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San Joaquin County Board of Supervisors

Solano County Board of Supervisors

Yolo County Board of Supervisors

Cities of San Joaquin County

Cities of Contra Costa and Solano Counties

Cities of Sacramento and Yolo Counties

Central Delta Reclamation Districts

North Delta Reclamation Districts

South Delta Reclamation Districts

Business, Transportation and Housing

Department of Food and Agriculture

Natural Resources Agency

State Lands Commission

September 27, 2012

Staff Report

County of Sacramento Consistency Findings

On February 25, 2010 the Delta Protection Commission (Commission) approved the Land Use Resource Management Plan for the Primary Zone (Management Plan). The Delta Protection Act (Johnson 1992, reformed 2009) (Act) states that within 180 days of the adoption of the Management Plan, all local governments must submit to the Commission any proposed amendments which will cause their General Plans to be consistent with the criteria in Section 29763.5 of the California Public Resources Code with respect to lands within the Primary Zone.

The Commission is required to review, and as appropriate, approve by a majority vote of the Commission membership, any proposed General Plan amendments of a local government, as to lands located within the Primary Zone. The Act allows the Commission to approve such amendments only after making all of the following written findings regarding the General Plan and any development approved or proposed that is consistent with the Management Plan:

a. *Consistent with the Land Use Resource Management Plan.*
b. *Will not result in wetland or riparian loss.*
c. *Will not result in the degradation of water quality.*
d. *Will not result in increased nonpoint source pollution.*
e. *Will not result in the degradation or reduction of Pacific Flyway habitat.*
f. *Will not result in reduced public access, provided the access does not infringe on private property rights.*
g. *Will not expose the public to increased flood hazard.*
h. *Will not adversely impact agricultural lands or increase the potential for vandalism, trespass, or the creation of public or private nuisance on public or private lands.*
i. *Will not result in the degradation or impairment of levee integrity.*
j. *Will not adversely impact navigation*
k. *Will not result in any increased requirements of restrictions upon agricultural practices in the Primary Zone.*

Sacramento County Submittal

Staff's review of the proposed amendments finds that the amendments meet the criteria outlined in Public Resource Code section 29763.5 and therefore recommend approval of the proposed General Plan amendments.

General Plan

Delta Protection Element

Adapted from
Land Use and Resource Management Plan for the Primary Zone of the Delta
(Adopted February 25, 2010)

County of Sacramento
Planning and Community Development Department

Table of Contents

INTRODUCTION 5

Application of Delta Protection Element Policies 5
Basis of Delta Protection Element Policies 5
Background 5

LAND USE 7

Overview 7

AGRICULTURE 11

Overview 11

NATURAL RESOURCES 14

Overview 14

RECREATION AND ACCESS 18

Overview 18

WATER 21

Overview 21

LEVEES 23

Overview 23

UTILITIES AND INFRASTRUCTURE 25

Overview 25

FIGURE 1: PRIMARY AND SECONDARY ZONES OF THE DELTA 28

SACRAMENTO COUNTY GENERAL PLAN
DELTA PROTECTION ELEMENT

INTRODUCTION

Application of Delta Protection Element Policies

The policies contained in the Delta Protection Element apply only to the Primary Zone of the Delta within Sacramento County, unless specifically noted otherwise. Figure 1 is a map of the Primary and Secondary Zones of the Delta.

Basis of Delta Protection Element Policies

This Delta Protection Element (DP Element) is based on the (2010) Delta Protection Commission's Land Use and Resource Management Plan for the Primary Zone of the Delta (DPC Plan), as required by Public Resources Code Section 29725. To the extent possible, the DP element uses language from the DCP Plan verbatim. There are numerous modifications, however, to make the language of the DP Element more consistent with the rest of the General Plan and in several instances the DPC Plan language was modified to better reflect that the policy is the County's and not the DPC's.

Background

The Delta Protection Act of 1992 (Act) established the Delta Protection Commission, a State entity to plan for and guide the conservation and enhancement of the natural resources of the Delta, while sustaining agriculture and meeting increased recreational demand. The Act defines a Primary Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Secondary Zone is the area outside the Primary Zone and within the "Legal Delta"; the Secondary Zone is not within the planning area of the Delta Protection Commission. (See Figure 1 on last page of this element.) The Act requires the Commission to prepare and adopt a Land Use and Resource Management Plan (Plan) for the Primary Zone of the Delta, which must meet specific goals. Sacramento County has adapted the Delta Protection Commission's Plan (adopted February 25, 2010) to create this Delta Protection Element (Element) of the Sacramento County General Plan.

The Delta Protection Act (Public Resources Code Section 29760 et. seq.) requires the Commission to prepare and adopt and thereafter review and maintain a comprehensive long-term resource management plan for land uses within the Primary Zone of the Delta ("Resource Management Plan"). The resource management plan is to set forth a description of the needs and goals for the Delta and a statement of the policies, standards, and elements of the Resource Management Plan. Within 180 days of the adoption of the Resource Management Plan or any amendments by the Commission, all local governments, as defined in Public Resources Code Section 29725 and including Sacramento County, shall submit to the Commission proposed amendments to their general plans. The amendments shall cause the general plans to be

consistent with the criteria in Public Resources Code Section 29763.5 with respect to land located within the Primary Zone. Those criteria include a requirement that the general plan be consistent with the Resources Management Plan (Plan). This introduction and the following policies of the element constitute the regulatory portion of the element.

The Primary Zone of the Sacramento-San Joaquin Delta (Delta) includes approximately 500,000 acres of waterways, levees and farmed lands extending over portions of five counties: Solano, Yolo, Sacramento, San Joaquin and Contra Costa. The rich peat soil in the central Delta and the mineral soils in the higher elevations support a strong agricultural economy. The Delta lands have access to the 1,000 miles of rivers and sloughs lacing the region. These waterways provide habitat for many aquatic species and the uplands provide year-round and seasonal habitat for amphibians, reptiles, mammals, and birds, including several rare and endangered species. The area is extremely popular for many types of recreation including fishing, boating, hunting, wildlife viewing, water-skiing, swimming, hiking, and biking.

The goals of the Plan as set out in the Delta Protection Act are to "protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife habitat, and recreational activities; assure orderly, balanced conservation and development of Delta land resources and improve flood protection by structural and nonstructural means to ensure an increased level of public health and safety."

