1 Goal, Objective, and Policies**

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

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

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

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

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

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

**Policy C-OSRC-4e:** Channelizations, dams, or other substantial alterations of rivers and streams shall be prohibited except for: (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is

feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat. Any channelization or stream alteration permitted for one of these three purposes shall minimize impacts to coastal resources, including the depletion of groundwater, and shall include measures sufficient to appropriately mitigate unavoidable impacts. Alternatives that incorporate a biotechnical component to river or stream bank stabilization (e.g., pocket planting and joint planting, vegetated crib walls, vegetated slope gratings, etc.) shall be encouraged over alternatives that employ strictly hard solutions (e.g., concrete wall or riprap banks) so long as the alternatives are consistent with all other applicable provisions of this LCP. Where there is conflict the more specific permissible use provisions of this policy shall control over the more general use provisions for other types of ESHA identified by policies found in Subsection 8. “Environmentally Sensitive Habitat Areas”.

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

**Policy C-OSRC-4g:** In Anadromous Fish Streams (Chinook and Coho Salmon Habitat), the following uses and activities shall be prohibited:

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

**Policy C-OSRC-4h** Carry out the following activities to preserve Chinook and Coho Salmon Habitat (Anadromous Fish Streams):

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

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

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

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

## **4.2 Programs**

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

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

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

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

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

## **4.3 Initiative**

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

## 5. WETLANDS

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

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

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

**California Code of Regulations §13577(b):**

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

## 5.1 Goal, Objective, and Policies

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

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

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

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

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

**Policy C-OSRC-5d:** Establish and maintain buffer areas, a minimum of 100 feet, in a natural, undeveloped, condition along the periphery of all wetlands. Wetland buffers shall be developed in accordance with **Appendix E-3**. Development within the buffer area is prohibited unless a study prepared by a qualified professional and reviewed by the Permit

Sonoma Natural Resources Section determines that the proposed development will have no potential for an adverse impact on the wetland.

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

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

- (1) Motor vehicles.
- (2) Dredging and filling, except within Bodega Harbor tideflats in accordance with policies found in Subsection 9 “Commercial Fishing, Support Facilities, and Harbor”.
- (3) Discharge of stormwater or wastewater unless it maintains or enhances wetland function and receiving water quality.
- (4) Agricultural activities, including grazing.
- (5) Removal of vegetation except where necessary to maintain plant, fish and wildlife habitat.
- (6) Construction of agricultural, commercial, industrial, and residential structures within the buffer area unless an environmental assessment or qualified professional that has been reviewed by the Permit Sonoma Natural Resources Section determines that the proposed development will have no potential for an adverse impact on the wetland.
- (7) New water diversions from streams which feed wetlands.
- (8) Discharge of effluent, including those of land- and boat-based origins.
- (9) Domestic animals off leash.

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

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

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

## 6. MARINE HABITATS

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

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

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

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



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

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

## **6.1 Goal, Objectives, and Policies**

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

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

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

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

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

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

- (1) Motor vehicles.
- (2) Development of groins, breakwaters, piers, sea walls, pipelines, or other structures that alter natural shoreline processes. Existing structures causing water pollution or

fish mortality shall be phased-out or upgraded where feasible. **Policy C-OSRC-6c:** Public access to Offshore Rocks and onshore nesting/rookery areas used by seabirds to breed or nest or which provide habitat for seals and sea lions shall be prohibited.

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

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

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

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

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

- (1) Monitor the size and viability of the kelp beds for all ecological functions including fish habitat;
- (2) Regulate and monitor activities such as sewage disposal, dredging, and renewable energy development, and other projects which could degrade nearshore marine water quality and hence have an adverse impact on kelp habitat;
- (3) Prohibit petroleum and other forms of energy development which may have a significant impact on kelp beds as a result of normal operations or accidents (e.g., oil spills and well blow-outs); and

- (4) Kelp may only be harvested for the purpose of scientific research. Onshore facilities that support commercial kelp harvesting, including the transfer of kelp to land-based transportation, are prohibited until the Board determines that the kelp beds have recovered to their historic range and vitality on the Sonoma Coast.
- (5) Identify locations and opportunities to collaborate with local, state, and Federal agencies, Tribal government, and key stakeholders to reintroduce sea otters to the Sonoma Coast and Collaborate on the development of a comprehensive program for reintroduction.

