

CALIFORNIA  
COASTAL COMMISSION

STATEWIDE  
INTERPRETIVE GUIDELINES

These Statewide Interpretive Guidelines were adopted by the California Coastal Commission pursuant to Public Resources Code Section 30620 (b) and are "designed to assist local governments, the commission, and persons subject to the provisions of this chapter in determining how the policies of this division shall be applied in the coastal zone prior to certification of local coastal programs."

The guidelines should assist in applying various Coastal Act policies to permit decisions; they in no case supersede the provisions of the Coastal Act nor enlarge or diminish the powers or authority of the Commission or other public agencies.

Interpretive guidelines for the six districts are published separately.

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(SECTIONS RESCINDED June 13, 2000 AS NOTED)

STATEWIDE INTERPRETIVE GUIDELINE FOR WETLANDS  
AND OTHER WET ENVIRONMENTALLY SENSITIVE HABITAT AREAS

(Adopted 2/4/81) (Sections Rescinded 6/13/00)

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*Rescinded  
6/30/00*

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STATEWIDE INTERPRETIVE GUIDELINE FOR WETLANDS AND OTHER WET ENVIRONMENTALLY SENSITIVE HABITAT AREAS (Adopted 2/4/81)

I. INTRODUCTION

The Commission adopted this guideline as a decision of the Commission after receiving extensive public testimony and comments and holding ten public hearings at numerous locations in the coastal zone. In addition, the Regional Commissions provided valuable comments and information as a result of an approximately equal number of hearings which they held. Guidelines should be viewed as a tool in reviewing coastal permit applications and LCPs for wetlands and adjacent areas. The Commission intends local governments to use the guideline when developing LCPs but believes that more flexibility may be appropriate in an LCP than in an individual permit decision. Guidelines of necessity must focus on issues primarily of statewide concern. The LCPs will focus in depth on regional wetlands issues. For example, the Humboldt County Northcoast Area Land Use Plan addressed farmed wetlands in detail, a subject only footnoted in this guideline. It adopted explicit criteria for identifying farmed wetlands and designated the areas exclusive agriculture. The Commission certified the LUP as consistent with the policies of Chapter 3, even though such specific criteria are not contained or endorsed in this guideline. This example illustrates that the guideline is a valuable tool, but only a tool, to be used in conjunction with permit and planning decisions.

A. What Are "Wetlands"?

The Coastal Act defines wetlands as land "which may be covered periodically or permanently with shallow water." Wetland areas, such as marshes, mudflats and lagoons, serve many functions: to absorb pollutants and storm energy; to serve as nutrient sources and genetic reservoirs; and to provide some of the world's richest wildlife habitats.

Wetlands are highly diverse and productive. The combination of shallow and deep water, and the variety of vegetation and substrates produce far greater possibilities for wildlife feeding, nesting and resting than is found in less diverse areas. Individual wetlands may be inhabited by hundreds of species of birds, mammals, fish and smaller organisms. Abundant microorganisms serve as food for crabs, clams, oysters, and mussels which live in the tidal flats.

Wetlands' natural abundance draws people for recreation such as clamming, bird watching and fishing. Fish such as the king and silver salmon and steelhead trout live much of their lives in the ocean but return to freshwater to spawn. Commercially important fish such as herring, anchovy and California halibut are also found in California's estuaries.

Food for ocean fauna is supplied from California's coastal estuaries. Estuarine productivity therefore contributes to a complex ocean food web. For example, a significant amount of the net areal primary productivity of the Tijuana Estuary is exported in the form of dissolved carbon which can be taken up and used by oysters, bacteria and phytoplankton, which may in turn be eaten by other creatures. Perhaps more importantly, estuaries provide habitat for organisms to use that food, therefore making these habitats important for man, for example, as aquaculture sites.

