

EXHIBIT I

2008 SOLANO COUNTY GENERAL PLAN SUISUN MARSH POLICIES

Chapter 2 Land Use

Land Use Designations

Table LU-5 provides a description of each General Plan land use designation and the range of density or intensity of development permitted within each category. The maximum allowable development on individual parcels is governed by these measures. General Plan land use designations are grouped into eight general categories: natural resource, agricultural, residential, commercial, industrial, public use, special purpose areas, and overlays. The following are excerpts from Table LU-5 describing the land use designations within the Suisun Marsh.

**Table LU-5
General Plan Land Use Designations**

Designation and Density or Intensity	Description
Natural Resources Designations	
WB Water Bodies and Courses	Applies to major waterways and lakes located within the county.
PR Park and Recreation	Provides for public park and recreation areas throughout the county.
M Marsh <i>1 du/250 ac</i>	Provides for protection of marsh and wetland areas. Permits aquatic and wildlife habitat, marsh-oriented recreational uses, agricultural activities compatible with the marsh environment and marsh habitat, educational and scientific research, educational facilities supportive of and compatible with marsh functions, and restoration of historic tidal wetlands.
Agricultural Designations	
AG Agriculture <i>Minimum lot sizes determined by agricultural region in Table AG-3 and Figure AG-4 in</i>	Provides areas for the practice of agriculture as the primary use, including areas that contribute significantly to the local agricultural economy, and allows for secondary uses that support the economic viability of agriculture. Agricultural land use designations protect these areas from intrusion by nonagricultural uses and other uses that do not directly support the economic viability of agriculture. Agricultural areas within Solano County are identified

**Table LU-5
General Plan Land Use Designations**

Designation and Density or Intensity	Description
<i>the Agriculture chapter</i>	within one of 10 geographic regions. Within these regions, uses include both irrigated and dryland farming and grazing activities. Agriculture-related housing is also permitted within areas designated for agriculture to provide farm residences and necessary residences for farm labor housing.
Public Use Designation	
PQP Public/ Quasi-Public	Provides for airports, schools, solid waste facilities, hazardous waste facilities, and other public and quasi-public facilities.
Residential Designations	
TC-R Vallejo Unincorporated & Collinsville Areas 1-10 du/ac	<p>Recognizes current residential and mixed-use communities located outside agricultural and municipal service areas where previous development has occurred at higher densities or intensities than currently allowed under County policy. The Traditional Community designation is intended to preserve and enhance the character and quality of these communities but is not to be applied to areas where the area of the residential community is anticipated to expand. Within Traditional Community residential areas, future infill residential and mixed-use development may occur.</p> <p>Two categories of Traditional Community are established: (1) TC-R, exclusively residential (e.g., Green Valley, Rockville, Willotta Oaks, Collinsville, Snug Harbor and unincorporated areas within Vallejo and Fairfield); and (2) TC-M, mixed-use residential and commercial communities (e.g., Old Town Cordelia, Elmira, Birds Landing and unincorporated areas within Vallejo). Within the Vallejo Unincorporated and Collinsville areas, a higher density range has been applied to reflect existing density range within these communities.</p>
Commercial Designations	
CR Commercial Recreation 0–0.3 FAR	Provides for privately owned recreational facilities, including campgrounds, special occupancy vehicle parks, floating home communities, golf courses, and recreational boat marinas. Complementary commercial facilities are also allowed with the primary use including restaurants, commercial lodging, retail shops, boat sales, boat launching ramps, and facilities for boat construction and repair.

**Table LU-5
General Plan Land Use Designations**

Designation and Density or Intensity	Description
Industrial Designations	
WDI Water Dependent Industrial 0–0.3 FAR	<p>This designation is specifically designed to accommodate water dependent industrial development along the Sacramento River. These are defined as:</p> <ul style="list-style-type: none"> a) Waterfront storage facilities – Ship cargo storage handling facilities immediately contiguous and with a functional relationship to a berthing facility; b) Waterfront manufacturing or processing facilities – Manufacturing or processing operations which require frontage on navigable waters to receive raw materials and/or to distribute processed materials by ship; c) Water-using facilities – Power plants and desalinization plants requiring large quantities of water for intake and waste assimilation; d) Support facilities – Uses in addition to those described above which are required to support the operation of a permitted waterfront use; and e) Associated manufacturing or processing uses – Those uses which must be in proximity to a demonstrated water-dependent manufacturing or processing use. <p>Industrial development shall be located and developed in a manner that protects significant marshland and wetland habitats and the water quality of the area. Wetland resources may be enhanced or restored, provided that the viability of the site for industrial development is preserved.</p>
Overlays	
RCO Resource Conservation Overlay	<p>Identifies and protects areas of the county with special resource management needs. This designation recognizes the presence of certain important natural resources in the county while maintaining the validity of underlying land use designations. The overlay protects resources by (1) requiring study of potential effects if development is proposed in these locations, and (2) providing mitigation to support urban development in cities.</p> <p>Resources to be protected through this overlay are those identified through technical studies as the highest priority areas within the habitat conservation planning process. Conservation measures used to achieve the County's resource goals vary based on the targeted resource. Removal of a Resource Conservation Overlay from a</p>

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General Plan Land Use Designations**

Designation and Density or Intensity	Description
	subject property may be possible through a General Plan amendment.

Notes: du/ac = dwelling units per acre; FAR = floor-area ratio

Special Study Areas

As part of the General Plan update process, special community participation programs were conducted in four special study areas. These four areas (Middle Green Valley, Suisun Valley, Old Town Cordelia, and Collinsville) face unique planning issues. The process of planning for special study areas focused attention on each area's particular issues and concerns. Goals and policies were established for each area based on the input from the community.

Collinsville

The Collinsville Special Study Area includes about 8,500 acres located in the extreme southeastern portion of Solano County. Located south of SR 12 approximately 10 miles southwest of Rio Vista and 15 miles southeast of Travis AFB and Fairfield, Collinsville is bordered on the south and southwest by the Sacramento River and on the west by Montezuma Slough and Suisun Marsh.

Current land uses in Collinsville include natural resources land, utility operations, publicly owned open land, residences, wind farms, and agricultural lands. Dry farming, which rotates between grain and grazing sheep, is the major agricultural practice in this area. Much of the land used for dry farming is also used for production of wind energy.

Pacific Gas and Electric Company and the Sacramento Municipal Utility District both own large tracts of land in the Collinsville area. A cluster of fewer than 20 homes is located in the southern portion of the area along Collinsville Road. Another cluster of homes and businesses serving the local area is located in Birds Landing, at the northern edge of the area, where Collinsville and Birds Landing Roads intersect.

Community Involvement Process

Five public workshops were held to shape the land use plan, including policies and implementation programs for Collinsville. These items were subsequently reviewed with the Citizens' Advisory Committee, Planning Commission and the Board of Supervisors. The issues summarized below were recurring points of discussion that resonated throughout each of the workshops.