As specified in the Delta Protection Act, the Delta Protection Commission is not authorized to exercise any jurisdiction over matters within the jurisdiction of, or to carry out its powers and duties in conflict with, the powers and duties of any other State agency. The Plan also provides guidance to State agencies undertaking activities in the Primary Zone. The Plan, therefore, applies to development subject to approval by the Delta counties (Contra Costa, Sacramento, San Joaquin, Yolo and Solano). Should Cities propose to expand into the Delta Primary Zone, or acquire land in the Primary Zone for utility or infrastructure facility development, those actions are to be carried out in conformity with the Delta Protection Act of 1992.

Each section of this Element includes an introductory discussion that provides the context for the section's goals and policies. It is important to note, however, that in the implementation of both the goals and policies of the Plan, the Delta Protection Act specifically prohibits the exercise of the power of eminent domain unless requested by the landowner.

The term "shall" in these regulations is mandatory; the terms "may", "should", and "can" are advisory.

This document should be considered in its entirety.

LAND USE

GOALS: **Protect the unique character and qualities of the Primary Zone by preserving the cultural heritage and strong agricultural/economic base, unique recreational resources, and biological diversity of the Primary Zone. Direct new non-agriculturally oriented non- farmworker residential development within the existing unincorporated towns in Sacramento County (Walnut Grove, Courtland, Hood, Locke, and Ryde).**

Encourage a critical mass of farms, agriculturally-related businesses and supporting infrastructure to support the economic vitality of agriculture within the Delta.

Overview

The patterns of settlement in the Delta reflect the history of immigration into the State in the late 19th century. The settlement pattern was historically, and remains to this day, closely associated with the rivers, sloughs, and waterways of the Delta, and with the configurations of agricultural lands. One incorporated city, Isleton, and portions of other incorporated cities including Stockton, Antioch, Oakley, Sacramento, West Sacramento, Elk Grove, Tracy, Lathrop and Pittsburg, are located within or just outside of the Secondary Zone; and Rio Vista is located partially within the Primary Zone, but not within the Secondary Zone. Unincorporated towns lying along the Sacramento River in the Primary Zone include Clarksburg, Courtland, Hood, Locke, Walnut Grove and Ryde. These towns serve as social and service centers for the surrounding farms and historically served as shipping sites for products. These rural communities reflect the diverse heritage of the Delta.

The five Delta counties (Solano, Yolo, Sacramento, San Joaquin, and Contra Costa) designate Primary Zone lands for agriculture or special Delta resources in their respective general plans. The zoning codes for the five Delta counties allow a variety of uses in the Primary Zone including agriculture and agriculturally-oriented uses; outdoor recreation; wildlife habitat; public facilities; and limited areas for commercial, industrial, and rural residential development.

The two Delta ports, Sacramento and Stockton, own hundreds of acres of land along their respective shipping channels. Some of these lands are used for dredge material disposal and some have been or will be used for habitat mitigation sites.

Sherman Island, Twitchell Island, Staten Island, portions of the Yolo Bypass (e.g., Vic Fazio Wildlife Area) and McCormack-Williamson Tract are held as conservation lands and are currently operated as farmlands. A number of conservation easements and mitigation banks will also be created under local Habitat Conservation Plans and Natural Communities Conservation Plans. Since 1990, urban and other land uses in the Secondary Zone have gained substantial acreage while agricultural land use has declined. Other land uses within the Secondary Zone

include conservation areas, low-density rural developments, natural areas not suitable for livestock grazing, and other non-agricultural areas.

The periphery of the Delta is undergoing rapid urbanization associated with substantial population growth. Current and future population growth increases the demand for developable land, particularly in areas near the Bay Area, Stockton, and Sacramento. This demand results in the conversion of open space, primarily agricultural land, to residential and commercial uses. Increasing concern exists regarding the potential for urbanization and projects in the secondary zone to impact the Primary Zone.

In addition to numerous local, national and international factors affecting the profitability of farming in the Delta, the acquisition of farmed land and subsequent retirement of that land affects the economic base for farm support industries; the economic base for community businesses that rely on patronage from citizens working in farm or farm support industries; the tax and assessment base for special districts, counties, and the State; and the existing wildlife use patterns that have adapted to agricultural land use patterns.

Policies:

DP-1. The rich cultural heritage, strong agricultural/economic base, unique recreational resources, and biological diversity of the Delta shall be preserved and recognized in public/private facilities, such as museums, recreational trails, community parks, farm stands, community centers, and water access facilities within the Delta

DP-2. Promote and facilitate agriculture and agriculturally-supporting commercial and industrial uses as the primary land uses in the Primary Zone; recreation and natural resources land uses shall be supported in appropriate locations and where conflicts with agricultural land uses or other beneficial uses can be minimized.

DP-3. Proponents of new non- agriculturally oriented residential, recreational, commercial, habitat, restoration or industrial development shall provide appropriate buffer areas to prevent conflicts between any proposed use and existing adjacent agricultural parcels. Buffers shall adequately protect integrity of land for existing and future agricultural uses and shall not include uses that conflict with agricultural operations on adjacent agricultural lands. Appropriate buffer setbacks shall be determined in consultation with local Agricultural commissioners, and shall be based on any applicable general plan policies and criteria included in the Right-to-Farm Ordinance.

DP-4. Direct new non-agriculturally oriented non-farmworker residential development within the existing unincorporated towns (Walnut Grove, Courtland, Hood, Locke, and Ryde).

DP-5. Address criteria under which general plan amendments in the Primary Zone will be evaluated under Public Resources Code Section 29763.5. Proposed amendments that apply to areas in the Primary Zone shall be evaluated in terms of consistency of the

overall goals and program of the Delta Protection Commission's Land Use and Resource Management Plan for the Primary Zone of the Delta.

DP-6 Subsidence control shall be a key factor in evaluating land use proposals. Encourage agricultural, land management, recreational, and wildlife management practices that minimize subsidence of peat soils. The County should utilize studies of agricultural and land management methods that minimize subsidence and should assist in educating landowners and managers as to the value of utilizing these methods.

DP-7. New structures shall be set back from levees and areas that may be needed for future levee expansion consistent with local reclamation district regulations, and, upon adoption, with the requirements to be identified in the California Department of Water Resources Central Valley Flood control Plan.