Migratory animals feed and rest in California's coastal wetlands in large enough numbers to make the wetlands invaluable habitat areas. Most waterfowl and shorebirds found in North America, such as ducks, geese, sandpipers, and dunlins, are migratory. They nest in Alaska or Canada in the summer, and winter in the U.S. or points south. During the fall and spring migrations, millions of these birds move along well-defined routes called flyways. The California coast, part of the Pacific Flyways, was assigned third highest priority (out of a total of 33 areas nationally) for wintering habitat preservation by the U.S. Fish and Wildlife Service.

Wetlands also serve as rich laboratories for ecological studies.

#### B. How the Coastal Act Protects Wetlands

Since wetlands are so valuable from both an economic and biologic standpoint, the California Coastal Act, and many other Federal and state statutes and regulations, mandates governmental regulation of these areas. Section 30001 of the Coastal Act states (in part) that the Legislature finds and declares as follows: that the California coastal zone is a distinct and valuable resource and exists as a delicately balanced ecosystem; that the permanent protection of the state's natural resources is of paramount concern to present and future residents of the state and the nation; and that it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction. Therefore, the Act requires that the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes be maintained and, where feasible, restored. Sections of the Act provide general policies for development in and adjacent to wetlands, and specific policies for protecting these areas.

In order to apply Coastal Act policies on wetlands to specific areas and developments, the Commission has adopted this interpretive guideline. The guideline integrates ecological concepts and policies found in many sections of the Act into a consistent whole, explains policies for protecting natural resources, defines technical terms, and facilitates application of the policies by the State and regional commissions. Since many of the natural resource policies in the Coastal Act overlap, this guideline distinguishes the relative importance of the policies and their interrelationships. Statutory provisions which govern all environmentally sensitive habitat areas are laid out and specific development standards and criteria are explained for particular habitat areas (e.g., wetlands, estuaries, open coastal waters, lakes and streams).

Wetlands are not isolated, independently functioning systems, and they depend upon and are highly influenced by their surroundings. Therefore, the guideline includes standards for the review and evaluation of proposed projects adjacent to environmentally sensitive habitat areas.

The State Department of Fish and Game is the authorized custodian of California's fish and wildlife resources and serves as the Commission's principal consultant on all matters related to these resources. This responsibility includes but is not limited to: determination of project impacts; adequacy of technical data; and identification of appropriate mitigation or restoration measures for affected habitat.

C. Use of the Guideline and Its Relationship to LCPs

This guideline is meant to assist the public and the Commissions in applying Coastal Act policies for wet environmentally sensitive habitat areas and is in no way meant to supersede those policies. The guideline should be viewed as a tool in reviewing coastal permit applications and LCPs for wetlands and adjacent areas as explained above.

The question of the relationship between interpretive guidelines and Local Coastal Programs (LCPs) has been hotly debated and underscores the importance of developing a comprehensive, consistent approach to these valuable coastal areas, but the LCPs (such as Humboldt County example discussed above) become the standard of review after certification. This guideline is a decision of the Commission, and therefore, it does serve as a tool or guide to local governments in preparing their LCPs as specified in Section 30625 (c) of the Act and in Section 00113 of the LCP Regulations.

II. WHAT ARE "ENVIRONMENTALLY SENSITIVE HABITAT AREAS"?

The Coastal Act defines "environmentally sensitive area" in Section 30107.5 as follows:

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

The term "environmentally sensitive habitat area" is also used in Section 30240 of the Coastal Act. The two terms are synonymous.

The Commission generally considers wetlands, estuaries, streams, riparian habitats, lakes and portions of open coastal waters to be environmentally sensitive habitat areas because of the especially valuable role of these habitat areas in maintaining the natural ecological functioning of many coastal habitat areas and because these areas are easily degraded by human developments. In acting on an application for development one of these areas, the Commission considers all relevant information. The following specific policies apply to these habitat areas: Sections 30230; 30231; 30233; and 30236. Section 30240, a more general policy, also applies, but the more specific language in the former sections is controlling where conflicts exist with general provisions of Section 30240 (e.g., port facilities may be permitted in wetlands under Section 30233 even though they may not be resource dependent). This guideline addresses wet environmentally sensitive habitat areas only. The discussion in this section and in section VII is not intended to describe or include all environmentally sensitive habitat areas which may fall under Section 30240 of the Coastal Act.