Maintain Residential Character of Collinsville and Birds Landing

Starting at the first workshop, many residents expressed a desire to keep Collinsville, and to a lesser extent Birds Landing, as they are right now. There was less discussion of Birds Landing due to more limited attendance from residents of that portion of the study area. Discussion of residential uses and designations often became confusing due to the fact that the current General Plan and Zoning designations for the Collinsville town site are

inconsistent with the land uses actually found there. Most of the resident participants who reiterated that they wanted to 'keep it the way it is' were referring to the existing land uses, but a smaller number of residents were actually referring to either the General Plan designation (Commercial Recreation in Collinsville) or the Zoning designation (Extensive Agricultural in Collinsville).

Industrial Uses

There was extensive discussion of industrial development in the Collinsville area. This was initially focused on a single proposal for industrial development on land that was formerly owned by Dow Chemical and is currently owned by the Sacramento Municipal Utility District (SMUD). As the workshops continued, representatives of the Pacific Gas and Electric Company and SMUD attended workshops, and comments in writing were submitted by landowners, which expanded the conversation to industrial uses in general and the types of industrial uses that should be permitted.

Marsh and Other Natural Resources

The condition of the Suisun Marsh and other natural resource areas within the study area was discussed frequently. Many residents commented that they liked living in an area with so many natural resources and would like to see them restored and preserved, rather than developed.

Infrastructure/Roadways

There was discussion of two infrastructure issues. The first was provision of septic for the existing homes in Collinsville. The second was traffic impacts that could result from industrial development.

Collinsville Land Use Plan

Based on the community input from the public workshops, the land use plan for Collinsville is intended to maintain the residential character of Collinsville and Birds Landing, retain the possibility for future industrial development outside of the existing community, and protect the condition of Suisun Marsh and other natural resource areas.

Extensive changes were made to the land use designations found in the 1979 *Collinsville–Montezuma Hills Area Plan and Program*; however, the focus will remain on providing land for industrial uses that rely on the Collinsville area's unique access to the Sacramento River and wind resources, with a focus on production of renewable energy. Expanded focus is given to maintaining and enhancing the current traditional communities of Collinsville and Birds Landing and ensuring that uses in other parts of the study area are compatible with those communities. The land use diagram for Collinsville is presented in Figure SS-5.

Goal and Policies

The following goal and policies were developed based on community input and along with the land use diagram will be used to review and update the Collinsville-Montezuma Hills Area Plan.

Goal

SS.G-3: Protect and maintain the historic communities of Birds Landing and Collinsville while continuing to provide opportunities for industrial development that are compatible with the Collinsville area.

Policies

- SS.P-20: Explore historic preservation for historic buildings located within the study area.
- SS.P-21: Preserve the residential character of the Collinsville town site; ensure that any future nonresidential uses are compatible with the residential character and that an adequate buffer is established between residential and nonresidential uses.
- SS.P-23: Focus on renewable energy in the development of Water Dependent Industrial uses.
- SS.P-24: Provide adequate circulation for new industrial development in the Water Dependent Industrial land use designation, and protect circulation for adjacent, nonindustrial land uses, including agricultural and other local traffic.
- SS.P-25: Support the development of Commercial Recreation uses in designated portions of the Collinsville town site.
- SS.P-26: Maintain and support the expansion of neighborhood commercial uses appropriate for the traditional community in Birds Landing.
- SS.P-27: Protect existing historic communities from floodwaters by supporting the ongoing maintenance of levees and other flood control mechanism

Chapter 4 Resources Chapter

Suisun Marsh

The Marsh designation has been applied to the Suisun Marsh on the Land Use Diagram. This designation is designed to preserve and enhance the quality and diversity of marsh habitats. Uses in marsh designated areas should be restricted to aquatic and wildlife habitat; marsh-oriented recreational uses; agricultural activities compatible with the marsh environment and which protect the habitat value of marsh areas; and educational and scientific research opportunities and resources; and restoration of historic tidal wetlands by such actions as raising site elevations through placement of approved dredged sediments, breaching levees, and reintroduction tidal action.

The Primary Management Areas as established in the Suisun Preservation Act of 1977 is shown in Figure 3RS-3. This area consists of tidal marshes, seasonal marshes, managed wetlands and lowland grasslands. It is the intent for this area to remain in it's existing marsh and related uses as provided for in the Suisun Marsh Local Protection Program.

Within the Primary Management Area lands are generally to be retained in minimum parcel sizes of 250 acres.

The Secondary Management area established in the 1977 Act and shown in Figure 3RS-3 is designated for agricultural use. This area includes portions of four agricultural regions as shown in Figure AG -4. They include the Western Hills region, Suisun Valley region, the Jepson Prairie Region, and the Montezuma Hills region. These areas within the Secondary Management area consist of upland grasslands and agricultural lands and serves as a buffer to the wetland areas. The Secondary Management Area is designed to assure retention of upland areas adjacent to the marsh in uses compatible with its protection as provided for in the Suisun Marsh local Protection Program. Within the Secondary Management area, lands within the Western Hills west of I-680 are generally to be retained in minimum parcel sizes of 20 acres and east of I-680 in 160 acre minimum parcel sizes. In Suisun Valley region of the Secondary Management area, lands are generally to be retained in minimum parcel sizes of 80 acres and lands in the Jepson Prairie and Montezuma Hills regions of the Secondary Management area are generally to be retained in minimum parcel sizes 160 acres. The County has applied Marsh Preservation (MP) and Suisun Marsh Agricultural zoning (A-SM) districts to the Primary and Secondary Management Areas, consistent with the General Plan.

In addition to the Suisun Marsh, a number of important habitat areas also exist along the county's significant water courses. The plan seeks to preserve the water quality and riparian habitat of these watercourses through the control of erosion, sedimentation and runoff resulting from adjacent use and development. Areas west of I-680 and outside the boundaries of the City of Fairfield are excluded from the land use restrictions which the Act places upon the buffer, except for watercourse protection and erosion and sediment control provisions.

Under the Suisun Marsh Local Protection Program, all public and private management and development activities within the Primary and Secondary Management areas of the Suisun Marsh shall be consistent with the policies and provisions of the Suisun Marsh Protection Plan as adopted by the San Francisco Bay Conservation and Development Commission. The Marsh designation in the Water Related Industry Reserve area, a part of the Secondary Management Area of the Suisun Marsh Protection Plan, will be managed in the same fashion as if it were a part of the Primary Management Area of the Suisun Marsh Protection Plan.

Policies

General Plan policies governing the Suisun Marsh are contained in Chapter 12, Suisun Marsh Local Protection Program.

Figure RS-3

Figure RS-3, Delta and Marsh Protection Areas, is amended to reflect the BCDC Suisun Marsh Protection Plan map amendment amending the Water Related Industrial Reserve area.