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

- (1) The research activities shall be consistent with the California Coastal Act and other relevant state and federal laws and regulations.
- (2) The BML shall submit an annual report the California Coastal Commission outlining the research activities conducted, including any potential impacts on the coastal resources and the steps taken to minimize such impacts.
- (3) The BML shall provide the California Coastal Commission with at least 30 days' notice prior to the initiation of any new research activities and shall work with the Commission to ensure that the activities are consistent with the Coastal Act and other relevant laws and regulations.
- (4) The BML shall make its research findings and education materials available to the public, in order to increase understanding and appreciation of the coastal zone and to inform coastal management decisions.
- (5) The BML shall, in case of any coastal damage or negative impact caused by their activities, take immediate steps to mitigate such damage and take all necessary measures to prevent recurrence of the same.

## **6.2 Program**

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

- (1) Designate important rocky intertidal areas as a Marine Reserve or Ecological Reserve, and encourage public agencies or private groups to maintain these areas.

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

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

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

### 6.3 Initiatives

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

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

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

## 7. TERRESTRIAL HABITATS

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

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

Coastal prairie and grassland support a rich assemblage of native plants on coastal terraces and bluffs in Sonoma County. More than 90 percent of coastal prairie habitat has been lost, but it is still found sporadically along the Pacific coast of California, including Sonoma County (see **Figures C-OSRC-2e** and **2h**). Due to the drastic habitat loss and great diversity of these grasslands, coastal prairies are considered sensitive habitats. Following conversion from native bunch-grass and herb dominated communities to vegetation dominated by non-native grasses and herbs, much of Sonoma County's historic coastal grasslands are now considered non-native annual grasslands after undergoing substantial conversion. Many of these grasslands are managed by grazing, which reduces the leaf litter caused by the larger and more aggressive non-native vegetation. Coastal prairies that are not grazed, or have been undisturbed from fire for long periods of time, often develop into coastal scrub habitat dominated by native shrubs such as bush lupine and coyote bush. Coastal prairie and scrub habitat occurs mostly on protected lands including Wright Hill Ranch, Salt Point State Park, Jenner Headlands Preserve, and Sonoma Coast State Park.

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

### 7.1 Goals, Objectives, and Policies

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (1) Removal of sand or rock except that necessary for road maintenance.
- (2) Public access off established steps, trails, or paths; and motor vehicles. Equestrian use shall be restricted to areas where ground compaction and erosion from use of horses would not have an adverse impact on bluff stability. **Policy C-OSRC-7n:** Carry-out the following activities to preserve coastal terrace prairie:
  - a) At Bodega Head and Stump Beach, sites shall be developed for the public to observe cormorants and other seabirds; and
  - b) At Stillwater Cove County Park, use of the upland area for habitat education activities shall be encouraged.

**Policy C-OSRC-7o:** The identification through site assessment, preservation, and protection of native trees and woodlands shall be required. To the maximum extent practicable, the removal of native trees and fragmentation of woodlands and forests shall be minimized; any trees removed shall be replaced, preferably on the site at a greater than 1:1 ratio (and at a greater than 3:1 ratio for riparian trees); and permanent protection of other existing woodlands and forests shall be provided where replacement planting does not provide



adequate mitigation. This policy shall not apply to fire risk reduction projects, restoration projects, or forestry projects overseen by a Registered Professional Forester.

**Policy C-OSRC-7p:** Identify important oak woodlands; assess current protection of oak woodlands; identify options to provide greater protection of oak woodlands, including identification and removal of trees infected with *Phytophthora ramorum*, 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.

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

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

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

- (1) Removal of osprey nests.
- (2) Removal of snags and dead tops of live trees.
- (3) Development of new structures and roads.

Recreational activities shall be limited to low-intensity passive recreation, these areas are particularly vulnerable during the period of egg incubation in May to July and activities should be further limited.

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

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

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

- (1) Public access.
- (2) Construction of structures or roads within 600 feet.
- (3) On Penny Island, uses other than low intensity scientific and educational uses, managed so as not to interfere with nesting activity (February to mid-July).

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

## 7.2 Initiatives

**Initiative C-OSRC-7-I1:** In coordination with resource agencies, landowners, and the affected public, conduct a comprehensive study of the cumulative impacts of habitat fragmentation and connectivity loss and the effects of exclusionary fencing on wildlife movement. If warranted, identify essential habitat connectivity corridors and develop recommendations or policies to protect essential habitat corridors and linkages and to restore and improve opportunities for native plant and animal dispersal.