As stated in the "INTRODUCTION," wetlands are not isolated, independently functioning systems. Rather, they depend upon and are highly influenced by their associated watersheds and upland transition areas. Therefore, when the Commission determines that any adjacent area is necessary to maintain the functional capacity of the wetland, the Commission will require that this area be protected against any significant disruption of habitat values consistent with Section 30240(a). These areas may be protected either by inclusion in a buffer area subject to land use restrictions or through provision of a buffer area around the ecological related adjacent area itself, or through other means. Section VII of this guideline discusses the use of buffers.

A. "Wetlands"

The Coastal Act defines "wetland" in Section 30121 as follows:

"'Wetland' means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats and fens."

This is the definition upon which the Commission relies to identify "wetlands." The definition refers to lands "...which may be periodically or permanently covered with shallow water ..." However, due to highly variable environmental conditions along the length of the California coast, wetlands may include a variety of different types of habitat areas. For this reason, some wetlands may not be readily identifiable by simple means. In such cases, the Commission also will rely on the presence of hydrophytes and/or the presence of hydric soils as evidence that an area may be periodically or permanently covered with shallow water. These are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act. In the past, the Commission has considered all relevant information in making such determinations and relied upon the advice and judgement of experts before reaching its own independent conclusion as to whether a particular area will be considered wetland under the Coastal Act. The Commission intends to continue to follow this policy. The discussion in "APPENDIX D" provides more detail and further guidance on wetland identification.

B. "Estuaries"

An "estuary" is a coastal water body usually semi-enclosed by land, but which has open, partially obstructed, or intermittent exchange with the ocean and in which ocean water is at least occasionally diluted by fresh water runoff from the land. The salinity may be periodically increased above the open ocean by evaporation. In general, the boundary between "wetland" and "estuary" is the line of extreme low water (see Appendix D for a more complete discussion of wetland/estuary boundaries).

C. "Streams" and "Rivers"

A "stream or a "river" is a natural watercourse as designated by a solid line or dash and three dots symbol shown on the United States Geological Survey map most recently published, or any well-defined channel with distinguishable bed and bank that shows evidence of having contained flowing water as indicated by scour or deposit of rock, sand, gravel, soil, or debris.

D. "Lakes"

A "lake" is a confined, perennial water body mapped by the United States Geologic Survey on the most current 7.5 minute quadrangle series.

E. "Open Coastal Waters" and "Coastal Waters"

The terms "open coastal waters" or "coastal waters" refer to the open ocean overlying the continental shelf and its associated coastline. Salinities exceed 30 parts per thousand with little or no dilution except opposite mouths of estuaries (see Appendix D).

Some portions of open coastal waters, generally areas without especially significant plant or animal life, may not be considered environmentally sensitive habitat areas. Environmentally sensitive habitat areas within open coastal waters may include "Areas of Special Biological Significance", as identified by the State Water Resources Control Board, habitats of rare or endangered plant and animal species, nearshore reefs, rocky intertidal areas (such as tidepools), and kelp beds.

F. "Riparian Habitats"

A "riparian habitat" is an area of riparian vegetation. This vegetation is an association of plant species which grows adjacent to freshwater watercourses, including perennial and intermittent streams, lakes, and other bodies of fresh water (see Appendix D).

III. WHEN IS DEVELOPMENT PERMITTED IN AN ENVIRONMENTALLY SENSITIVE HABITAT AREA?

"Development" is defined in Section 30106 of the Coastal Act, and includes the placement of fill; construction or alteration of any structure or facility; discharge of any waste material; dredging or extraction of any materials; change in the density or intensity of use of land; removal or harvest of major vegetation except for agricultural purposes; and other alterations to the land and water in the coastal zone (see Appendix A).



