SUISUN MARSH LOCAL PROTECTION PROGRAM

Suisun Marsh Local Protection Program

Part 1 - April, 1980

COMPONENTS OF:

SOLANO COUNTY LOCAL AGENCY FORMATION COMMISSION

SOLANO COUNTY MOSQUITO ABATEMENT DISTRICT

CITY OF FAIRFIELD

Prepared By:

Solano County Planning Department,

Solano County Mosquito Abatement District and

City of Fairfield Department of Environmental Affairs

This publication was prepared with financial assistance from the U.S. Office of Coastal Zone Management, National Oceanic and Atmospheric Adiministration, under the provisions of the Federal Coastal Zone Management Act of 1972, as amended, and from the San Francisco Bay Conservation and Development Commission under the provisions of the Suisun Marsh Preservation Act of 1977.

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I. Resolution Of Transmittal

RESOLUTION NO. 80-54

RESOLUTION TRANSMITTING THE SUISUN MARSH LOCAL PROTECTION PROGRAM TO THE SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION FOR CERTIFICATION

WHEREAS, the Suisun Marsh Preservation Act of 1977 requires local governments and districts having jurisdiction over the Marsh to prepare a Local Protection Program for the Suisun Marsh in order to bring local policies and regulations into conformity with the provisions of said Act and the Suisun Marsh Protection Plan; and

WHEREAS, said Act requires such local governments and districts to submit their proposed components of the Local Protection Program to the Solano County Board of Supervisors for review and Public Hearing prior to submittal of the program to the San Francisco Bay Conservation and Development Commission; and

WHEREAS, the Suisun Marsh Local Protection Program as attached hereto consists of the components of the Solano County Local Agency Formation Commission, the Solano County Mosquito Abatement District and the City of Fairfield; and

WHEREAS, the Board of Supervisors has reviewed each component, considered its environmental effects and received testimony on said components during Public Hearing on the Local Protection Program;

NOW, THEREFORE, BE IT RESOLVED that the Solano County Board of Supervisors endorses the Suisun Marsh Local Protection program consisting of the components of the Solano County Local Agency Formation Commission, the Solano County Mosquito Abatement District and the City of Fairfield, as attached hereto as being prepared in conformance with the provisions of the Suisun Marsh Preservation Act of 1977 and does hereby transmit said program to the San Francisco Bay Conservation and Development Commission

TLC/jf

for its review and certification.

I, JOHN S. BLACKLOCK, Clerk of the Board of Supervisors of the County of Solano, State of California, do hereby certify that the above and foregoing Resolution was regularly introduced, passed and adopted by said Board at a regular meeting thereof held this 8th day of April, 1980.

On the motion of Supervisor Asera and the second of Supervisor Davis, this Resolution was adopted by the following vote:

AYES: SUPERVISORS: ASERA, DAVIS, HEWITT and BRANN

NOES: SUPERVISORS: NONE

ABSENT: SUPERVISORS: BRAZELTON

WITNESS my hand and Seal of said Board this 8th day of April, 1980.

JOHN S. BLACKLOCK
Clerk of the Board of Supervisors

By Linda Tevis
Deputy Clerk

II. Introduction

INTRODUCTION

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 Flyway. 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 implementing policies and programs set forth in the Suisun Marsh Protection Plan as prepared by the San Francisco Bay Conservation and Development Commission (BCDC). A key feature of the Preservation Act requires local governments and districts having jurisdiction over the Marsh to prepare a Local Protection Program (L.P.P.) for the Marsh which will bring local policies and ordinances into conformity with the provisions of the Preservation Act and the policies of the Protection Plan. Upon completion of the L.P.P., local agencies are required to submit the program to BCDC for the Commission's review and final certification.

PRESERVATION ACT REQUIREMENTS

The Local Protection Program has been prepared to meet the requirements of state law. It consists of a series of local components in which each local agency outlines policies, ordinances and regulations to guide uses and operations within and adjacent to the Marsh. The majority of the Suisun Marsh lies under the jurisdiction of Solano County. Other local governments having jurisdiction within the Marsh include the cities of Benicia, Fairfield and Suisun City (See Figure I). The Solano County Local Agency Formation Commission and the Solano County Mosquito Abatement District are County-wide agencies with jurisdiction in the Marsh and the Suisun Resource Conservation District has boundaries which are, for the most part, coterminous with the Marsh.