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

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

## 8. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

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

While ESHA maps can serve as an illustrative tool to help identify the presence of potential resources, **it is the actual presence of ESHA on the site** that dictates whether ESHA policies apply. The Local Coastal Plan's ESHA policies will generally not apply to marine habitats which are

protected separately. Under the Coastal Act, ESHAs are governed by Section 30240, while marine resources are governed by Section 30230 and 30231.

## 8.1 Goal, Objective, and Policies

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

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

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

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

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

- (1) The potential ESHAs presented on **Figures C-OSRC-2a** through **2k**
- (2) Federally-listed Rare, Threatened, & Endangered Species
- (3) State-listed Rare, Threatened & Endangered Species
- (4) Federal and State Proposed/Candidate Species
- (5) California Native Plant Society “1B” and “2” Listed Species

- (6) California Department of Fish and Wildlife Global and State 1 - 3 Ranked Vegetation Communities (i.e. G1, G2, G3, S1, S2, S3)
- (7) California Department of Fish and Wildlife Global and State 1 - 3 Ranked Plant and Animal Species
- (8) California Species of Special Concern
- (9) California Fully Protected Species
- (10) Habitats that Support Listed Species (i.e., those in 2 & 3)
- (11) Tree stands that support raptor nesting or monarch populations
- (12) Genetically special populations

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

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

**Policy C-OSRC-8d:** ESHAs shall be protected against any significant disruption of habitat values, which is the importance of various habitat types and conditions in sustaining socially or ecologically significant wildlife populations and biological diversity. Uses allowed within ESHAs shall be limited to those that are dependent on and compatible with maintaining the habitat values within ESHA and those that are otherwise specifically provided for in Subsection 8. "Environmentally Sensitive Habitat Areas" and **Appendix E-3**. Proposed

development in areas adjacent to ESHAs and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and must be compatible with the continuance of such habitat areas.

**Policy C-OSRC-8e:** Establish buffers around ESHA to protect it from development impacts. ESHA buffers shall be developed in accordance with **Appendix E-3**. All buffers around ESHA shall be a minimum of 100 feet in width; a lesser width may be approved by the County as addressed in Subsection 8. “Environmentally Sensitive Habitat Areas” and **Appendix E-3**. Generally, a 600-foot buffer is required for heron rookeries; a 500-foot buffer for occupied raptor nests; a 300-foot buffer for any occupied burrow of a burrowing owl. However, these buffers may be reduced, to a minimum of 100ft, in consultation with resource agencies and with the recommended mitigation and monitoring for impacts. Only developments consistent with Subsection 8. “Environmentally Sensitive Habitat Areas” shall be allowed in ESHA buffers. Buffers shall take into account reasonably foreseeable effects of sea level rise and climate change.

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

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

**Policy C-OSRC-8h:** If proposed development is a permissible use and there is no feasible alternative, including the no project alternative, that can avoid significant impacts to ESHA, then the alternative that would result in the fewest or least significant impacts shall be selected. Residual adverse impacts to ESHA shall be fully mitigated, with priority given to on-site habitat mitigation. Off-site habitat mitigation measures shall only be approved when it is not feasible to fully mitigate impacts on-site or where off-site habitat mitigation is more protective, as documented in a biological resource assessment prepared by a qualified professional and approved by Permit Sonoma staff. Any determination that it is infeasible to mitigate impacts onsite should be supported by written findings. Mitigation may not be used as a substitute for implementation of the feasible project alternative that would avoid impacts to ESHA. Mitigation for impacts to ESHAs other than marine habitats shall be provided at a minimum ratio of 2:1. The more specific mitigation requirements as required by regulatory

agencies or the County shall control over the more general mitigation requirements of this Local Coastal Plan.

**Policy C-OSRC-8i:** Adjacent to ESHA, the use of compatible native, non-invasive plant species for landscaping shall be required as a condition of coastal development permit approval. The use of invasive exotic plant species shall be prohibited. No landscaping shall extend into ESHA.

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

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

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

## **8.2 Program**

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

### 8.3 Initiatives

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

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

## **9. COMMERCIAL FISHING, SUPPORT FACILITIES, AND HARBOR**

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

### ***Section 30234 Commercial fishing and recreational boating facilities***

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

### ***Section 30234.5 Economic, commercial, and recreational importance of fishing***

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

### ***Climate Change***

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

In addition to warming, the world's oceans are gradually becoming more acidic due to increases in atmospheric carbon dioxide (CO<sub>2</sub>). 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.