Chapter 8 Public Facilities and Services

Solid Waste

Planning Context

The Potrero Hills Landfill is located in the Secondary Management Area of the Suisun Marsh. The Public/Quasi-public land use designation applied to the Potrero Hills Landfill shall be temporary and limited to only a solid waste facility established consistent with Solano County Suisun Marsh Local Protection Program Utilities, Facilities and Transportation Policy 4. (Appendix C). All other Public/Quasi-public facilities and uses shall not be permitted at this site. When the Potrero Hills Landfill is closed, the land use designation for this area shall revert to Agriculture. The Potrero Hills Landfill will reach its near-term capacity in 2013, but may be expanded to reach its long-term capacity in 2049. The Hay Road Landfill has until 2070 before it reaches capacity. Each site shall be restored to its original natural condition consistent with each site's approved closure plan and reclamation plan. Restoration may be phased over the life of the landfill.

Policy

- PF.P-31: The Public/Quasi-public land use designation applied to the Potrero Hills Landfill is a temporary designation and shall be limited to only a solid waste facility that is established consistent with Solano County *Suisun Marsh Local Protection Program* and *Suisun Marsh Protection Plan*. The temporary designation is for the life of a facility, as permitted. Once any portion of the facility is closed, the agricultural land use designation will be restored and in effect.

Chapter 12 Suisun Marsh Local Protection Program Policies

INTRODUCTION

The Suisun Marsh Management is shown in Figures SM-1 and SM-2. The County is required to prepare and adopt a component of the local protection program required under the 1997 Suisun Marsh Preservation Act (Marsh Act) to implement the Suisun Marsh Protection Plan within the Suisun Marsh Management area (See Chapter 4, Suisun Marsh). The County component of the Local Protection Program is comprised of polices contained in the County General Plan; County Code provisions including the Zoning Code (Chapter 28), Drainage and Flood Control (Chapter 9), and Grading, Drainage, Land Leveling and Erosion Control (Chapter 31); policies regulating sewage disposal systems; and findings of consistency between the Marsh Act and existing county policy.

Purpose

This Chapter contains and references the General Plan provision of the Solano County component of the Suisun Marsh Local Protection Program.

Relationship to Other General Plan Chapters

The Suisun Marsh Local Protection Program includes the following General Plan provisions.

Chapter 1 Land Use

Table LU-5

- WB Water Bodies and Courses
- PR Park and Recreation
- M Marsh
- A Agriculture
- PQP Public/ Quasi-Public
- TC-R Traditional Community Residential
- CR Commercial Recreation
- WDI Water Dependent Industrial

Special Study Area – Collinsville discussion, goal and policies SS.P-20, SS.P-21, SS.P-23, SS.P-24, SS.P-25, SS.P-27 and Figure SS-5

Chapter 4, Resource

Biological Resources, Suisun Marsh discussion and Figure RS-3

Chapter 8, Public Facilities and Services

Solid Waste - Potrero Hills Landfill discussion and Solid Waste Policy PF.P-31

Chapter 12, Suisun Marsh Local Protection Program Policies

Related Plans, Programs and Agencies

The Suisun Marsh Local Protection Program is required to be consistent with the Suisun Marsh Protection Plan prepared by the Bay Conservation and Development Commission and the provisions of the Suisun Marsh Protection Act of 1977. The Suisun Marsh Local Protection Program was certified by the Bay Conservation and Development Commission (BCDC) on , 2012.

LAND USE DIAGRAM

Within the Suisun Marsh Management area, the following land use classifications apply:

- Water Bodies and Courses
- Park and Recreation
- Agriculture
- Public/Quasi-Public
- Traditional Community – Residential
- Commercial Recreation

Water Dependent Industrial

These land use classifications are described in Chapter 2, Land Use and are shown on the Suisun Marsh Land Use Diagram in Figure SM-3.

SUISUN MARSH POLICIES

BIOLOGIC RESOURCES

The Suisun Marsh represents an area of significant aquatic and wildlife habitat and is an irreplaceable and unique resource to the residents of Solano County, the state and nation. The Marsh comprises approximately 85,000 acres of tidal marsh, managed wetlands and waterways. It is the largest remaining wetland around San Francisco Bay and includes more than ten percent of California's remaining wetland area. The Marsh is also a wildlife habitat of nationwide importance in that it provides wintering habitat for waterfowl of the Pacific fly-way. Because of its size and estuarine location, it supports a diversity of plant communities which provide habitats for a variety of fish and wildlife, including several rare and endangered species.

In order to preserve and enhance the quality and diversity of marsh habitats and to assure retention of upland areas adjacent to the marsh in uses compatible with its protection, the California Legislature passed the Suisun Marsh Preservation Act of 1977. This legislation serves to protect the Marsh by adopting provisions of the Suisun Marsh Protection Plan as prepared by BCDC. The Preservation Act also requires local governments and districts having jurisdiction over the Marsh to prepare a Local Protection Program for the Marsh consistent with the provisions of the Preservation Act and the policies of the Protection Plan.

An important provision of the Act and Plan is the delineation of two management areas within the Marsh. The Primary Management Area consists of tidal marshes, seasonal marshes, managed wetlands and lowland grasslands within the Marsh, and the Secondary Management Area is comprised of upland grasslands and cultivated lands which serve as significant buffers to the Marsh. Policies incorporated within this Section which refer to uses in either of these management areas apply to the Primary and Secondary Management Areas as established by the Preservation Act.

Another important provision of the Act and Plan is to ensure that appropriate marsh preservation policies are incorporated into local plans and ordinances. The following discussion of marsh related issues presents policies and standards consistent with this provision. Marsh issues addressed herein are discussed and grouped in several areas of major concern. These include provisions for the management of wildlife habitat, agricultural use within and adjacent to the Marsh, preservation of water quality within the Marsh and watershed, recreation and marsh access, as well as standards for natural gas, utilities, and water-related industrial development.

Wildlife Habitat Management and Preservation

The Suisun Marsh and adjacent uplands provide a unique resource for a wide range of aquatic and wildlife species, due to the occurrence of many diverse habitats in close proximity to each other. The marsh also provides habitat for many rare and endangered plant and animal species.

The tidal marshes, managed wetlands, seasonal marshes and the lowland grasslands of the Suisun Marsh represent a vital resource for many forms of marsh wildlife. Most of the wetlands in the Marsh are managed wetlands that are artificially flooded and cultivated to enhance the production of preferred waterfowl food plants. The tidal marshes, which occur on the edges of the bays and sloughs, are exposed to the natural daily tidal rhythm. Seasonal marshes are found adjacent to the managed wetlands in several areas. They are low-lying lands that are flooded annually by winter and spring rains, and dry out with the approach of summer. Between the Marsh and adjacent uplands lies a "transition zone" of lowland grasslands, which supports a mixture of plants common to both the wetlands and the upland grasslands. Because of their critical importance to Marsh wildlife these areas should be managed so as to preserve and enhance marsh habitat while limiting agricultural use to practices consistent with wildlife use.