A. Requirements For All Development Proposals in Environmentally Sensitive Habitat Areas

Under the Coastal Act, there are two basic steps in determining if development is permitted in an environmentally sensitive habitat area. First, the type of development proposed must be a permitted use under the applicable section of the Coastal Act. For example, any development proposed in a wetland must be specifically described in Section 30233(a) of the Act. The permitted developments allowed in each type of environmentally sensitive habitat area are discussed in subsequent sections. Additional permitted developments in environmentally sensitive habitat areas are projects which depend on the natural resources in that habitat area and therefore require a site in that particular type of environmentally sensitive habitat area in order to function.

Second, any permitted use must also meet all general requirements. For example, before development could be approved in a wetland, the Commission must find that there is no feasible, less environmentally damaging alternative, that feasible mitigation measures have been provided to minimize adverse environmental effects, and that the functional capacity of the wetland is maintained or enhanced. These requirements are discussed in subsequent sections.

B. Requirements for Additional Project Information.

To meet the statutory requirements of Sections 30230, 30231, 30233, 30236, and 30240 of the Coastal Act, an applicant for a permit to develop within or near an environmentally sensitive habitat area may be required to submit supplemental information, including any or all of the maps described below. The size of the study area will depend upon natural topographic features, location of existing development, and potential biological significance of adjacent lands. In undeveloped areas, the required study area may extend 500 feet or more around the environmentally sensitive habitat area, but the 500 foot distance is not an absolute standard. It is recommended that this information be developed before the application comes before the Commission, but the Commission may require additional information as a part of its permit process.

When there is a dispute over the adequacy of the information, the Commission will request the State Department of Fish and Game to review the material and submit written comments to the Commission. A qualified private professional acceptable to the applicant may be employed by the Commission to assist in this review or to provide additional information. The Commission may require the applicant to reimburse it for any reasonable expenses incurred in providing additional information or in the review of the applicant's information.

1. Maps

a. Topographic base map. The base map should be at a scale sufficiently large to permit clear and accurate depiction of vegetative associations and soil types in relation to any and all proposed development (normally the scale required will be 1"=200'). Contour intervals should be five feet, and the map should contain a north arrow, graphic bar scale, and a citation for the source of the base map (including the date). The map should show the following information:

- 1) Boundary lines of the applicant's property and adjacent property, including assessor's parcel numbers, as well as the boundaries of any tidelands, submerged lands or public trust lands.
- 2) Names and locations of adjacent or nearby roads, streets or highways, and other important geographic, topographic and physical features.
- 3) Location and elevation of any levees, dikes or flood control channels.
- 4) Location, size and invert elevation of any culverts or tide gates.

b. Inundation map. For nontidal wetlands, a map should be prepared indicating permanent or seasonal patterns of inundation (including sources) in a year of normal rainfall.

c. Vegetation map. Location and names of plant species (e.g., Salicornia virginica) and vegetation associations (e.g., saltmarsh). This map should be prepared by a qualified ecologist or botanist based upon the technical criteria provided in Appendix D.

c. Soils map. If no soil survey is available, a soils map should be prepared by a qualified soils scientist, and should show the location of soil types and include a physical description of their characteristics based upon the technical criteria provided in Appendix D.

## 2. Supplemental information

A report should be prepared which demonstrates that all of the criteria for development in environmentally sensitive habitat areas have been met. The report should investigate physical and biological features existing in the habitat area and evaluate the impact of the development on the existing ecosystem. The information should be prepared by an ecologist or professional environmental scientist with expertise in the ecosystem in which the development is proposed. For example, in preparing such a report for a proposed development in a salt marsh, the expertise of a qualified wetland ecologist, botanist, ornithologist, hydrologist, soil scientist or other technical professional may be required. The report should be based on an on-site investigation, in addition to a review of the existing information on the area, and should be sufficiently detailed to enable the Commission to determine potential immediate and long range impacts of the proposed project.