### ***Offshore Marine Protected Areas***

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

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

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

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

### ***Oil Exploration and Development***

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



***Bodega Bay and Harbor***

Bodega Bay is the largest harbor in Sonoma County and is about 58 miles north of the entrance to San Francisco Bay. Bodega Bay is well protected from the open ocean and prevailing winds by Bodega Bay and Doran Beach and provides shelter for a large fleet of commercial and pleasure boats. Bodega Harbor is located in the northeastern portion of Bodega Bay and serves as the largest fishing port between San Francisco and Fort Bragg. Existing fishing industry facilities at the harbor include two berth installations, three boat launch ramps, commercial fish receiving piers, and a federal navigation channel maintained by the U.S. Army Corps of Engineers (**Table C-OSRC-1**).

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

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

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

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

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

### ***Bodega Harbor Maintenance Dredging***

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

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

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

### ***Marine Debris***

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

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

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

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

## **9.1 Goal, Objectives, and Policies**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(6) Restoration purposes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Policy C-OSRC-9o:** The rare plants in the marsh south of the Old Airport Disposal Site shall be protected during the course of any construction on the site.

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

## **9.2 Program**

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

## **10. SOIL RESOURCES**

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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.

Important farmland soils on the Sonoma County coast include grassland suitable for sheep and cattle grazing along the coastal terrace and lower slopes on the North Coast and throughout the County coast south of Jenner. Soil, climate, topography, and water combine to make these lands highly

productive agricultural areas. Important timberland soils on the County coast are located primarily north of Russian Gulch and in the Willow Creek watershed.

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

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

## **10.1 Goal, Objectives, and Policies**

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

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

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

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

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

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

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

- (1) Projects shall be designed so that structures and roads are not located on steep slopes with an incline greater than 30 percent.
- (2) Erosion control measures shall be incorporated as part of projects involving construction or grading near waterways or on lands with slopes over 10 percent.
- (3) A soil conservation program shall be incorporated as part of projects which could increase erosion of waterways or hillsides.

- (4) New roads and driveways for residential, ranch, and timber harvest uses shall be designed and constructed to retain natural vegetation and topography to the extent feasible.
- (5) Improvements near waterways or in areas with a high risk of erosion as determined by a site specific analysis shall be shall be designed and constructed to retain natural vegetation and topography to the extent feasible.

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

## **10.2 Initiative**

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

## **11. TIMBER RESOURCES**

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

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

### ***Timberland Resources***

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

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

The County coast exhibits the diversity of tree species found throughout the County. Soil, climate, topography, and human activity are the important factors which determine the growth and distribution of tree species. Redwood predominates in the coastal fog belt, with Douglas fir and grand fir 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.

### ***Timberland Regulations***

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

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

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

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

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

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

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

### ***Timberland Environmental Impacts***

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

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

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

## **11.1 Goal, Objectives and Policies**

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

**Objective C-OSRC-II.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-II.2:** Minimize the potential adverse impacts of timber harvesting on economic, conservation, recreation, and open space values; and restore harvested areas to production for a future yield.

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

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

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

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

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

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

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

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

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

## 11.2 Programs

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

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

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

## 11.3 Initiative

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

## 12. MINERAL RESOURCES

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

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

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

## 12.1 Goal, Objectives and Policies

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

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

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

**Policy C-OSRC-12a:** Consider areas designated by the State Mining and Geology Board as regionally significant for construction grade aggregate as priority sites for aggregate production and mineral extraction. Within the Coastal Zone, this is limited to sandstone deposits located in Cheney Gulch, approximately 2.5 miles east of Bodega Bay in western Sonoma County.<sup>2</sup> Review requests for designation of additional areas for consistency with the Coastal Act, Surface Mining and Reclamation Act, Sonoma County Local Coastal Plan, and the Sonoma County Aggregate Resources Management (ARM) Plan.

**Policy C-OSRC-12b:** Review aggregate production projects for impacts coastal resource, including, but not limited to preservation of visual resources, and impacts to natural resources such as topsoil salvage loss, vegetation removal, impacts to terrestrial and marine ecosystems, noise, water quality, maintenance and safety of Highway 1, energy consumption, and air quality. Additionally, the project must demonstrate that an economic need exists for aggregate materials produced at the site and that full reclamation of the site is feasible and that reclamation will fully restore ecological function of the site to that which existed prior to any mining operation.