Wildlife habitat within the Suisun Marsh shall be managed and preserved through the following policies;

- SM.P-1: The diversity of habitats in the Suisun Marsh and surrounding upland areas shall be preserved and enhanced wherever possible to maintain the unique wildlife resource.
- SM.P-2: The Marsh waterways, managed wetlands, tidal marshes, seasonal marshes, and lowland and grasslands which are critical habitats for marsh-related wildlife and are essential to the integrity of the Suisun Marsh.
- SM.P-3: The eucalyptus groves in and around the Marsh, particularly those on Joyce and Grizzly Islands, should not be disturbed.
- SM.P-4: Burning in the primary management area is a valuable management tool. However, it should be kept to a minimum to prevent uncontrolled fires which may destroy beneficial plant species and damage peat levees, and to minimize air pollution.
- SM.P-5: Where feasible, historic marshes should be returned to wetland status, either as tidal marshes or managed wetlands. If, in the future, some of the managed wetlands are no longer needed for waterfowl hunting, they should also be restored as tidal marshes.
- SM.P-6: Land division or other development that are inconsistent with protection of the Marsh and continued agricultural use shall be limited or prohibited.

AGRICULTURE

Adjacent to the Suisun Marsh wetlands and lowland grasslands, is an area comprising upland grasslands and cultivated lands. The upland grasslands and cultivated lands provide habitat for Marsh-related wildlife, but more importantly, by their location and existing uses, they insulate the habitats from the adverse impacts of both urban development and other upland land uses and practices incompatible with Marsh preservation. Within this area, existing grazing and agricultural uses should continue, and agricultural practices favoring wildlife use and habitat enhancement should be encouraged.

The following policies apply to agricultural uses within and adjacent to the Suisun Marsh.

- SM.P-7: Agriculture within the primary management area of the Suisun Marsh should be limited to activities compatible with, or intended for, the maintenance or improvement of wildlife habitat. These include agricultural uses such as grain production and grazing. Agricultural activities involving removal or persistent plowing of natural vegetation should not be permitted. Grain production should be confined to the Grizzly Island Wildlife Area and relatively small, well-suited areas of some of the large duck clubs. Grazing should be used to control vegetation on duck clubs where plant cover is sub-optimum for waterfowl use and should be discouraged on those clubs where there is already a good mixture of preferred waterfowl food plants. Grazing pressures should not exceed sound range management practices.
- SM.P-8: Agricultural uses consistent with protection of the Marsh, such as grazing and grain production, should be maintained in the secondary management area. In the event such uses become infeasible, other uses compatible with protection of the Marsh should be permitted. The value of the upland grassland and cultivated lands as habitats for Marsh-related wildlife should be maintained and enhanced where possible by planting or encouraging valuable wildlife food or cover plant species.
- SM.P-9: Existing non-agricultural uses such as Potrero Hills Landfill (formally referred to as Solano Garbage Company), Universal Propulsion Co. Inc. (formally Goodrich and Explosive Technology Corporation), FP Smith Parts and Equipment, Flatiron and others, on sites within the secondary management area should be allowed to continue if they are conducted so that they will not cause adverse impacts upon the marsh. Any future change in uses of these sites should be compatible with the preservation of the Marsh and its wildlife resources.
- SM.P-10: Within the Marsh the County shall limit special assessments against the agricultural lands for the provision of public services, where the demand for such services is not generated by agricultural use on the land.

WATER QUALITY AND FLOOD CONTROL

The Suisun Marsh is located where the salt water of the Pacific Ocean and fresh water of the Sacramento and San Joaquin River Delta meet and mix. Because of its location, it provides a transition between salt and fresh water habitats which creates the unique diversity of fish and wildlife habitats characteristic of a brackish marsh. Water quality in the Marsh today is generally adequate, in terms of salinity, turbidity, temperature and pollution levels. The salinity level, however, is almost totally dependent upon the amount of fresh water flowing in from the Delta since it is this inflow that limits the intrusion of saline ocean waters.

Numerous upstream storage facilities, together with diversions of water from the Delta and the tributary streams of the Delta have substantially reduced the amount of fresh water flowing into the Delta with a resultant increase in salinity intrusion into the Marsh and Delta. Future changes in land use in the Suisun Marsh and its watershed may also affect water quality through changes in turbidity, temperature or pollution levels.

Land use and conservation policies can protect waster quality and mitigate flood hazards by minimizing encroachment on natural drainage courses and preventing increases in the rate of runoff caused by upstream land development within the Suisun Marsh and its watershed.

The following policies represent the County's intent in preserving water quality and reducing flood hazards in the Suisun Marsh:

- SM.P-11: Projects designed to import or redistribute the fresh water in the Marsh for salinity control should be planned carefully so that the expected benefits are realized. Furthermore, any proposed import project should be studied to determine if the project would adversely affect the Marsh by encouraging urban and industrial growth in the Marsh area. No import project should be constructed if the adverse environmental impacts of growth on the Marsh would outweigh the possible beneficial impacts of salinity control.
- SM.P-12: To prevent crop damage in some areas, the withdrawal of groundwater from the underground aquifers surrounding the Marsh may be desirable. Withdrawal should not be so extensive as to allow the salt water of the Marsh to intrude into fresh water aquifers, or to disrupt the natural subsurface flow of groundwater into the Marsh.
- SM.P-13: Disruption or impediments to runoff and stream flow in the Suisun Marsh and its watershed should not be permitted if it would result in adverse effects on the quality of water in or entering the Marsh. Riparian vegetation in the immediate Suisun Marsh and its immediate watershed should be preserved due to its importance in the maintenance of water quality and its value as Marsh-related wildlife habitat. Stream modification should be permitted only if it is necessary to ensure the protection of life and existing structures from floods and only the minimum amount of modification necessary should be allowed in such cases.
- SM.P-14: The development of industrial facilities in, adjacent to or upstream from the Marsh should be planned to eliminate significant adverse environmental impacts on the water quality of the Suisun Marsh. Activities that could significantly alter the temperature, salinity, or turbidity of the water should be prohibited. Industrial facilities that will increase the potential for spills of toxic and hazardous materials should not be permitted unless it is established that spills of such materials will not represent a significant threat to the Marsh.
- SM.P-15: Any development in the Suisun Marsh or its watershed proposed for areas that have poor soil conditions for construction or that are

seismically active, should be controlled to prevent or minimize earth disturbance, erosion, water pollution, and hazards to public safety. Local runoff, erosion, and sediment control ordinances should be established in the Suisun Marsh and its watershed to protect the Marsh from these potential adverse effects.

- SM.P-16: Riparian corridors (the stream, its banks, and creekside vegetation) in the Marsh and its immediate watershed should be protected from encroachment and degradation by development. No development shall be permitted which would interfere with existing channel capacity or would substantially increase erosion, siltation, or other contributors to the deterioration of any watercourse.
- SM.P-17 Within the Suisun Marsh and its watershed, sound agricultural practices which conserve water quality and riparian vegetation shall be encouraged.
- SM.P-18 Public roadway construction and improvement activities should be subject to restrictions permitting the natural water movement necessary to sustain the marsh environment.
- SM.P-19: Wherever possible, upstream watersheds should remain essentially devoted to open space land uses such as recreation and extensive agriculture (grazing). Upstream land use practices that contribute to increased rates of surface water runoff should be prevented or regulated.