DP-8. The County may approve mitigation of adverse environmental impacts under the California Environmental Quality Act beyond county boundaries if the action: 1) is consistent with other General Plan policies on mitigating outside of the County, 2) is acceptable to reviewing fish and wildlife agencies and 3) has the approval of the recipient jurisdiction. Mitigation in the Primary Zone for loss of agricultural lands in the Secondary Zone may be appropriate if the mitigation program supports continued farming in the Primary Zone. California Government code Section 51256.3 (Assembly Bill 797) specifically allows an agricultural conservation easement located within the Primary or Secondary Zone of the Delta to be related to Williamson Act contract rescissions in any other portion of the secondary zone without respect to County boundary limitations.

DP-9. The implementation of the policies contained in the resource management plan shall not be achieved through the exercise of the power of eminent domain unless requested by the landowner.

DP-10. Maintain sites for the storage of dredged material from channels within the Delta and discourage the conversion of existing sites to other uses, as appropriate. Soil that is suitable for levee rehabilitation and raising Delta lowlands should remain within the Delta.

DP-11. Consider developing programs to permit clustering of residential units that allow property owners to engage in limited property development in order to ensure the efficient use and conservation of agricultural lands, support open space values, and protect sensitive environmental areas in the Primary Zone. Clustered development occurs when contiguous or non-contiguous parcels are developed to cluster lots for residential use. The purpose of clustered development is to provide a mechanism to preserve agricultural land and open space, to locate housing in areas that can readily be served by public services and utilities, and provide the agricultural community an alternative to transfer of development rights. Clustered development programs shall ensure that the number of clustered lots created does not exceed the allowable density requirement for the zoning of the sum of the parcels. Clustered development may

only be used one time. Neither the clustered lots nor the remainder lots may be further subdivided. Residential development shall be consistent with Sacramento County General Plan policies and zoning regulations and standards.

DP-12. Consider developing transfer of development rights (TDR) programs that allow land owners to transfer the development right from one parcel of land to another. The purpose of these TDR programs would be to provide the efficient use and conservation of agricultural lands, to support open space values, and to protect sensitive environmental areas within the Primary Zone. This purpose would be achieved by relocating development rights within the Primary Zone to more suitable areas such as adjacent to or within existing urban areas within or outside of the Primary Zone, or to provide expanded opportunities for affordable farm worker housing. TDR programs shall ensure that the transferred development density does not exceed the development density identified for the zoning for the sending parcel, and that any farm worker housing is restricted and regulated for that purpose. The land upon which the development rights are transferred from would be restricted with a permanent conservation easement. Receiving areas must have the infrastructure capacity, public services and utilities to absorb the new development.

DP-13. Support the implementation of appropriately located agricultural labor camps and housing that serve agricultural operations, which are constructed and sited consistent with Sections 17021.5 and 17021.6 of the California Health and Safety Code and consistent with the requirements of local building codes.

DP-14. The conversion of an agricultural parcel, parcels, and/or an agricultural island for water impoundment, including reservoirs, water conveyance or wetland development may not result in the seepage of water onto or under the adjacent parcel, parcels, and/or island. These conversions shall mitigate the risks and adverse effects associated with seepage, levee stability, subsidence, and levee erosion, and shall be consistent with the goals of this element.

DP-15. Support regional efforts to address issues related to urban development, habitat conservation and agricultural protection through participating in the South Sacramento Habitat Conservation Plan

AGRICULTURE

GOALS: **To support long-term viability of commercial agriculture and to discourage inappropriate development of agricultural lands.**

Support the continued capability for agricultural operations to diversify and remain flexible to meet changing market demands and crop production technology. Promote the ability for agriculture operations to change the crops or commodities produced to whatever is most economically viable at the time. Support the use of new crop production technologies that keep Delta agricultural operations competitive and economically sustainable.

The priority land use of areas in the Primary Zone shall be oriented toward agriculture and open space. If agriculture is no longer appropriate, land uses that protect other beneficial uses of Delta resources and that would not adversely affect agriculture on surrounding lands or the viability or cost of levee maintenance, may be permitted. If temporarily taken out of agriculture production due to lack of adequate water supply or water quality, the land shall remain reinstateable to agriculturally-oriented uses for the future.

Overview

Delta agricultural lands were "reclaimed" through construction of levees and drainage of the marshy islands of the area. In less than 100 years, from 1850 to 1930, hundreds of thousands of acres of land went into agricultural production due in large part to the high productivity of the peat soils in the central Delta and the mineral soils in the higher elevations. The farmers and landowners represented a cross section of the new Americans-- Slavs, Dutch, German, English, and others. Many groups of immigrants first labored in the fields, then went on to become landowners or tenant farmers including Portuguese, Chinese, Japanese, Filipinos, and Hindus.

Early crops were grains, fruits and vegetables marketed in the nearby cities. Early specialty crops included wheat, barley, beans, and potatoes. Later asparagus, sugar beets, tomatoes, and celery grew in popularity. Currently, the Delta counties raise a variety of crops including grains, fruits, field crops, nuts, seeds, pasture and alfalfa, wine grapes, vegetables, olives and blueberries.

In the recent past, thousands of acres of agricultural lands were developed for residential and other urban uses. Between 1990 and 2004, approximately 39,000 acres of agricultural land was converted to urban and other uses in the larger Delta-Suisun Marsh area (*Status and Trends of Delta-Suisun Service*, California Department of Water Resources, May 2007). New markets to sell crops and new crops, including crops to burn as energy sources, will continue to keep agriculture an important land use in the Delta and California.

Agricultural lands within the Delta are highly productive and well suited for ongoing agricultural operations. Sacramento County recognizes the value of the agriculture economy and has designated Delta lands for long-term agricultural use and protects them through several mechanism including the Agricultural Element in the General Plan, the Urban Service Boundary, the establishment of buffers between agriculture and other approved uses, the Right-to-Farm ordinances, full support of the Williamson Act programs, the control of land subdivision and land use types allowed within agricultural areas, the establishment of minimum agricultural parcel sizes, and the establishment of limits on General Plan land use designation changes. Also pursuant to the Delta Protection Act, to the extent that any of the requirements specified in this element are in conflict, nothing in this Element shall deny the right of the landowner to continue the agricultural use of the land.

Some agricultural lands provide rich seasonal wildlife habitat. Thousands of acres of agricultural lands are flooded after harvest and provide feeding and resting areas for resident and migratory birds and other wildlife. This practice of seasonal flooding helps maximize the wildlife values of agricultural areas and lessen opportunities for agricultural pests.

Policies:

DP-16. Support and Encourage agriculture in the Delta as a key element in the State's economy and in providing the food supply needed to sustain the increasing population of the State, the Nation, and the world.