The L.P.P. includes the components of the Solano County Local Agency Formation Commission, the Solano County Mosquito Abatement District and the City of Fairfield. Solano County and the cities of Benicia and Suisun City have not completed their components to date, but will be submitted when completed. The Suisun Resource Conservation District is required to prepare its component and submit it directly to BCDC under separate cover.

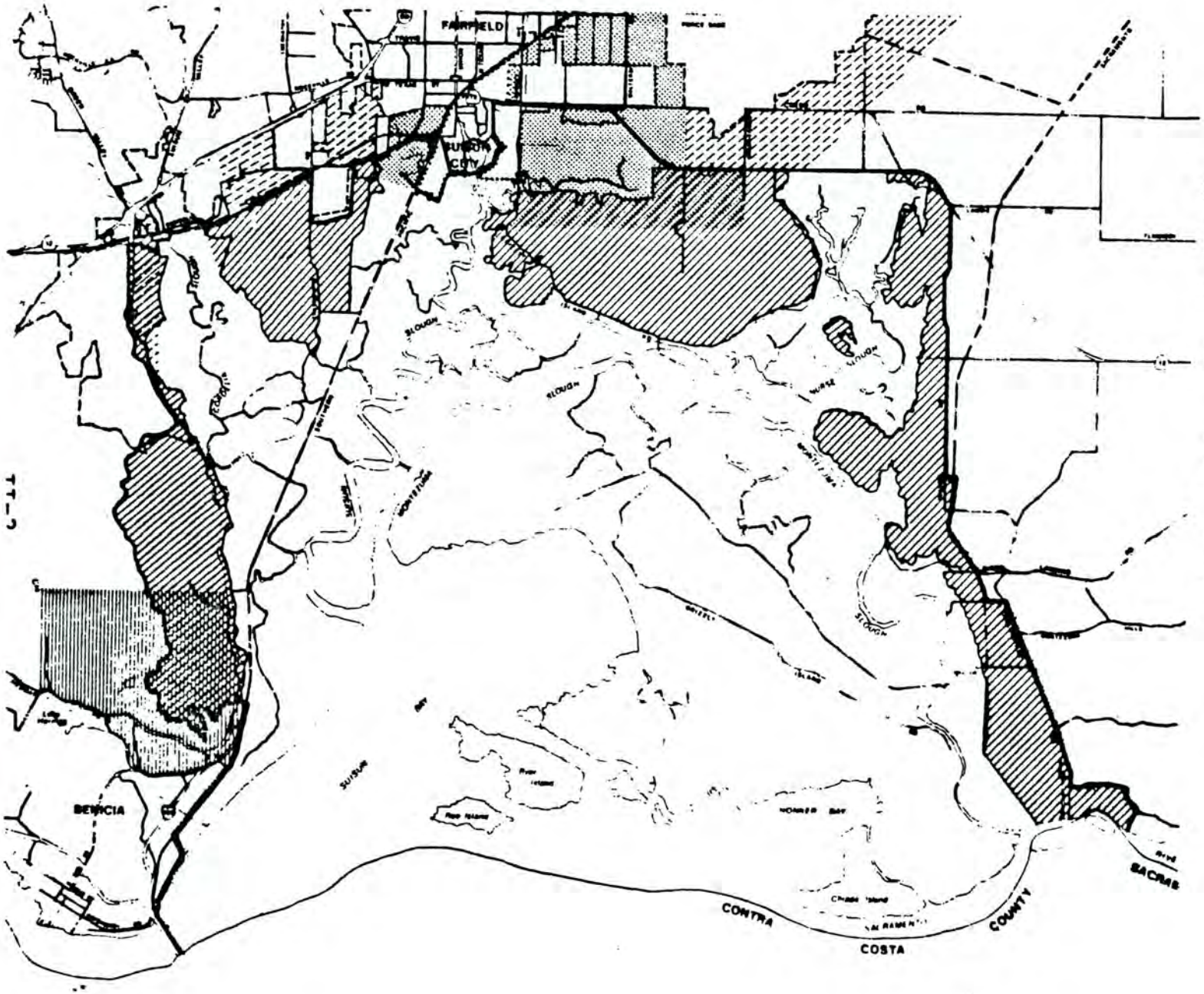

FIGURE I

CITY JURISDICTIONS IN THE SUISUN MARSH

LEGEND

- Suisun Marsh Line
- Primary Management Area
- Secondary Management Area
- Suisun City Limits
- Suisun City Sphere of Influence
- Fairfield City Limits
- Fairfield Sphere of Influence
- Benicia City Limits
- Benicia Sphere of Influence