NATURAL GAS

Several thousand feet below the tidal marshes, managed wetlands, sloughs and bays of the Suisun Marsh are geologic formations that contain trapped accumulations of natural gas. These formations and the accumulated gas constitute the Suisun Marsh gas fields. Gas has been extracted from the Suisun fields since their discovery in 1938. However, due to high demands for natural gas as a fuel and the limited nature of the resource, the fields are expected to be completely depleted in the future. After the depletion of the fields, the remaining geologic formations may be suitable for the underground storage of natural gas extracted from other fields and transported to the Bay Area by pipeline or tanker.

Provisions for natural gas exploration, operation and storage shall be controlled through the following policies:

- SM.P-20: Transportation of natural gas by underground pipeline is the most economical and safe method of gas transportation in the Suisun Marsh area. Future gas pipelines should be permitted if they are consistent with the Suisun Marsh Protection Plan and if the design and construction meet the following standards:
- a. Existing pipeline systems are utilized to the maximum extent feasible.

- b. The pipeline design meets all applicable safety standards of the Office of Pipeline Safety Operations and other regulatory agencies.
- c. The pipeline route avoids tidal marshes and managed wetlands wherever possible and, if that is not possible, the route crosses as little marsh or managed wetland as possible.
- d. Wide track or amphibious construction equipment is used in tidal marsh or managed wetland areas. Pads or mats are used as needed to prevent any construction equipment from sinking into the soft marsh muds and damaging the marsh plants.
- e. The "trench and push" construction method is used in all tidal marsh and managed wetland areas where feasible, so that the construction zone is kept as small as possible and the minimum amount of heavy equipment passes through the marsh or wetland area.
- f. Prior to any pipeline construction or related activities in the Marsh, the contractors consult with the Department of Fish and Game to determine at what time such construction or related activities should be conducted so as to create the least possible adverse impact on breeding, migration, or other fish and wildlife activities.
- g. Prior to any underground pipeline construction in the Marsh, the contractors consult with the Solano County Mosquito Abatement District to ensure existing recirculation water ditches are not blocked and levees are adequately repaired after pipeline construction, or that effective mosquito control measures are maintained.
- h. At slough, mudflat and bay crossings of gas pipelines, the trench is dredged in a manner that minimizes turbidity and prevents interference of the dredging operation with fish or wildlife.
- i. A regular surface and aerial inspection of the pipeline route is carried out as required by the Office of Pipeline Safety Operations.

SM.P-21: If additional gas wells or ancillary facilities are required for gas exploration, production, or injection, the drilling should be accomplished with the following safeguards:

- a. Drilling operations conform to the regulations of the California Division of Oil and Gas designed to prevent damage to natural resources.

- b. The drilling operation is confined to as small an area as possible and does not irreversibly damage unique vegetation or fish and wildlife habitats.
- c. After drilling is complete, all drilling muds, water waste, and any other fluids are removed entirely from the site and disposed of in a manner that does not adversely affect the Marsh.
- d. All buildings, tanks, "Christmas trees" or other facilities related to the production or storage of natural gas do not result in the permanent loss of water surface in the Marsh.

SM.P-22: Construction and drilling in tidal marsh and managed wetland areas should occur only during the dry months of the years (generally April 15 through October 15) when these activities would not disturb wintering waterfowl.

SM.P-23: If gas wells are abandoned, they should be sealed in accordance with Division of Oil and Gas regulations; the drilling or production facilities should be removed; and the surface area should be revegetated with native vegetation within one growing season after abandonment.

SM.P-24: Storage of natural gas in depleted gas reservoirs is a reasonable use of the resource and should be permitted. Storage facilities should meet all safety standards of the Division of Oil and Gas.

SM.P-25: Because the Suisun Marsh offers both natural gas and depleted gas fields suitable for gas storage, and because it is close to the urban Bay Area and the proposed waterfront industrial area on the Sacramento River, gas will probably continue to be transported out of, into, and around the Marsh. All gas transportation into and out of the Marsh is now by underground pipeline systems. If other types of systems for the transport or storage of liquefied natural gas (LNG) are proposed for the Suisun Marsh area, a detailed investigation of the hazards and impacts of LNG facilities should be carried out before approval of the facilities.

UTILITIES, FACILITIES AND TRANSPORTATION

Construction of utilities, facilities, and transportation systems in and immediately adjacent to the Suisun Marsh can (1) disrupt the Marsh ecosystem at the time of construction; (2) have lasting effects on wildlife by forming barriers and obstacles to their movement and flight patterns; and (3) stimulate urban development by providing services that are a prerequisite for such development.

The following policies are incorporated to protect the Marsh from such facilities:

SM.P-26: In the Suisun Marsh and upland areas necessary to protect the Marsh, improvements to public utility facilities should follow these planning guidelines:

- a. New electric power transmission utility corridors should be located at least one-half mile from the edge of the Marsh. New transmission lines, whether adjacent to the Marsh or within existing utility corridors, should be constructed so that all wires are at least six feet apart.
- b. Urban utilities and public services (e.g., natural gas lines, electric lines for local power distribution, domestic water mains, and sewers) should be allowed to extend into the Suisun Marsh and the adjacent upland area necessary to protect the Marsh only to serve existing uses and other uses consistent with protection of the Marsh, such as agriculture. However, utilities in the secondary management area necessary for the operation of water-related industry within the area designated for such use in the Suisun Marsh Protection Plan at Collinsville would be permissible.
- c. Within the Marsh, new electric lines for local distribution should be installed underground unless undergrounding would have a greater adverse environmental affect on the Marsh than above-ground construction, or the cost of underground installation would be so expensive as to preclude service. Any distribution line necessary to be constructed above ground should have all wires at least six feet apart.
- d. New telephone lines installed in the Marsh and within one-half mile of the Marsh should be buried underground whenever possible. All new telephone cables routed through the Suisun Marsh area should be buried, and the alignment should avoid wetland areas whenever possible.
- e. New roadways (highways, primary and secondary roads) and rail lines that form barriers to movement of terrestrial wildlife should not be constructed in the Suisun Marsh or in adjacent uplands necessary to protect the Marsh except where such roadways and rail lines are necessary in the secondary management area for the operation of water-related industry and port uses within the area designated by the Protection Plan as a water-related industry reserve area at Collinsville. Rail access to serve the water-related industrial reserve area may be permitted within the existing Sacramento Northern Railroad right-of-way or along the east side of the Marsh, whichever route would result in the least disturbance to wetlands and wildlife. Wherever possible, rail access to the Sacramento River and through the area designated as a water-related industrial reserve area should be located above the 10 foot contour in order

to avoid adverse impacts to wetlands. Whenever the reconstructed line would pass through wetland areas, it should be constructed on trestles or in a manner which allows for the natural movement of water and wildlife beneath the alignment.

- f. The Solano County General Plan acknowledges the need for the possible future expansion of Highway 12. When future traffic loads warrant the widening of Highway 12, such expansion must be designed so as to minimize adverse environmental impacts on the Marsh.