DP-17. Conversion of land to non-agriculturally-oriented uses should occur first where productivity and agricultural values are lowest.

DP-18. Promote recognition of the Delta as a place by educating individuals about the rich agricultural heritage, the unique recreational resources, the biological diversity, and the ongoing value of maintaining a healthy agricultural economy in the Delta

DP-19. Support agricultural programs that maintain economic viability and increase agricultural income in accordance with market demands, including but not limited to wildlife-friendly farming, conservation tillage and non-tillage.

DP-20. Encourage implementation of the necessary plans and ordinances to: maximize agricultural parcel size; reduce subdivision of agricultural lands; protect agricultural and related activities; protect agricultural land from conversion to non-agriculturally oriented uses. An optimum package of regulatory and incentive programs would include: (1) an urban limit line; (2) minimum parcel size consistent with local agricultural practices and needs; (3) strict regulations regarding subdivision of agricultural lands intended to ensure that subdivided lands will continue to contain agriculturally-oriented land uses; (4)-adequate buffers between agricultural and non-agricultural land uses particularly residential development outside but adjacent to the Primary Zone; (5) an agriculture element of the general plan; (6) a right-to-farm ordinance; and (7) a conservation easement program.

DP-21. Encourage acquisition of agricultural conservation easements from willing sellers as mitigation for projects within each county. Promote use of environmental mitigation in agricultural areas only when it is consistent and compatible with ongoing agricultural operations and when developed in appropriate locations designated on a countywide or Deltawide habitat management plan.

DP-22. Encourage management of agricultural lands which maximize wildlife habitat seasonally and year-round, through techniques such as fall and winter flooding, leaving crop residue, creation of mosaic of small grains and flooded areas, wildlife friendly farming, controlling predators, controlling poaching, controlling public access, and others.

DP-23. Encourage the protection of agricultural areas, recreational resources and sensitive biological habitats, and the reclamation of those areas from the destruction caused by inundation.

DP-24. Support agricultural tourism and value-added agricultural production as a means of maintaining the agricultural economy of the Delta.

NATURAL RESOURCES

GOAL: **Preserve and protect the natural resources of the Delta. Promote protection of remnants of riparian habitat and aquatic habitat.-Encourage compatibility between agricultural practices and wildlife habitat.**

Overview

The Delta is a unique geographic area in the State of California, a low-lying region of rich mineral and peat soils, composed of islands created largely by humans, as they diked and drained the prehistoric marshes of the region.

The peat soils of the central and western Delta have oxidized, resulting in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Subsidence has slowed to about one-third of an inch a year in many areas.

Flood threats are compounded by the low elevations of the Delta and by subsidence. Twice in each approximately 25-hour period the elevation of the Sacramento River rises and falls about three feet due to the tidal cycle. The threat of flooding is generally associated with periods of high winter rainfall and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides and strong winds.

The lush wetland habitats surrounded by riparian woodlands have been replaced by agricultural lands including cultivated and irrigated croplands as well as irrigated and non-irrigated pasture lands. Remnants of natural habitat are located largely along some sloughs and rivers and on small channel islands. Pockets of wooded or wetland habitat exist on some islands.

The aquatic habitats historically ranged from fresh to brackish and were home to both resident and migratory fish. Modern aquatic habitats are affected by flows released from upstream dams, seasonal drainage from agricultural lands, and year-round drainage from sources outside the Primary Zone, such as sewage treatment plants. Several large, freshwater lakes are located on the eastern edge of the Delta, providing year-round wetland habitat.

Species native to the Delta evolved within an ecosystem that was much different than today. Many of the indigenous species have declined because of ecosystem changes over the past 150 years including:

- Loss of habitat.
- Loss of access to upstream habitat for anadromous fish from construction of dams.
- Diking and draining of Delta lands to convert marshes to farms.
- Urbanization.
- Changes in river flows.

- Construction of levees that separate rivers from their floodplains thereby eliminating channel meander and riparian habitat.
- Invasion by non-native species.
- Alterations in hydrology, particularly the elimination of variability in seasonal flow patterns.
- Reduction in seasonal and annual variability in salinity.
- Introduction of numerous toxic substances.
- Export pumping in the South Delta.

Flow patterns in the Delta are governed by inflows, large water diversions, and tidal flows. The relative importance of these flows varies with season and location. Net—tidally averaged—flows depend on inflows from the rivers and export pumping in the southern Delta. Sometimes the combination of inflows and exports causes "reverse flow," or a situation when flow moves upstream rather than downstream. These flows can cause young fish, including eggs and larvae, to be entrained at the pumping facilities of the State Water Project and the Central Valley Project.

The Delta provides substantial habitat for resident and migratory waterfowl and shorebirds. The abundance of these birds declined precipitously in the Delta because of land reclamation, although subsequent changes in cropping patterns have allowed populations of some species to increase.

The Delta supports hundreds of fish, plants, mammals, amphibians, reptiles, and invertebrates. Many of the native species have declined in abundance and in range, leading to the listing of several species under the California and/or federal Endangered Species Acts. Early species declines were caused by loss or isolation of physical habitat when the Delta islands were drained. However, due to the information collected as a result of monitoring activities that occurred in the 1960,,s through the 1980,,s, it is clear that species declined due to a variety of causes including changing climate; effects of toxic substances; alteration of habitat; introduction of non-native species that consume, compete with, or alter the habitat of native species; water diversions/exports; and changes in hydrology.

In the past few years, the abundance of several pelagic (open water) fish species inhabiting the Delta, such as delta smelt and longfin smelt, have declined to record-low levels. The reasons for this pelagic organism decline are multiple and are the subject of intense investigation. The loss of pelagic species in the Delta seems to be a function of poor conditions for food conditions, invasive species, degraded water quality, losses to export pumping, and other potential negative influences, such as toxins. The populations of salmon that migrate through the Delta and are dependent on Delta resources have also experienced precipitous declines, which have adversely affected the fishing industry.

Long-term trends for the ecosystem depend on the severity of climate change and the future physical structure and salinity of the Delta. Large mammals, such as bear and elk, which historically lived in and around the Delta have either been eliminated or reduced to extremely low numbers. Aquatic mammals, including beaver and otter still remain. Some resident and migratory birds have adapted to the agricultural practices in the Delta, particularly the small

grain fields which are flooded in fall and winter months. Migratory birds include ducks, geese, swans, cranes, and shorebirds. Hawks and eagles forage in the Delta fields. The Primary Zone, with its large open expanses of farmland, mosaic of small grain crop residues and shallow flooded fields, permit wildlife to feed and rest, thereby providing high quality wildlife habitat.