The development and adoption of the Local Protection Program is required to follow guidelines based upon provisions of the Marsh Act. Initially, each local jurisdiction prepared a detailed work program which specifically identified the work to be performed to meet the requirements of the legislation. The work program also served as the basis for Coastal Zone Management planning assistance grants. Upon approval of the work program each local agency prepared a draft of its proposed component. The proposed components were then circulated to local, state and federal agencies, public groups and individuals for review and comment.

During component preparation, local agencies were required to review environmental impacts. When appropriate, Negative Declarations were prepared and circulated in accordance with the California Environmental Quality Act (CEQA). Public hearings were held on the proposed components and environmental documentation and following approval, components were submitted to Solano County for the Board of Supervisor's approval of the overall Local Protection Program.

Following action by the Board of Supervisors, it is required that the Local Protection Program be submitted to BCDC for its review and certification. BCDC has the responsiblity to prepare an environmental evaluation for the overall program and circulate documents to local, state and federal agencies, public groups and individuals involved with the L.P.P. process. BCDC is required to hold public hearings on the program and after the agency has determined it to be in conformity with the Preservation Act and Protection Plan, certify the Local Protection Program.

PROGRAM COORDINATION

Essential in this process was the coordination of local planning efforts through the Suisun Marsh Local Protection Program Technical Advisory Committee. The committee included representatives of Solano County, the cities of Fairfield, Benicia and Suisun City, Solano County Local Agency Formation Commission, Suisun Resource Conservation District, Solano County Mosquito Abatement District, local irrigation, sewer and reclamation districts, California Department of Fish and Game, State Department of Health, San Francisco Bay Conservation and Development Commission, Assemblyman Hannigan's Office and the U.S. Soil Conservation Service. The committee met almost every month from December 1977 through September 1979. This process ensured the maximum coordination among local agencies and allowed for continuing review and comment by state and federal agencies throughout the development of the work programs and the proposed components. The Technical Advisory Committee review process culminated in a committee sponsored Public Forum on September 19, 1979, during which each local agency introduced its proposed component to the public and received comments on the drafts prior to formal public hearings before local legislative bodies.

SUMMARY OF LOCAL COMPONENTS

The following summarization of local components outlines the major provisions contained within each component. In addition, the environmental assessment and local adoption procedures utilized by each jurisdiction is discussed.

Solano County Local Agency Formation Commission Component

One of the main responsibilities of the Solano County Local Agency Formation Commission (LAFCO) is to review and act on proposals for the annexation or detachment of lands to or from local cities and districts. The LAFCO component sets out a policy framework which it can use in determining whether to approve or disapprove an agency's formation, request for annexation or deannexation of territory or expansion or contraction of a sphere of influence within the Suisun Marsh. It is the intention of the LAFCO component to encourage continued long-term agricultural and wildlife use of lands within the Marsh and to limit urban assessments against lands within the Marsh. The component also encourages cities to deannex lands within the Marsh and exclude sphere of influence lines from the Marsh.

Public hearings on the Solano County Local Agency Formation Commission component were held on January 7, 1980 and again on February 4, 1980. At that time, the Commission reviewed the adopted Negative Declaration for the Solano County Component and found that it adequately assessed the impacts of implementing the Commission's component. After certifying the Negative Declaration the Commission took action to adopt the component.

Solano County Mosquito Abatement District Component

The Solano County Mosquito Abatement District's (SCMAD) component ensures that the mosquito abatement practices do not harm the Marsh while ensuring that the marsh management practices do not add to mosquito problems. The SCMAD component sets forth management schedules and practices for drainageway construction and maintenance, tidal marshes, leveed irrigated pastures, duck clubs, salt marsh restoration of exterior levee lands, wastewater reclamation projects, dredge disposal sites, permanent ponds, controlled burning and for utilities construction. The component also establishes provisions for the biological and chemical control of mosquitos within the Marsh.