SM.P-27: Underground pipelines, wires, and cables should be permitted in the Suisun Marsh if no alternative route is feasible and they are designed and constructed to meet the following standards;

- a. Installation of pipes, wires, and cables (particularly local service utilities) are located within existing road rights-of-way whenever possible.
- b. All pipelines passing through the Marsh meet Pipeline Safety Regulations of the U.S. Department of Transportation regarding pipe thickness, pressure limiting devices, emergency shut-down valves and other safety design criteria.
- c. Whenever construction occurs within the wetlands, it is confined to the dry months (generally April 15 through October 15) to minimize disturbance of wetland vegetation, wintering migratory waterfowl, other water-associated birds, and nesting resident birds.
- d. Wide-track or amphibious construction equipment is used to reduce the bearing weight of the equipment unless pads are laid on the wetland area to support the heavy machinery and to prevent it from sinking into the soft marsh soil. Equipment movement to the construction site within the Marsh is limited to roads in the immediate vicinity of the pipeline, wire, or cable being installed to minimize disruption of Marsh wildlife habitat. The construction site is well defined and clearly marked so that workers do not disturb adjacent Marsh areas.
- e. When a trench is cut to install a pipe, wire, or cable, excavation is only slightly wider than the utility line to be buried to minimize wetland disturbance.
- f. When pipelines only are being installed across wetlands, the "trench and push" method of construction is employed. This construction method, the least damaging to the wetlands because it avoids the need for heavy equipment alongside the trench to install the pipe, involves filling the excavated trench with water and pushing or

pulling the assembled pipe through the Marsh trench. Recent pipeline installations in the Suisun Marsh, conducted under an ECOC permit, indicate that this is a practical method in the Marsh.

- g. Tidal marsh and managed wetlands disturbed during pipeline, wire, or cable construction will generally revegetate naturally within one growing season if the top layer of soil and vegetation is stockpiled when the trench is first dug and replaced on top of the backfilled trench to facilitate revegetation. If a completed trench is not revegetated within one growing season in a managed wetland, the disturbed area must be reseeded with appropriate native plant seed.
- h. In water areas (bays and sloughs), dredging and pipe and cable installation is scheduled so as to avoid major fish migrations.

SM.P-28: To protect the Marsh from potential accidental drainage of toxic materials, any future expansion of the Pacific Reclamation and Disposal, Inc. facility should meet all requirements of the Regional Water Quality Control Board, and any future dam construction to contain waste material should meet all requirements of appropriate regulatory agencies, such as the Division of Dam Safety. Any future expansion, construction, or operation of the Pacific Reclamation facility outside the area currently under option should be away from the steep slopes of the hills that front directly on the Marsh.

SM.P-29: The Potrero Hills Landfill (formally referred to as Solano Garbage Company) should be permitted to continue its existing County approved operation until it reaches capacity. Expansion of this facility could impact upland grassland areas, which provide valuable habitat for Marsh-related wildlife. However, future expansion of the Potrero Hills should be permitted if it can be shown that the construction and operation of such facilities will not have significant adverse ecological or aesthetic impacts on the Marsh.

SM.P-30: Material Disposal Company's debris disposal facility, which is currently not in operation, should not be permitted to resume functioning because its operation would involve fill in tidal marsh and is not compatible with preservation of the Marsh.

SM.P-31: Extraction and removal of minerals or natural materials from existing quarries and borrow areas within the Secondary Management Area of the Suisun Marsh should be allowed to continue where not in conflict with protection of the marsh and in conformance with County Codes. Sites governed by the above provisions include: Two on the Tule Vista Livestock Company properties, of which one is located east of Scally Road and the

other located northeast of Beldon's Landing, one on the Guy Stewart property 1,500 feet west of Shiloh Road, two on the Barnes property 8,000 feet west of Shiloh Road in the Kirby Hills and two on the Wagent property 3,000 feet west of Shiloh Road These are in addition to existing sites under County land use permit.

- SM.P-32: In order to improve marsh management, it is important to improve and maintain exterior and interior levee systems, as well as other water control facilities on public and privately owned, managed wetlands. Hauling excessive amounts of earth material on public roads for levee maintenance use can have a detrimental effect on the roads. In order to minimize impacts on existing public roads on the marsh, earth levee maintenance materials may be transferred from a shore site to barges for transporting the material to a repair site on a temporary basis under the following conditions: (1) there is a proven need for the levee maintenance material at a specific repair site, (2) the transfer site is not a wetland tidal marsh or seasonal marsh; (3) the transfer operation is limited to the minimum time necessary to provide material for the levee repair; (4) any equipment, machinery or similar facilities needed to transfer materials shall be temporary and removed from the transfer site when not in use and (5) no permanent improvements are developed at a transfer site. At such time as is determined to be appropriate by the Board of Supervisors a study may be undertaken to determine whether, when deliveries of marsh maintenance materials are made within the marsh, the operation of a transfer site could encompass transfer of natural materials reclaimed from within the Suisun Marsh from barges to the shore site. Such study, if undertaken, would address the issues of conformance of such an operation with the policies and purposes of the Suisun Marsh Protection Act, and what limitations, conditions, and standards would be necessary to insure protection of the marsh from adverse environmental impact from such activity.
- SM.P-33: The proliferation of sites for the disposal of special wastes could have significant adverse impacts upon preservation of marsh upland areas! The animal burial ground on Scally Road under County Use Permit should be allowed to operate as conditioned. The creation of additional disposal sites of a special nature shall be prohibited.
- SM.P-34: Policies toward diking, filling and dredging of sloughs, managed wetlands and marshes.
- a. No dredging, filling or diking activity shall be conducted within the Primary Management Area of the Suisun Marsh except with the permission of the appropriate permitting authorities.
 - b. In order to minimize adverse effects on desirable plant and wildlife communities and to minimize the potential for

erosion and sedimentation, all diking, dredging and filling activities shall be carried out in conformity with the following general principles and standards.

- i. Stripping or burning of vegetation, or other soil disturbance, should be done in a manner which will minimize adverse impacts on desirable plant and wildlife communities and control erosion and sedimentation.
- ii. Existing native vegetation shall be retained, protected, and supplemented wherever practical. Development shall be accomplished so that existing trees will be preserved whenever practical.
- iii. Exposure of soil to erosion by removal of vegetation shall be limited to the smallest area practical and for the shortest time practical. Soil exposure should not exceed an area in which work can be completed during a single construction season to insure that soil stability is established well in advance of the rainy season. In general, soil disturbance shall be limited to the period between April 1 and October 1.
- iv. Permanent control structures should be installed and final vegetation established as soon as practical.
- v. Facilities shall be constructed in a manner which will minimize erosion and sediment deposition in adjacent waterways and wetlands.
- vi. Slopes, both cut and fill, shall not be steeper than 2:1 unless a thorough geological and engineering analysis indicates that steeper slopes are safe and appropriate erosion control measures are specified.
- vii. Cuts and fills shall not encroach upon existing watercourses, or constructed channels in a manner so as to adversely affect adjacent properties or the carrying capability of the watercourse.
- viii. Disposal of cleared vegetation and excavated materials shall be done in a manner which reduces the risk of erosion and sedimentation and shall conform to the provisions of these standards.
- ix. Diking, filling and dredging activities shall be conducted so as to minimize interference with critical wildlife activities such as nesting and breeding.