It is recognized that Habitat Conservation Plans and Natural Community Conservation Planning (HCP/NCCP) efforts within the Delta, including the CALFED Ecosystem Restoration Program Plan (ERPP) 4, must be acknowledged in the administration of the policies of the Element as these programs include agreements and/or contracts that have long-term provisions to sustain a durable program.

Policies:

DP-25. Preserve and protect the natural resources of the Delta. Promote protection of remnants of riparian and aquatic habitat. Encourage compatibility between agricultural practices, recreational uses and wildlife habitat. Partner with Sacramento Regional County Sanitation District and other partners to promote and encourage the use of recycled water for agricultural, habitat and water conservation purposes where feasible.

DP-26. Encourage farmers to implement management practices to maximize habitat values for migratory birds and other wildlife. Appropriate incentives, such as the purchase of conservation easements from willing sellers or other actions, should be encouraged.

DP-27. Lands managed primarily for wildlife habitat should be managed to maximize ecological values. Appropriate programs, such as "Coordinated Resource Management and Planning" (Public Resources Code Section 9408(c)) should ensure full participation by local government and property owner representatives.

DP-28. Support the non-native invasive species control measures being implemented by the California Department of Fish and Game, the California Department of Boating and Waterways, the California Emergency Management Agency, the California Department of Food and Agriculture, the State Water Resources Control Board, the Central Valley and San Francisco Bay Regional Water Quality Control Boards, and the Agricultural Commissioners for the five Delta Counties (Yolo, Solano, Sacramento, San Joaquin, and Contra Costa), which include controlling the arrival of new species into the Delta.

DP-29. Preserve and protect the viability of agricultural areas by including an adequate financial mechanism in any planned conversion of agricultural lands to wildlife habitat for conservation purposes. The financial mechanism shall specifically offset the loss of local government and special district revenues necessary to support public services and infrastructure.

DP-30. Support the implementation of appropriate buffers, management plans and/or good neighbor policies (e.g. safe harbor agreements) that among other things, limit liability

for incidental take associated with adjacent agricultural and recreational activities within lands converted to wildlife habitat to avoid or minimize negative effects on the ongoing agricultural and recreational operations adjacent to the converted lands.

DP-31. Incorporate, to the maximum extent feasible, suitable and appropriate wildlife protection, restoration and enhancement on publicly-owned land as part of a Delta-wide plan for habitat management.

DP-32. Promote ecological, recreational and agricultural tourism in order to preserve the cultural values and economic vitality that reflect the history, natural heritage and human resources of the Delta including the establishment of National Heritage Area designations.

DP-33. Protect and restore ecosystems and adaptively manage them to minimize impacts from climate change and other threats and support their ability to adapt in the face of stress.

DP-34. Support the design, construction, and management of any flooding program to provide seasonal wildlife and aquatic habitat on agricultural lands, duck club lands and additional seasonal and tidal wetlands, shall incorporate "best management practices" to minimize vectors including mosquito breeding opportunities, and shall be coordinated with the local vector control districts., (Each of the four vector control districts in the Delta provides specific wetland/mosquito management criteria to landowners within their district.)

RECREATION AND ACCESS

Including Marine Patrol, Boater Education, and Safety Programs

GOAL: **To promote continued recreational use of the land and waters of the Delta; to promote facilities that support the construction, maintenance and supervision of recreational uses; to protect landowners from unauthorized recreational uses on private lands; and to maximize dwindling public funds for recreation by promoting public-private partnerships and multiple use of Delta lands.**

Overview

The Delta is a unique geographic region that provides exceptional recreational opportunities including boating, fishing, hunting, hiking, biking, camping, and wildlife viewing. Recreational users originate from both within and outside of the Delta. Many of the visitors value the wide expanses of open land, interlaced waterways, historic towns, and the feeling of a slower pace of life within the Delta.

Navigable waterways in the Delta-Suisun area are publicly accessible and currently constitute the majority of the recreational opportunities within the Delta. Boating use totals more than 6.4 million visitor days annually, composed of 2.13 million annual boat trips in the larger Delta-Suisun area (*Status and Trends of Delta-Suisun Service, California Department of Water Resources, May 2007*). The Aquatic Recreation Component of the Delta Recreation Strategy Plan prepared by the Delta Protection Commission forecasts demand for boating recreation through 2020 and identifies a deficit of facilities.

Most of the recreational facilities within the Delta are provided through private marinas. Several thousand boat berths are located in the Primary Zone, almost equally divided between Contra Costa, Sacramento, and San Joaquin Counties. Private facilities also provide launching facilities, Recreational Vehicle and tent camping, picnicking, restaurants, and bait and tackle shops. Waterskiing and riding [1]Personal Water Craft (PWC) are popular water-oriented activities.

The majority of the land within the Delta is privately owned, which reduces the availability of land-based recreation. Five fishing access/launching facilities owned by the California Department of Fish and Game and managed by Sacramento and Yolo counties are located within the Delta. San Joaquin County provides land and water access at Westgate Park. Brannan Island State Recreation Area provides boat launching, camping, swimming, nature interpretation, and wind surfing. Hunting occurs mainly on private lands; although some hunting is allowed on State- and federally-owned lands and waterways.

Concerns regarding existing and future recreational activities within the Delta include compatibility with agricultural operations and other private property uses, funding availability

[1] "*(Personal Water Craft" (PWC) is the general term for a broad range of small, powered boats that typically carry one or two persons, and are popularly known by registered tradenames such as Jet Ski, Ski Doo, etc.*[1]

for the long-term maintenance and supervision of existing recreational facilities and for the development of new recreational facilities, compatibility with wildlife uses and levee maintenance requirements, overuse of existing facilities and popular waterways, the abandonment of vessels and other debris within Delta waterways, and increased demands on law enforcement and other emergency response providers.

Opportunities are available for new recreational facilities to be provided within the Delta on publicly-owned land. Examples include pedestrian access on publicly-owned levees adjacent to Brannan Island State Recreation Area; construction of new visitor facilities, interpretative facilities and trails at the Stone Lakes National Wildlife Refuge; and pedestrian trails, visitor facilities, and water access facilities at State Park's Delta Meadows Project.