The report should describe and analyze the following:

- a. Present extent of the habitat, and if available, maps, photographs or drawings showing historical extent of the habitat area.
- b. Previous and existing ecological conditions.
  - 1) The life history, ecology and habitat requirements of the relevant resources, such as plants, fish and wildlife, in sufficient detail to permit a biologist familiar with similar systems to infer functional relationships (the maps described in above may supply part of this information).
  - 2) Restoration potentials.
- c. Present and potential adverse physical and biological impacts on the ecosystem.
- d. Alternatives to the proposed development, including different projects and off-site alternatives.
- e. Mitigation measures, including restoration measures and proposed buffer areas (see pp. 14-17 and pp. 20-23).
- f. If the project includes dredging, explain the following:
  - 1) The purpose of the dredging.
  - 2) The existing and proposed depths.
  - 3) The volume (cubic yards) and area (acres or square feet) to be dredged.
  - 4) Location of dredging (e.g., estuaries, open coastal waters or streams).
  - 5) The location of proposed spoil disposal.
  - 6) The grain size distribution of spoils.
  - 7) The occurrence of any pollutants in the dredge spoils.
- g. If the project includes filling, identify the type of fill material to be used, including pilings or other structures, and specify the proposed location for the placement of the fill, the quantity to be used and the surface area to be covered.

h. If the project includes diking, identify on a map the location, size (length, top and base width, depth and elevation of the proposed dike(s)) as well as the location, size and invert elevation of any existing or proposed culverts or tide gates.

i. If the project is adjacent to a wetland and may cause mud waves, a report shall be prepared by a qualified geotechnical engineer which explains ways to prevent or mitigate the problem.

j. Benchmark and survey data used to locate the project, the lines of highest tidal action, mean high tide, or other reference points applicable to the particular project.

k. Other governmental approvals required and obtained. Indicate the public notice number of Army Corps of Engineers permit if applicable.

Any maps or technical data submitted by the applicant will be subject to review by the State Department of Fish and Game, the State Lands Commission, or other applicable agencies who may submit comments to the Commission.

#### IV. DEVELOPMENTS PERMITTED IN WETLANDS AND ESTUARIES

Of all the environmentally sensitive habitat areas mentioned specifically in the Coastal Act, wetlands and estuaries are afforded the most stringent protection. In order to approve a project involving the diking, filling<sup>1</sup>, or dredging of a wetland or estuary, the Commission must first find that the project is one of the specific, enumerated uses set forth in Section 30233 of the Act (these developments and activities are listed in section A. and B. below). The Commission must then find that the project meets all three requirements of Section 30233 of the Act (see pp. 14-17). In addition, permitted development in these areas must meet the requirements of other applicable provisions of the Coastal Act.

##### A. Developments and Activities Permitted in Wetlands and Estuaries

1. Port facilities.
2. Energy facilities.

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<sup>1</sup> The Coastal Act defines "fill" as ". . . earth or any other substances or material, including pilings placed for the purposes of erecting structures thereon, placed in a submerged area" (Section 30108.2).

3. Coastal-dependent industrial facilities<sup>2</sup>, such as commercial fishing facilities.
4. Maintenance of existing or restoration of previously dredged depths in navigation channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
5. Incidental public service purposes which temporarily impact the resources of the area, which include, but are not limited to, burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines (roads do not qualify)<sup>3</sup>.
6. Restoration projects.<sup>4</sup>

(continued on next page)

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<sup>2</sup> For the purposes of this guideline, a coastal-dependent industrial facility is one which requires a site on, or adjacent to, the sea to function. See also Sections 30260 through 30264.

<sup>3</sup> When no other alternative exists, and when consistent with the other provisions of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted. Activities described in the Commission's Guideline on Exclusions from Permit Requirements applicable to roads also should be consulted.

<sup>4</sup> Restoration projects allowable under Section 30233 are discussed in detail on pp. 13-14.