- c. To prevent sedimentation resulting from dredging projects and to restore and enhance wetlands, dredged sediments should be disposed of in one of the following ways: (a) placement on dry land; (b) placement as fill in approved fills or levee projects; (c) barging or piping to suitable disposal sites in the ocean, or dumping in areas of the bay designated for such purposes by the appropriate governmental agency; or (d) used to restore or enhance tidal, managed, or seasonal wetlands.
- d. All proposed channels should be carefully designed so as not to undermine the stability of any adjacent dikes and fills.
- e. Any proposed fills, dikes or piers should be thoroughly evaluated to determine their effects on sloughs, managed wetlands and marshes and then modified as necessary to minimize any harmful effects.

SM.P-35 The County has identified the Collinsville-Montezuma Hills south of SR12 as the primary wind resource area in the County. Wind energy development is inappropriate in certain areas of the county, in order to protect public health and safety and natural resources. These areas include the Suisun Marsh Primary Management Area. Installation of wind turbines in the Suisun Marsh secondary management area could have a significant impact upon maintenance of the area in its present natural state, on Marsh wildlife, and on the visual characteristics of the marsh. Therefore, careful consideration will need to be given projects on a case by case basis to ensure that significant adverse ecological or aesthetic impacts on the marsh will be avoided. The County's objective is to balance the prudent use of wind resources of the marsh with the need to protect and maintain its essential environmental qualities. The following should be followed in siting wind energy projects: (1) Commercial wind turbine generators should be permitted in the secondary management area only. (2) Projects should not be allowed to proliferate in the marsh, but should be allowed only where monitoring has shown productivity to be feasible. (3) The location and density of machines should not substantially alter the principal (agricultural or wetland) allowed uses in the marsh. (4) Roads and utility transmission lines to serve machines and transmit power from machines must be installed in conformance with provisions of the Suisun Marsh Preservation Act (5) In order to protect the biological resources of the marsh, the design, density, height, noise level, illumination and location of wind turbine generators and ancillary facilities should minimize or avoid the following adverse effects: collision hazards for birds, interference with migratory flight patterns or disturbance of

wildlife habitat. Design considerations of importance should include non-synchronous machines, low-noise design, subdued security lighting and minimal tower lighting. (6) All construction must be carried out so as to minimize erosion and prevent sedimentation in the marsh. (7) The installation and operation of wind turbine facilities must protect the visual characteristics of the marsh. In order to minimize the impact upon the aesthetics of the marsh as a natural open space area, wind turbine generators and ancillary facilities should be designed and sited to complement the natural landscape whenever feasible, consistent with the following guidelines: colors should blend with the landscape; lighting should be subdued and be provided for safety and security reasons only; and facilities should be located off the ridgeline unless to do so would result in higher tower height, significant grading or cut and fill.

RECREATION AND MARSH ACCESS

The Suisun Marsh is an 85,000 acre natural recreational area of statewide significance. The area provides for a variety of recreational opportunities on both private and public lands. Duck hunting is the major recreational activity in the marsh occurring from late October until January. Fishing accounts for nearly as much recreational use in the marsh as duck hunting. In addition, several other forms of recreation such as water sports, upland game hunting and wildlife observation are popular in the Marsh.

The importance of the marsh as a recreational area can be seen in the amount of land which is given over to duck hunting. The General Plan's land use diagram identifies two recreational sites in the Marsh. A Wildlife Interpretive Center is planned to be developed near the intersection of Hill Slough and Grizzly Island Road. Beldon's Landing is developed with fishing and boat launch facilities.

Rush Ranch is a 2,070 acre ranch located on Grizzly Island Road, approximately two miles south of Highway 12. The ranch is owned and operated by the Solano Land Trust. The site includes historic buildings, self-guided hiking tours, educational facilities and a nature center which showcases many of the historic and natural features of the property.

In addition to the above mentioned recreational sites, a number of more passive recreational areas exist in the Marsh. Passive recreational opportunities will be provided at the following areas:

- The 1,112 acre Hill Slough Wildlife area extends along Grizzly Island Road from Hill Slough to State Route 12. Levee construction will return some lands to wetland status and provide public hiking trails.
- The Peytonia Slough Ecological Reserve is a 206 acre area directly south of the City of Suisun City open for public hiking, fishing and wildlife observation.

A number of recreational oriented commercial uses exist in the Marsh. These uses which include Little Honker Bay Resort, Pierce Harbor, Suisun Pacific Marina, Port of Suisun Marina and City of Benicia Marina are located on the edge of the marsh accessible to

the general public. As the demand for recreation increases there may be a need for more such facilities or expansion of existing facilities.

The vast open expanse of the Suisun Marsh is the location of many recreational activities. The Marsh is well known for waterfowl hunting in California. In addition, several other forms of recreation, including fishing, upland game hunting, and water sports, are also popular. Nevertheless, there are opportunities for a greater diversity and amount of public recreation in the Marsh.

The recreation values of the Marsh, particularly for duck hunting, have been a significant factor in its preservation. Private duck clubs and public agencies, such as the Department of Fish and Game, have made considerable contributions to the improvement of the Marsh habitats for waterfowl as well as other wildlife.

Recreational uses in the Suisun Marsh should be guided through the following policies:

- SM.P-36: Within the Suisun Marsh, provision should be made for public and private recreational development to allow for public recreation and access to the Marsh for such uses as fishing, hunting, boating, picnicking, hiking and nature study.
- SM.P-37: Recreational uses in the Marsh should be located on the outer portions near population centers and easily accessible from existing roads.
- SM.P-38: Recreational activities that could result in adverse impacts on the environment for the Suisun Marsh should not be permitted.
- SM.P-39: Public access at appropriate locations shall be provided and protected along the county's significant waterways within the Suisun Marsh to the maximum extent feasible.
- SM.P-40: Additional land should be acquired within the Suisun Marsh to provide for increased public duck hunting recreational use and additional refuge areas for waterfowl during the hunting season. Acquisition priority should be given to those lands not now operated as managed wetlands.
- SM.P-41: Land should also be purchased for public recreation and access to the Marsh for such uses as fishing, boat launching, nature study, and for scientific and educational uses. These areas should be located on the outer portions of the Marsh near the population centers and easily accessible from existing roads. Improvements for public use should be consistent with protection of wildlife resources.
- SM.P-42: Public agencies acquiring land in the Marsh for public access and recreational use should provide for a balance of recreational needs by expanding and diversifying opportunities for activities such as bird watching, picnicking, hiking, and nature study.
- SM.P-43: Agencies administering land acquired for public access and recreational use should be responsible for maintaining the areas

and controlling their use. Signing on roads leading into the Marsh and maintained litter receptacles at major public use areas should be provided by the appropriate local or state agency to prevent littering and vandalism to public and private property.