In addition, Senate Bill 1556, signed by the Governor in September 2006, creates a California Delta Trail and requires the Delta Protection Commission to create a plan for designing, constructing, and maintaining this trail. The California Delta Trail is planned to be a bike, pedestrian and equine trail system and recreation corridor along more than 1,000 miles of Delta waterfront that will connect with the 450-mile San Francisco Bay Trail.

Policies:

DP-35. Support appropriate planning, development and funding for expansion, ongoing maintenance and supervision of existing public recreation areas and access areas.

DP-36. Encourage expansion of existing privately -owned water-oriented recreation and access facilities that are consistent with local General Plans, zoning regulations and standards

DP-37. Assess the need for new regional public and private recreation and access facilities to meet increasing public need, and prioritize, develop, maintain and supervise them consistently with local, state, and federal laws and regulations. Support adequate public services for all existing, new, and improved recreation and access facilities.

DP-38. Encourage new regional recreational opportunities, such as Delta-wide trails, which take into consideration environmental, agricultural, infrastructure, and law enforcement needs, and private property boundaries. Also, encourage opportunities for water, hiking, and biking trails.

DP-39. Encourage provision of publicly funded amenities such as picnic tables and boat-in destinations in or adjacent to and complimentary to private facilities, particularly if the private facility will agree to supervise and manage such amenities, thus lowering the long-term cost to the public.

DP-40. Support multiple uses of Delta agricultural lands, such as seasonal use for hunting and provision of wildlife habitat.

DP-41. Support improved access for bank fishing along State highways, county roads and other appropriate areas where safe and adequate parking, law enforcement, waste management and sanitation facilities, and emergency response can be provided and where proper rights-of-access have been acquired.

DP-42. Consider, for the sake of the environment and water quality, the provision of appropriate restroom, pump-out and other sanitation and waste management facilities at new and existing recreation sites, including marinas; encourage the provision of amenities including but not limited to picnic tables and boat-in destinations.

DP-43. Encourage the development of funding and implementation strategies by appropriate governing bodies for the surrender and/or removal of water-borne debris and dilapidated, unseaworthy and abandoned vessels from waterways, to minimize navigational and environmental hazards.

DP-44. Promote and encourage Delta-wide communication, coordination, and collaboration on boating and waterway-related programs including but not limited to marine patrols, removal of debris and abandoned vessels, invasive species control and containment, clean and safe boating education and enforcement, maintenance of existing anchorage, mooring and berthing areas, and emergency response in the Delta.

DP-45. Recognizing existing laws, encourage establishment of Delta-wide law enforcement protocols on local public nuisance and safety issues, such as trespassing, littering, and theft.

DP-46. Support and encourage programs for waterways that provide opportunities for safe boating and recreation, including removal of floating and sunken debris and abandoned vessels from Delta waterways in collaboration with appropriate agencies.

DP-47. Support the development of a strategic plan, in consultation with all law enforcement agencies having jurisdiction in the Delta, to improve law enforcement and the use of available resources to provide an adequate level of public safety. The strategic plan shall identify resources to implement the plan.

WATER

GOAL: **Protect and enhance long-term water quality in the Delta for agriculture, municipal, industrial, water-contact recreation, and fish and wildlife habitat uses, as well as all other beneficial uses.**

Overview

In California, rainfall runoff and snowmelt are captured in reservoirs to redistribute to urban and agricultural customers while meeting environmental requirements. About 75 percent of the State's water originates north of the Delta; and about 75 percent of the State's water needs occur south the of Delta.

Water bound for distribution through both the State Water Project (SWP) and the federal Central Valley Project (CVP) is taken from the south Delta. The CVP has contracts to divert 3.3 million acre feet per year, which supplies primarily agricultural land south of the Delta but also supplies urban areas and wildlife refuges. In addition, water to serve some Bay Area urban users is taken from the Delta. The SWP has contracts to divert 4.2 million acre feet per year from the Delta, which supplies primarily urban uses but also supplies agricultural uses south of the Delta. On average, the projects export a total of about 5 million acre feet annually.

About two-thirds of the State's population gets at least a portion of its drinking water from the Delta. In addition, Delta farmers and irrigation districts have rights to irrigate with water taken directly from Delta sloughs and channels.

Because the Delta drains the Sacramento River and San Joaquin River watersheds, urban stormwater runoff and waste discharges from upstream and adjacent areas enter Delta waterways and may contribute to and cause water quality problems. Low-flow years generally carry higher concentrations of waste discharges and agricultural runoff and drainage than do wet years.

Some treated municipal and industrial wastewater, untreated urban storm water, and agricultural runoff and drainage enter the Delta directly. Other urban and agricultural discharges from upstream in the watershed enter the Delta along with the river flows. Seepage onto Delta islands from adjacent channels and drainage from the agricultural lands are released back to the Delta channels at hundreds of locations.

The Central Valley Regional Water Quality Control Board (Board) has identified the Delta as impaired by a number of pollutants, including some pesticides, low dissolved oxygen, electrical conductivity (salinity), and mercury (naturally occurring in the Cache Creek watershed, as well as a legacy of the large-scale hydraulic mining of the Sierra Nevada in the late 1800s).

Designation as an impaired water body by the Board, relevant to certain water quality criteria or other stressors, is variable depending on portions of the watershed within the Delta. Some Delta fish have elevated levels of methylmercury, which poses a risk to humans and wildlife that eat

the fish on a regular basis. As of 2009, the Board has adopted a threshold called a total maximum daily load (TMDL) for dissolved oxygen and as of 2010 is developing a TMDL for methylmercury in the Delta.

The daily tidal cycles and the San Joaquin River contribute most of the salinity to the Delta. During periods of high Delta inflows, salinity is low; during periods of low Delta inflows, the salinity level rises. Salinity in the Delta is managed by a mix of releases from upstream reservoirs, Cross Channel Gate operations, Delta outflow, and exports from the Delta. The combination of organic matter (decaying vegetation), bromide in the seawater, and disinfectants used in water treatment plants produce disinfection byproducts that may pose health risks.

The State Water Resources Control Board and the Regional Boards designate beneficial uses of the State's waters. In the Delta, beneficial uses include: municipal and domestic supply; agriculture; industry; groundwater recharge; navigation; recreation; wildlife habitat; fish migration and spawning; and preservation of rare and endangered species. Delta water quality is governed through standards that are protective of beneficial uses for municipal and industrial uses, agricultural uses, and fish and wildlife, all of which are currently under review by the State Water Resources Control Board.

Policies:

DP-48 Preserve and protect the water quality of the Delta both for designated beneficial uses.