A Negative Declaration was prepared by the District and was circulated through the State Clearinghouse in accord with CEQA requirements. No comments were received on the project. Public Hearings on the Solano County Mosquito Abatement District Component were held on November 18, 1979 and January 14, 1980. At its final hearing, the Board of Trustees took action to certify the Negative Declaration prepared by the district and it adopted the local component.

City of Fairfield Component

The Fairfield City Council approved a resolution submitting its component to Solano County on March 8, 1980. The City of Fairfield's component consists of amendments to the General Plan, existing City policies on creekside protection, and Planned Development zoning regulations applicable to the Cordelia Area Specific Plan. In addition, it contains proposed creekside protection and grading control ordinances.

Existing Planned Development zoning regulations were approved by the City in 1975. In 1979, the City conducted a comprehensive General Plan revision program which resulted in numerous policies relating to protection of the Suisun Marsh. Adoption of the General Plan amendments and certification of an extensive Environmental Impact Report for the update occurred on December 4, 1979. Following considerable negotiations with BCDC, the city approved a Specific Plan for Creekside Protection and its accompanying Negative Declaration on January 16, 1980. Final adoption of the proposed Creekside and Grading Ordinances is scheduled to occur later in 1980.

III. Solano County Local Agency Formation Commission Component

RESOLUTION OF THE LOCAL AGENCY FORMATION COMMISSION
OF SOLANO COUNTY ESTABLISHING POLICIES FOR THE
LONG-TERM PRESERVATION OF LANDS WITHIN THE SUISUN MARSH

WHEREAS, the Solano County Local Agency Formation Commission recognizes that 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 the nation; and

WHEREAS, 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 State Legislature passed the Suisun Marsh Preservation Act of 1977, requiring 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 Suisun Marsh Protection Plan; and

WHEREAS, the Commission has prepared policies to guide its actions with respect to proposals for the formation of agencies, the annexation or de-annexation of territory, and the setting of sphere-of-influence lines within the Suisun Marsh, as contained in Exhibit A entitled "Solano County Local Agency Formation Commission Component of the Suisun Marsh Local Protection Program," attached hereto; and

WHEREAS, legal notice of public hearing of this matter on January 7, 1980, at 10:00 a.m. has been duly publicized and a full and impartial public hearing was accomplished on January 7, and February 4, 1980; and

WHEREAS, the Commission has reviewed the adopted Negative Declaration for the Solano County Component of the Suisun Marsh Local Protection Program and found that document to adequately assess the impacts of implementing the Commission's component.

NOW, THEREFORE, BE IT RESOLVED that the Solano County Local Agency Formation Commission does hereby adopt and certify

the Negative Declaration of the Solano Count Component of the Suisun Marsh Local Protection Program; and

BE IT FURTHER RESOLVED that the Commission hereby adopt the Solano County Local Agency Formation Commission Component of the Suisun Marsh Local Protection Program, as contained in Exhibit A.

I, DAVID BALMER, Executive Officer of the Local Agency Formation Commission of Solano County, California, do hereby certify that the above and foregoing Resolution was regularly introduced, passed and adopted by said Commission at a regular meeting thereof held February 4, 1980, by the following vote:

AYES: COMMISSIONERS: ASTA, BRAZELTON, BRANN, BUCK, and CHAIRMAN CAMPOS

NOES: COMMISSIONERS: NONE

ABSTAINED: COMMISSIONERS: NONE

ABSENT: COMMISSIONERS: NONE

WITNESS my hand for the said Local Agency Formation Commission on February 4, 1980.

David Balmer

DAVID BALMER, Executive Officer
Local Agency Formation Commission

EXHIBIT
"A"

SOLANO COUNTY
LOCAL AGENCY FORMATION COMMISSION
COMPONENT OF THE
SUISUN MARSH LOCAL PROTECTION PROGRAM

Prepared by
The Solano County Planning Department
December, 1979

This publication was prepared with financial assistance from the U.S. Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, under the provisions of the Federal Coastal Zone Management Act of 1972, as amended, and from the San Francisco Bay Conservation and Development Commission under the provisions of the Suisun Marsh Preservation Act of 1977.