- SM.P-44: Recreational activities that could result in adverse impacts on the environmental or aesthetic qualities of the Suisun Marsh should not be permitted. Levels of use should also be monitored to insure that their intensity is compatible with other recreation activities and with protection of the Marsh environment. For example, boat speeds and excessive noise should be controlled and activities such as water skiing should be kept at an acceptable level.

SCENIC RESOURCES

The policies set forth below provide a series of guidelines to be used by the County in its land development guidance procedures within the Suisun Marsh. It is the intent that these provisions be employed as criteria to be adhered to by all future land development which falls within the visual components of any of the designated scenic roadways. Intensive development cannot be visually absorbed into a marsh landscape without seriously disrupting the delicate foreground and unprotected background view components. Intensive development here can also result in disruption of the local ecosystem which supports the marsh and its unique and delicate visual character.

The following policies apply to view components of all designated scenic roadways adjacent to and within the Suisun Marsh:

- SM.P-45: The number of man-made interruptions or incidents along a scenic roadway (housing, commercial uses, signs, driveways, etc.) should be limited to maintain the current visual values as the prevalent feature of the route.
- SM.P-46: Placement of off-site advertising along a designated scenic roadway should be prohibited, except where provisions are made, as part of a standardized, public, on-road sign program, for providing signing within the roadway right-of-way for roadway related services. Such a program could provide a series of signs of similar design, identifying food, lodging, and other road-related services by type and by the symbol or logotype of the proprietor.
- SM.P-47: Immediately adjoining dryland and upland within and around a marsh should remain in open space use (grazing, cropland, or other extensive uses) to protect the unique visual character of the landscape.
- SM.P-48: Existing habitats should be protected from encroachment due to their own visual value and their role in maintaining the marsh ecosystem and its overall scenic value.
- SM.P-49: Since such a flat and expansive natural environment tends to exaggerate vertical elements, undergrounding of utility lines is highly recommended.

SM.P-50: Maintenance and-protection of existing windbreaks should be encouraged to provide a contrasting visual element on flatland landscapes and to call attention to distant farm development or to places where major changes occur in the alignment or a scenic roadway.

Water Dependent Industrial Uses

The following Water Dependent Industrial policies shall be applicable to the General Plan Diagram Water Dependent Industrial land use designation within the Suisun Marsh Management Area.

Policies

- SM.P-51: The upland portion of the Collinsville site, above the 10-foot contour line presents no significant physical constraints for development and should be reserved for water-related industry use.
- SM.P-52: The low-lying-portion of the Collinsville site, below the 10-foot contour line, does present physical constraints for development and consists of critical Marsh-related wildlife habitats. Nevertheless, the portion of this area, which fronts on deep water should be reserved for water-related industry use.
- SM.P-53: Reservation of the Collinsville site for water-related industry use notwithstanding, wetland restoration or enhancement of the area below the 10-foot contour line may occur provided that the restoration or enhancement program is carried out in a manner that will not preclude use of the deep water shoreline and area above the 10-foot contour line for water-related industry use. Specifically, any wetland restoration or enhancement project should be designed so as not to restrict possible future development and operation of marine terminals and marine terminal berths on the deep water shoreline, and the movement of waterborne cargo, materials and products from the shoreline terminal to the upland portions of the site.
- SM.P-54: A program to prevent accidental spills of toxic and hazardous materials entering Montezuma Slough should be developed by industries constructing marine terminal facilities at Collinsville. Prior to the use of such facilities, equipment required to carry out the prevention program should be installed at the appropriate location at or adjacent to the mouth of Montezuma Slough.
- SM.P-55: The remaining areas of lowland grassland and seasonal marsh in the Collinsville site should be preserved and, whenever possible, enhanced or restored for their intrinsic value as Marsh-related wildlife habitat and to act as a buffer between the Suisun Marsh and industrial and port activities. There are several land uses that could occur in this area. The existing agricultural use-cattle grazing--could be continued. Portions of the area should also be restored to wetland status, either as tidal marsh or managed wet-lands. Dredged materials may be used in any wetland enhancement or restoration program when such activity will be conducted without adverse environmental impacts on the Marsh.

SM.P-56: All future industrial development adjacent to the Suisun Marsh within areas reserved

for water-related industry should conform to the following planning guidelines:

(a) Industrial activities should not have the potential to cause significant adverse impacts on the Suisun Marsh. In particular, water quality should be maintained by ensuring that no hazardous or toxic materials could be introduced into the Marsh sloughs and by prohibiting activities that could alter the temperature salinity or turbidity of the water. Construction of necessary access routes across wetlands should result in the minimum possible disturbance to the ecosystems and wildlife. Pipelines should be installed using the procedures described in the Plan Policies on Utilities, Facilities, and Transportation. Conveyor belts and railroads should be constructed on trestles, except in situations such as along the western boundary of the Collinsville water-related industry area, where a railroad may be constructed on fill in order to provide a dike separating industrial facilities from wetlands.

(b) The construction and development of any industrial facilities adjacent to and upstream from the Suisun Marsh should comply with the Plan Policies on Water Supply and Quality and all applicable State and Federal water and air quality standards.

(c) Industrial facilities should not be located directly adjacent to the Suisun Marsh. A buffer area should be provided to reduce adverse environmental impacts on the Marsh.

(d) Development of industrial sites should not result in the construction of physical barriers such as freeways, fences or exposed pipelines that impede the movement of wildlife. In addition, construction of very tall structures with which wildlife are prone to collide, especially during migrations and in bad weather, should be avoided. Industrial facilities adjacent to wildlife areas that deter the landing of wildlife should also be avoided. However, the type, size, and location of structures that could be hazardous cannot now be predicted in advance. Therefore, decisions should be made on a case by case basis to ensure that structures in the vicinity of the Marsh are located and constructed to avoid, to the maximum extent feasible, interference with the flight or migration patterns of wildlife.

(e) Industry sites should be developed to allow the most efficient use of the shoreline. For example, in the Collinsville site, wharves constructed along the shoreline in the area reserved for water-related industry, in addition to any petroleum dock which may be needed, should be shared to the maximum extent feasible by industries locating in the water-related industry area.

(f) Storage of raw materials, fuel, or products should not be permitted at the shoreline on a permanent or long-term basis. The waterfront is too scarce and valuable to accommodate uses, such as storage, that could be located farther inland.

(g) Industrial facilities should be located and designed to avoid visual intrusion on the Suisun Marsh. Where sloping land is to be used for industrial development, it should be terraced, rather than leveled, and soil erosion and storm water runoff should be controlled. Buildings should not be highly visible against the skyline, should have a low profile, be well designed and unobtrusive in appearance, and use colors and materials compatible with the surrounding landscapes. Appropriate landscaping should be used to reduce the impact of industrial structures on views

from the Suisun Marsh.

(h) The industrial waterfront is attractive and interesting to many people and public access to the shoreline should be provided wherever feasible, unless it will result in interference with industrial activities or hazards to the public. Public access to exceptional natural features within industrial areas should also be provided wherever feasible.