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

## 13. ENERGY RESOURCES POLICY

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Residents, visitors, and businesses to the Sonoma Coast consume energy in many forms and for many uses, but primarily oil and gas for transportation due to the reliance on automobiles, lack of public transit, and long distances to destinations.

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<sup>2</sup> This area is identified as Sector Q in the 1987 Department of Conservation, Division of Mines and Geology report, entitled *Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area: Special Report 146, Part 3: Classification of Aggregate Resource Areas: North San Francisco Bay Production-Consumption Region*.

Energy production in Sonoma County is dominated by the electricity generated from geothermal resources at The Geysers. This source generates about 5,000,000 megawatt-hours per year. Additional sources include hydroelectric power, methane gas, and solar photovoltaics. Additional opportunities exist for individual and small scale production from other renewable energy sources such as solar, wind, and biomass, but these sources must be developed in a way that coastal resources are not impacted. Small scale solar energy production has the lowest potential for impacts, as wind energy will impact visual resources and create hazards for bird. Small scale biomass energy generation may offer future potential, but cost and limited local availability of biomass fuels in the Coastal Zone make it uncertain if this energy source is viable in the Coastal Zone.

### ***Climate Change***

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

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

**Temperature, Energy Demand, and Energy Supply.** Increases in temperature will likely change how much energy we consume, as well as our ability to produce electricity and deliver it reliably. In a warmer climate, Americans would use more electricity for air conditioning and less natural gas, oil, and wood for heating. Heating demand would decrease the most in the northern United States, and cooling demand would increase

***Water Availability and Energy.*** Energy is needed to pump, transport, and treat drinking water and wastewater. Rising temperatures, increased evaporation, and drought may increase the need for energy-intensive methods of providing drinking and irrigation water such as desalinization. This process makes ocean water potable by removing salt, but the process consumes significant amounts of energy and disposal of waste salt may disrupt marine ecosystems.

***Temperature, Energy Demand, and Energy Supply.*** Increases in temperature will likely increase energy demand, as well as our ability to produce electricity and deliver it reliably. As the climate warms and California moves towards lower carbon energy sources, electrical demand for heating, cooling, and transportation will increase. Changes in energy demand will likely affect greenhouse gas emissions, but the net effect depends on which energy sources are used for electricity and heating.

Warming is likely to increase summer peak electricity demand in most regions of California, including the Sonoma Coast. While California is moving rapidly towards renewable energy sources, a significant amount of energy in the state is still supplied by fossil fuel and nuclear power plants that rely on large-scale supplies of water for cooling. The colder the water, the more efficient the generator.

Hydroelectricity (electricity produced by running water) is an important source of energy in California. Changes in precipitation, increased risk of drought, reduced snowpack, and changes in the timing of snowmelt in spring will reduce hydroelectric energy production.

Rising temperatures, increased evaporation, and drought will increase the need for energy-intensive methods of providing drinking and irrigation water. For example, desalinization plants can convert salt water into freshwater, but require large amounts of electrical energy.

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

**Transportation Impacts.** Damage to the road network in the Coastal Zone will increase as sea level rises and storm events become increasingly severe. Wildfire events are increasing in size and frequency. Significant portions of Highway 1 are at risk from sea level rise, wildfire, and landslides. Past efforts to armor and reinforce Highway 1 against the impacts of climate change have proven ineffective, and a program of managed retreat is necessary to protect this critical transportation link.

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

### **Energy Conservation and Demand Reduction**

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

## **13.1 Goal, Objectives, and Policies**

**GOAL C-OSRC-13: Promote energy conservation and increase energy supply by increased reliance on renewable energy sources that will greenhouse gas emissions.**

**Objective C-OSRC-13.1:** Increase energy conservation and improve energy efficiency in government operations, especially facilities that provide coastal access.

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

**Objective C-OSRC-13.3:** Increase the development of renewable energy and distributed energy generation systems and facilities for state and local government operations including, but not limited to state and regional parks, fire stations, and Caltrans maintenance facilities.

**Objective C-OSRC-13.4:** Promote the use of renewable energy and distributed energy generation systems and facilities in new development.

**Objective C-OSRC-13.5:** Establish guidelines and standards for development of energy generation systems and facilities.

**Objective C-OSRC-13.6:** Encourage exploration of the extent and potential use of hot water geothermal resources.

**Policy C-OSRC-13a:** The latest green building certification standards, such as the CalGreen Tier 1 standards, shall be used for new development, including redevelopment.