7. Nature study, aquaculture,<sup>5</sup> or similar resource-dependent activities<sup>6</sup>
8. In wetland areas, only entrance channels for new or expanded boating facilities<sup>7</sup> may be constructed, except that in a degraded wetland,<sup>8</sup> other boating facilities may be permitted according to the requirements of Section 30411 discussed on pp. 23-27.
9. New or expanded boating facilities in estuaries.<sup>9</sup>

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<sup>5</sup> Aquaculture is not defined in the Coastal Act. The definition contained in Public Resources Code, Division 1, Chapter 4, Section 828 will be used for the purposes of this guideline. ". . . 'aquaculture' means the culture and husbandry of aquatic organisms, including, but not limited to, fish, shellfish, mollusks, crustaceans, kelp and algae. Aquaculture shall not mean the culture and husbandry of commercially utilized inland crops, including, but not limited to, rice, watercress, and bean sprouts." Aquaculture activities could only be sited in a wetland or estuary if they depended upon the resources of the wetland or estuary to be able to function at all. Support facilities which could be located on upland sites (e.g., parking lots, buildings) would not be permitted in the wetland or estuary. This requirement is not intended to discourage aquaculture projects or to prohibit vertical access. The Coastal Act encourages aquaculture.

<sup>6</sup> For the purposes of this guideline, similar resource-dependent activities include scientific research, hunting and fishing (where otherwise permitted). In addition, when wetlands are seasonally farmed, the continued use of agriculture is allowed. Expanding farming operations into non-farmed wetlands by diking or otherwise altering the functional capacity of the wetland is not permitted. Farm-related structures (including barns, sheds, and farm-owner occupied housing) necessary for the continuance of the existing operation of the farmed wetlands may be located on an existing farmed wetland parcel, only if no alternative upland location is available for such purpose and the structures are sited and designed to minimize the adverse environmental effects on the farmed wetland. Clustering and other construction techniques to minimize both the land area covered by such structures and the amount of fill necessary to protect such structures will be required.

<sup>7</sup> Boating facilities include, but are not limited to, boat landings, boat launching ramps, and marinas.

<sup>8</sup> The term "degraded wetland" (emphasis added) is discussed on pp. 24-25.

<sup>9</sup> The list of developments permitted in wetlands and estuaries is the same except that new or expanded boating facilities are permitted in estuaries but are not permitted in wetlands.

B. Special Limitations on Development in Those Coastal Wetlands Identified by the Department of Fish and Game.

Pursuant to Section 30233(c) of the Act, the type and amount of development in the coastal wetlands identified by the Department of Fish and Game is even more limited than those developments set forth in section A. above.

Not all coastal wetlands are identified by the Department of Fish and Game; rather, only 19 are identified for acquisition purposes in their report, "Acquisition Priorities for the Coastal Wetlands of California." However, the Department of Fish and Game may identify additional coastal wetlands pursuant to Section 30233(c). If the Department elects to identify additional wetlands pursuant to Section 30233(c), the Commission recommends that the Department develop standards and procedures for doing so. Wetlands not identified by the Department of Fish and Game are still protected by the Coastal Act, because development in any wetland as defined in the Coastal Act (see section II. A., above) must meet the requirements of Section 30233 and other applicable sections of the Act. The coastal wetlands identified for acquisition purposes to date are as follows:

- |                          |                            |
|--------------------------|----------------------------|
| 1. Lake Earl             | 11. Carpentaria Marsh      |
| 2. Ten Mile River        | 12. Upper Newport Bay      |
| 3. Big River             | 13. Agua Hedionda Lagoon   |
| 4. Bodega Bay            | 14. Batiquitos Lagoon      |
| 5. Estero Americano      | 15. San Elijo Lagoon       |
| 6. Estero de San Antonio | 16. San Dieguito Lagoon    |
| 7. Pescadero Marsh       | 17. Los Penasquitos Lagoon |
| 8. Elkhorn Slough        | 18. South San Diego Bay    |
| 9. Morro Bay             | 19. Tijuana River          |
| 10. Santa Maria River    |                            |

Development permitted in the wetland portions of those areas named above is limited to the following:

1. Very minor incidental public facilities which temporarily impact the resources of the area, such as the inspection of piers, and the maintenance of existing intake and outfall lines (see footnote #3).
2. Wetland restoration.
3. Nature study.
4. Commercial fishing facilities in Bodega Bay (the meaning of this phrase is further defined in Section 30233(c)).
5. Development in already developed parts of south San Diego Bay.