DP-49 Respect and protect Delta water rights and water contracts, including area of origin water rights and riparian water rights.

LEVEES

GOALS: **Support the improvement, emergency repair, and long-term maintenance of Delta levees and channels**

Promote levee rehabilitation and maintenance to preserve the land areas and channel configurations in the Delta as consistent with the objectives of the Delta Protection Act.

Overview

The Delta is the natural drain for a watershed that includes the Central Valley and the western slope of the Sierra Nevada from Fresno to Mount Shasta. Existing flood management and water supply facilities (dams, levees, and bypasses) throughout the watershed influence floodflows to the Delta. Settlers began to farm the rich lands of the Delta by the 1850s. They built low levees to allow land to be drained for farming. Few of these levees were built using modern engineering techniques, and many rest on peat foundations that have settled with the added weight.

The main flood management facilities in the Delta include the approximately 1,100 miles of levees and the Yolo Bypass. The Yolo Bypass, with about 500,000 cubic feet per second (cfs) capacity, was designed to flood occasionally to relieve high water stages on the Sacramento River. Easements held by the Central Valley Flood Protection Board provide the right to inundate the land, including some islands such as Liberty Island, with floodwaters. The lower Sacramento ship channel and the Stockton ship channel provide some flood-carrying capability. Dredging to enlarge and clean Delta channels use to be an important element of flood management.

Levees can fail for various reasons including the burrowing activities of animals, erosion, overtopping, deferred maintenance, seepage through sand layers underlying levee foundations, slope stability and other causes.

Delta levees face risk of high water overtopping during the wet season (winter and spring), particularly when large storms coincide with high tides. Storms contribute to the levee overtopping risk by increasing water levels in the rivers and creating wind-induced waves. In addition, the low barometric pressures associated with large storms raise water surface levels in Delta and Suisun Marsh channels. In many cases, the flooding of the islands has been costly to local residents and farmers and to the state as a whole. Damage to levees could also occur due to sea level rise and other aspects of climate change.

Policies:

DP-50. Regulate new construction within flood hazard areas to protect public health, safety, and welfare consistently with applicable regulations concerning the Delta, as well as

the statutory language contained in the Delta Protection Act of 1992. Increased flood protection shall not result in residential designations or densities beyond those allowed under zoning and general plan designations in place on January 1, 1992, for lands in the Primary Zone.

DP-51. Support programs for emergency levee repairs and encourage coordination between local, State, and federal governments. The programs may include but are not limited to: interagency agreements and coordination; definition of an emergency; designation of emergency funds; emergency contracting procedures; emergency permitting procedures; and other necessary elements.

DP-52. Support efforts to address levee encroachments that are detrimental to levee maintenance.

DP-53. Support funding assistance for existing unincorporated towns within the Delta to improve levees up to a 200-year flood protection level.

DP-54. Support stockpiling rock in the Delta for levee emergency response.

DP-55. Support a multi-year funding commitment to maintain and restore both project and non-project levees in the Delta.

DP-56. Encourage the beneficial reuse of dredged material, as appropriate, for levee maintenance and rehabilitation, and the maintenance of instream flows. Support and advocate for the Delta Long-Term Management Strategy (LTMS).

DP-57. Seek funding for and support programs to make cost-effective levee investments in order to preserve the economy and character of the Delta.

DP-58. Support a minimum Delta-specific levee design standard as established by state and federal regulations.

UTILITIES AND INFRASTRUCTURE

GOAL: **Support construction of new utilities and infrastructure facilities appropriate to the Delta which avoid, minimize and mitigate the impacts of such new construction on the integrity of levees, wildlife, recreation, agriculture.**

Overview

Due to the Delta's location between major population areas, its unique resources, especially water and natural gas, and its flat terrain and general lack of development, the Delta has high value as a utility and transportation corridor.

Utilities located in the Delta include: radio, cellular telephone and television transmission towers; electrical transmission lines including Pacific Gas and Electric (PG&E), Sacramento Municipal Utility District, and Western Area Power Administration lines; natural gas pipelines, serving local gas fields and regional pipelines; petroleum transportation pipelines; and water transportation canals and pipelines transporting water from the Delta to regional users and to the State and federal water projects.

Local governments regulate the utilities that serve Delta residents and visitors including potable water, sewage disposal, and solid waste disposal. Most potable water is obtained from groundwater through local wells. Most wastewater from homes and businesses is treated in on-site septic tanks. Some of the larger communities and developments have self-contained wastewater treatment facilities. Communities outside the Primary Zone are currently anticipated to continue to release treated wastewater into Delta waterways (through wastewater discharge requirements issued by the regional water board), onto constructed wetlands, or onto agricultural lands. Most solid waste generated in the Delta is disposed of at facilities outside the area.

Transportation systems traversing around and through the Delta include several railroads and freeways, state highways, and county roads. Three interstate freeways (Interstate 5, Interstate 80, and Interstate 580) provide major transportation and trucking routes that pass the periphery of the Delta. The three major state highways in the Delta (State Routes 4, 13, and 160) are typically two lanes, sometimes built on top of levees. Originally meant for lower traffic volumes at moderate speeds, the state highways are now heavily used for regional trucking, recreational access, and commuting. More than 50 bridges, including approximately 30 drawbridges span the navigable channels of the Delta.

Regional rail traffic between the Bay Area and the Central Valley passes through the Delta. The Amtrak San Joaquin route from Bakersfield to Sacramento/Oakland, which crosses through the Delta, had nearly 800,000 riders in 2006. In addition, companies such as the Sierra Northern Railway use existing short-line tracks for inter-regional freight and passenger services.

Two major ports lie north and east of the Primary Zone, the Ports of Sacramento and Stockton, respectively. The Stockton and Sacramento Deep Water Ship channels traversing the Delta were

constructed in 1933 and 1963, respectively. The Stockton channel is 35 feet deep and can handle 55,000-ton class vessels with full loads. More than 300 ships and barges used the channel in 2005. The Sacramento ship channel is 30 feet deep with plans underway to increase its depth to 35 feet. Both ports are likely to expand in the future, which would result in an increase in ship and barge traffic through the Delta. Several million tons of diversified products are shipped through the Delta each year.

Airports in the Primary Zone of the Delta are limited to small facilities serving individual land-owners, agriculture-serving businesses, and small air operations.