**Policy C-OSRC-13b:** Require the water and wastewater service providers to reduce energy demand from their operations.

**Policy C-OSRC-13c:** Support project applicants in incorporating cost effective energy efficiency design that exceeds State standards.

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

**Policy C-OSRC-13e:** The use of low temperature geothermal resources shall be allowed in all land use designations if it can be demonstrated that it will be compatible with surrounding land uses, not degrade coastal views, and not have an adverse impact on Environmentally Sensitive Habitat Areas.

**Policy C-OSRC-13f:** Require development of renewable energy and distributed energy generation systems and facilities for state and local government facilities and operations.

**Policy C-OSRC-13g:** Encourage and promote the use of renewable energy and distributed energy generation systems and facilities that are integral to and contained within existing and new development (e.g., solar thermal installations to provide space and water heating or solar electric installations for small commercial buildings or residences in rural areas, small wind energy systems to provide electricity to agricultural accessory structures, etc.) that do not impact ESHA, public access, or coastal views.

## **13.2 Program**

**Program C-OSRC-13-P1:** Develop a Greenhouse Gas Emissions Reduction Program to include the following as a high priority:

- (1) A methodology to measure baseline and future Vehicle Miles Traveled (VMT) and greenhouse gas emissions;
- (2) Targets for various sectors including existing development and potential future development of commercial, industrial, residential, transportation, and utility sources;



- (3) Collaboration with local, regional, and State agencies and other community groups to identify effective greenhouse gas reduction policies and programs in compliance with new state and federal standards;
- (4) Adoption of development policies or standards that substantially reduce emissions for new development;
- (5) Creation of a task force of key department and agency staff to develop action plans, including identified capital improvements and other programs to reduce greenhouse gases and a funding mechanism for implementation; and
- (6) Monitoring and annual reporting of progress in meeting emission reduction targets.

## **14. AIR RESOURCES POLICY**

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Air pollutants include both gases and particulates. The automobile is the most common source of smog. Particulates come from residential, industrial, and agricultural sources, mainly during grading and construction activities. Wildfires contribute large amounts of air pollutants, but this emission can only be controlled indirectly by fire fuel management and improved fire suppression.

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

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

The southern section of the Coastal Zone is within the jurisdiction of the Bay Area Air Quality Management District (Bay Area Air District) and the northern portion of the Coastal Zone is within the Northern Sonoma County Air Pollution Control District (Northern Air District).

The Bay Area Air District is currently designated as a nonattainment area for state and federal ozone standards, the state particulate matter (PM) 10 standard, and the state and federal PM 2.5 standard. The Bay Area Air District has adopted an Ozone Attainment Plan and a Clean Air Plan in compliance with Federal and State Clean Air Acts. These plans include measures to achieve compliance with both ozone standards. The plans deal primarily with emissions of ozone precursors (nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds, also referred to as Reactive Organic Gases (ROG)).

The Northern Air District does not have an adopted air quality plan because it is in attainment for all federal and state criteria pollutants, although the District occasionally exceeds state standards for PM<sub>10</sub>.

## 14.1 Goal, Objectives and Policies

**GOAL C-OSRC-14:** Preserve and maintain good air quality and provide for an air quality standard that will protect human health and preclude crop, plant, and property damage in accordance with the requirements of the state and federal Clean Air Acts.

**Objective C-OSRC-14.1:** Minimize air pollution and greenhouse gas emissions.

**Objective C-OSRC-14.2:** Encourage reduced motor vehicle use as a means of reducing resultant air pollution.

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

**Policy C-OSRC-14a:** Development projects shall be designed to minimize air pollutant emissions. Direct emissions shall be reduced by using construction techniques that decrease the need for space heating and cooling.

**Policy C-OSRC-14b:** Proposed changes in land use shall be denied unless they are consistent with projected air quality levels.

**Policy C-OSRC-14c:** Any proposed new source of toxic air contaminants or odors shall provide adequate buffers to protect sensitive receptors and comply with applicable health standards. Buffering techniques such as landscaping, setbacks, and screening in areas where such land uses abut one another shall be used to promote land use compatibility.

**Policy C-OSRC-14d:** Residential units may only install fireplaces, woodstoves, or any other residential wood-burning devices that meet the grams-per-hour Environmental Protection Agency or Oregon Department of Environmental Quality wood heater emissions limits (exempt devices are not allowed).

## OPEN SPACE AND RESOURCE CONSERVATION ELEMENT REFERENCES

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