C. Restoration Projects Permitted in Section 30233 - Section Rescinded  
6/13/00

Restoration projects which are a permitted development in Section 30233 (a)(7) are publicly or privately financed projects in which restoration is the sole purpose of the project. The Commission found in its decision on the Chula Vista LCP that projects which provide mitigation for non-permitted development may not be broadly construed to be restoration projects in order to avoid the strict limitations of permitted uses in Section 30233.

Restoration projects may include some fill for non-permitted uses if the wetlands are small, extremely isolated and incapable of being restored. This limited exception to Section 30233 is based on the Commission's growing experience with wetlands restoration. Small extremely isolated wetland parcels that are incapable of being restored to biologically productive systems may be filled and developed for uses not ordinarily allowed only if such actions establish stable and logical boundaries between urban and wetland areas and if the applicant provides funds sufficient to accomplish an approved restoration program in the same general region. All the following criteria must be satisfied before this exception is granted:

1. The wetland to be filled is so small (e.g., less than 1 acre) and so isolated (i.e., not contiguous or adjacent to a larger wetland) that it is not capable of recovering and maintaining a high level of biological productivity without major restoration activities.
2. The wetland must not provide significant habitat value to wetland fish and wildlife species, and must not be used by any species which is rare or endangered. (For example, such a parcel would usually be completely surrounded by commercial, residential, or industrial development which are incompatible with the existence of the wetland as a significant habitat area).
3. Restoration of another wetland to mitigate for fill can most feasibly be achieved in conjunction with filling a small wetland.
4. Restoration of a parcel to mitigate for the fill (see pp. 14-17 for details about required mitigation) must occur at a site which is next to a larger, contiguous wetland area providing significant habitat value to fish and wildlife which would benefit from the addition of more area. In addition, such restoration must occur in the same general region (e.g., within the general area surrounding the same stream, lake or estuary where the fill occurred).
5. The Department of Fish and Game and the U.S. Fish and Wildlife Service have determined that the proposed restoration project can be successfully carried out.



Additional flexibility will be allowed for restoration projects located in wetlands which are degraded (as that term is used in Section 30411 of the Coastal Act). Section VIII. discusses the requirements of such projects.

D. Requirements for All Permitted Development

Any proposed project which is a permitted development must also meet the three statutory requirements enumerated below, in the sequence shown:

1. Diking, filling or dredging of a wetland or estuary will only be permitted if there is no feasible<sup>10</sup> less environmentally damaging alternative (Section 30233(a)). The Commission may require the applicant to submit any or all of the information described in section III. B. above.

2. If there is no feasible less environmentally damaging alternative, feasible mitigation measures must be provided to minimize adverse environmental effects.

a. If the project involves dredging, mitigation measures must include at least the following (Section 30233(b)):

1) Dredging and spoils disposal must be planned and carried out to avoid significant disruption<sup>11</sup> to wetland habitats and to water circulation.

2) Limitations may be imposed on the timing of the operation, the type of operation, the quantity of dredged material removed, and the location of the spoil site.

3) Dredge spoils suitable for beach replenishment shall, where feasible, be transported to appropriate beaches or into suitable longshore current systems.

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<sup>10</sup> "Feasible" is defined in Section 30108 of the Act to mean "... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." A feasible less environmentally damaging alternative may involve a location for the proposed development which is off the project site on lands not owned by the applicant. Feasible under the Coastal Act is not confined to economic considerations. Environmental, social and technological factors also shall be considered in any determination of feasibility.

<sup>11</sup> To avoid significant disruption to wetland habitats and to water circulation the functional capacity of a wetland or estuary must be maintained. Functional capacity is discussed on page 17.