Policies:

DP-59. Impacts associated with construction of transmission lines and utilities can be mitigated by locating new construction in existing utility or transportation corridors, or along property lines, and by minimizing construction impacts. Before new transmission lines are constructed, the utility should determine if an existing line has available capacity. To minimize impacts on agricultural practices, utility lines shall follow edges of fields. Pipelines in utility corridors or existing rights-of-way shall be buried to avoid adverse impacts to terrestrial wildlife. Pipelines crossing agricultural areas shall be buried deep enough to avoid conflicts with normal agricultural or construction activities. Utilities shall be designed and constructed to minimize any detrimental effect on levee integrity or maintenance, agricultural uses and wildlife within the Delta. Utilities shall consult with communities early in the planning process for the purpose of creating an appropriate buffer from residences, schools, churches, public facilities and inhabited marinas.

DP-60. New houses built in the Delta agricultural areas but outside of the Delta's unincorporated towns shall continue to be served by independent potable water and wastewater treatment facilities and/or septic systems. Agricultural uses that require wastewater treatment shall provide adequate infrastructure improvements or pay to expand existing facilities, and not overburden the existing limited community resources. The appropriate governing body shall ensure that new or expanded construction of agriculturally-oriented wastewater disposal systems meet the appropriate standards/conditions and are not residentially growth inducing. Independent treatment facilities should be monitored to ensure no cumulative adverse impact to groundwater supplies.

DP-61. New municipal sewage treatment facilities (including storage ponds) that support development or business outside of the Delta Primary Zone shall not be located within the Delta Primary Zone. The Rio Vista project, as described in the adopted Final Environmental Impact Report for such project, and the Ironhouse Sanitary District use of Jersey Island for disposal of treated wastewater and biosolids are exempt from this policy.

DP-62. Encourage recycling programs for metals, glass, paper, cardboard, and organic materials in order to minimize waste generation. Recycling facilities for these

materials should be suitably located to serve Delta residents, visitors, and businesses. High groundwater tables and subsiding soil make the Delta an inappropriate location for solid waste disposal.

DP-63. Roads within the Delta shall be maintained to serve the existing agricultural uses and supporting commercial uses, recreational users, and Delta residents. Promote the maintenance and enhancement of major thoroughfares already used as cross-Delta corridors.

DP-64. Allow Air transportation in the Delta to continue to serve Delta residents and agriculture-related businesses. Due to subsidence, transmission lines, high winds, fog, and high raptor and waterfowl use, the Primary Zone is not an appropriate location for new or expanded general aviation airports.

DP-65. Encourage the provision of infrastructure for new water, recycled water and recreational and scientific research facilities.
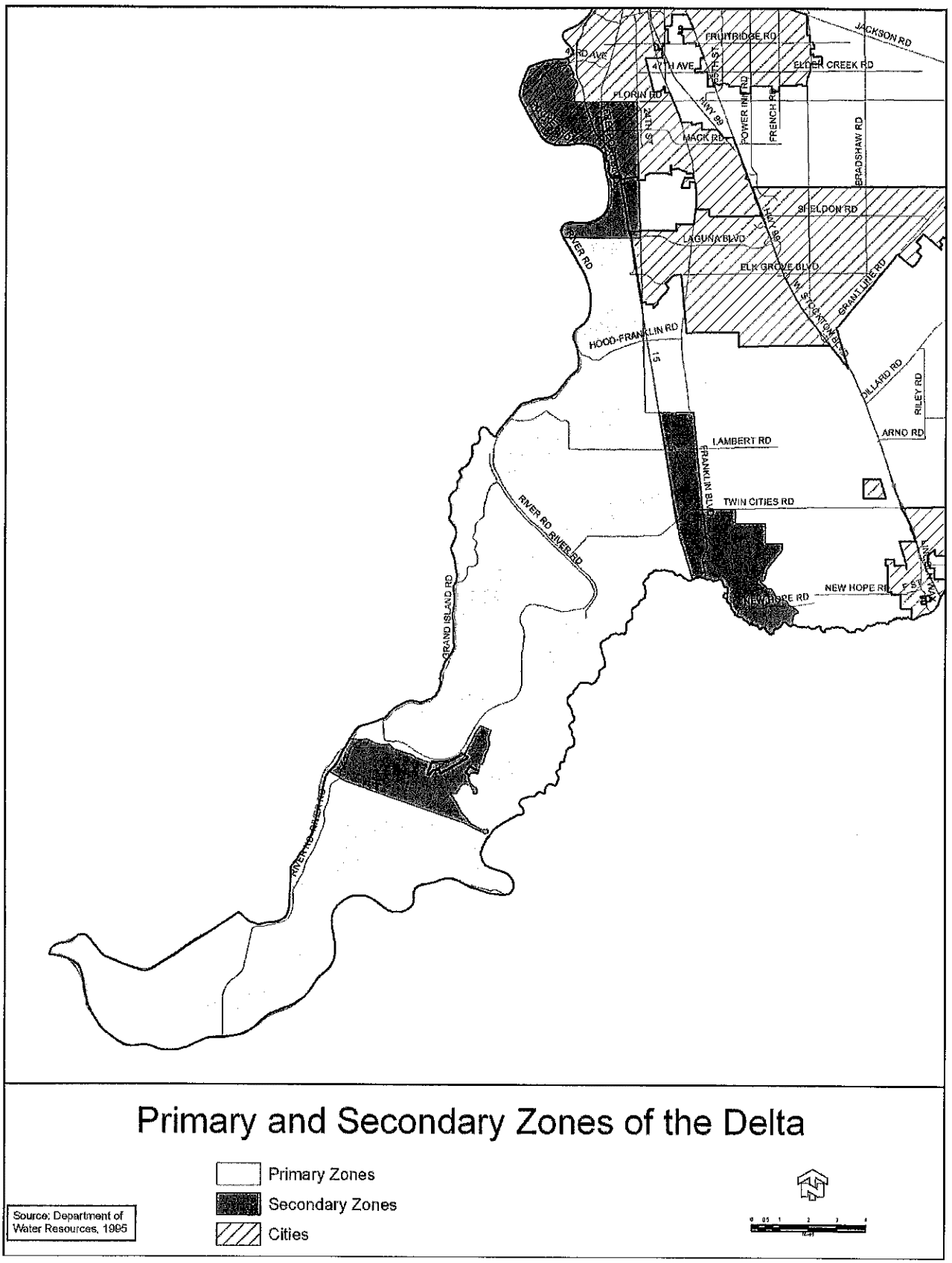
FIGURE 1: Primary and Secondary Zones of the Delta