4) Other mitigation measures may include opening up areas to tidal action, removing dikes, improving tidal flushing, or other restoration measures.

The Executive Director or the Commission may request the Department of Fish and Game to review dredging plans for developments in or adjacent to wetlands or estuaries. The Department may recommend measures to mitigate disruptions to habitats or to water circulation.

b. If the project involves diking or filling of a wetland, required minimum mitigation measures are the following:<sup>12</sup>

1) If an appropriate restoration site is available, the applicant shall submit a detailed restoration plan which includes provisions for purchase and restoration of an equivalent area of equal or greater biological productivity<sup>13</sup> and dedication of the land to a public agency or otherwise permanently restricts its use for open space purposes. The site shall be purchased before the dike or fill development may proceed.

2) The applicant may, in some cases, be permitted to open equivalent areas to tidal action<sup>14</sup> or provide other sources of surface water. This method of mitigation would be appropriate if the applicant already owned filled, diked areas which themselves were not environmentally sensitive habitat areas but would become so, if such areas were opened to tidal action or provided with other sources of surface water.

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<sup>12</sup> Mitigation measures shall not be required for temporary or short-term fill or diking, if and only if a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time. For the purposes of this guideline, short-term generally means that the fill or dikes would be removed immediately upon completion of the construction of the project necessitating the short-term fill or diking (Section 30607.1).

<sup>13</sup> For an area to be of "equal or greater biological productivity," it must provide equivalent or greater habitat values to the same type and variety of plant and animal species which use the area affected by the proposal.

<sup>14</sup> "Opening up equivalent areas to tidal action" means to permanently open to tidal action former intertidal wetlands capable of providing equal or greater biological productivity. Mitigation measures should restore areas which are no longer functioning in a manner beneficial to wetland species. For example, returning a diked-off, formerly saltwater, but presently freshwater marsh to tidal action would not constitute mitigation. However, improving tidal flushing by removing tide gates, digging tidal channels and clearing culverts might qualify, if the Commission determines that such actions would restore an area to equal or greater habitat value than the area lost.

3) However, if no appropriate restoration sites under options 1 and 2 are available, the applicant shall pay an in-lieu fee of sufficient value to an appropriate public agency for the purchase and restoration of an area of equivalent productive value, or equivalent surface area.

This third option would be allowed only if the applicant is unable to find a willing seller of a potential restoration site. The public agency may also face difficulties in acquiring appropriate sites even though it has the ability to condemn property. Thus, the in-lieu fee shall reflect the additional costs of acquisition, including litigation, as well as the cost of restoration. If the public agency's restoration project is not already approved by the Commission, the public agency may need to be a co-applicant for a coastal development permit to provide adequate assurance that conditions can be imposed to assure that the purchase of the mitigation site shall occur prior to issuance of the permit. In addition, such restoration must occur in the same general region (e.g., within the same stream, lake, or estuary where the fill occurred).

A preferred restoration program would remove fill from a formerly productive wetland or estuary which is now biologically unproductive dry land and would establish a tidal prism necessary to assure adequate flushing. Few if any restoration projects have been implemented for a sufficient length of time to provide much guidance as to the long-term restorability of such areas. Since such projects necessarily involve many uncertainties, restoration should precede the diking or filling project. At a minimum, the permit will be conditioned to assure that restoration will occur simultaneously with project construction. Restoration and management plans shall be submitted with the permit application.

The restoration plan should generally state when restoration work will commence and terminate, should include detailed diagrams drawn to scale showing any alterations to natural landforms, and should include a list of plant species to be used as well as the method of plant introduction (i.e., seeding, natural succession, vegetative transplanting, etc.).

The management plan would constitute an agreement between the applicant and the Commission to guarantee the wetland is restored to the extent established under stated management objectives and within a specified time frame.

The plan should describe the applicant's responsibilities in maintaining the restored area to assure the Commission that the project will be successful. The management plan should generally include provisions for a monitoring program and for making any necessary repairs or modifications to the mitigation site.