Adopted February 4, 1980
Solano County Local Agency Formation Commission

Manuel Campos - Chairman

Wallace Brazelton - Vice Chairman

Manual Asta

James Buck

Richard Brann

Alternates:

Jan Hewitt

Terry Curtola

John Hamel

Executive Officer:

David Balmer

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Introduction

The Suisun Marsh comprises approximately 85,000 acres of tidal marsh, managed wetlands, and waterways in southern Solano County. 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. It plays an important role in providing wintering habitat for waterfowl of the Pacific Flyway, and because of its size and estuarine location, supports a diversity of plant communities. These provide habitats for a variety of fish and wildlife, including several rare and endangered species.

In 1977, the State legislature enacted the Suisun Marsh Preservation Act which provides a mechanism to protect wildlife habitats and to ensure the continued existence of this significant State resource. The primary responsibility for carrying out the provisions of the Suisun Marsh Preservation Act of 1977 rests with local government. Under the provisions of the Act, the Solano County Local Agency Formation Commission must prepare a component of the "Local Protection Program" for the Marsh. The purpose of this component is to bring agency policies and operating procedures into conformity with the provisions of the Suisun Marsh Preservation Act. The Act designates two implementation areas where the Local Agency Formation Commission has responsibility: to encourage continued long term agricultural and wildlife use of lands within the Marsh and to limit urban assessments against lands within the Marsh.

This document is intended to satisfy the requirements of the Marsh Preservation Act by setting a policy framework which the Local Agency Formation Commission can use in evaluating local agency proposals within the boundaries of the Marsh. It consists of four parts. Part I is a review of the policies of the Marsh Act which are applicable to LAFCO. Part II inventories local agencies with jurisdiction in the Marsh. Part III consists of a discussion as to how LAFCO can respond to the mandate, and Part IV is a list of policies which are proposed for LAFCO adoption.

Requirements of the Suisun Marsh Preservation Act and Suisun Marsh Protection Plan.

The Suisun Marsh as defined in the Public Resources Code is divided into two subunits: the primary management area consisting of waterways, managed wetlands, tidal marshes and lowland grasslands; and the secondary management area, consisting of upland grasslands and agricultural areas. It is the clear mandate of the Marsh legislation that within these two areas the authority of LAFCO is to be used to retain the existing agricultural and marsh land pursuits. Section 29409.5 of the Act states:

> The component of the local protection program prepared by the Solano County Local Agency Formation Commission shall conform to this division and the policies of the protection plan, which shall govern its decisions. That component of the local protection program shall be specifically designed to encourage continued long-term agricultural use of lands within and adjacent to the marsh and continued wildlife use of lands within the marsh.

Guidance as to how long-term agricultural and wildlife uses are to be encouraged by LAFCO is provided in other provisions of the Act and policies of the protection plan.

Under Section 29403 the Act provides that the local protection program include "limitations on special assessments against agricultural lands for the provision of public services, the demand for which is not generated by agricultural uses on such lands.

Protection Plan policies on Land Use and Marsh Management provide that "within the primary management area, existing uses should continue and both land and water areas should be protected and managed to enhance

the quality and diversity of the habitats (Policy 1 page 28). Policy #2 under this section indicates that "agriculture within the primary management area should be limited to activities compatible with, or intended for, the maintenance or improvement of wildlife habitat".

The theme of preserving marsh habitat is carried to the secondary management area, as well. In Policy 9, the plan outlines the function of this area "as a buffer area insulating the habitats within the primary management area from adverse impacts of urban development and other uses and land practices incompatible with preservation of the marsh". The plan seeks to insulate primary area habitats by limiting land uses in the following manner. "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." (Policy #10 page 29.)

It is intended that the above policies be applied throughout the Suisun Marsh; however, the legislation does limit the extent of new policies in one geographic area. The secondary management area west of 680 and outside the limits of the City of Fairfield may include only ordinances which control grading, erosion, sediment, runoff and creekside development.

The marsh legislation and protection plan clearly indicate that marsh habitats are to be preserved by retaining the non-urban land uses which presently exist there. Although LAFCO does not have direct control

over land use within the marsh, it does have the power to approve or deny certain local agency activities which could introduce urbanization into the marsh environment. It, therefore, has a very significant role to insure that the marsh is preserved.

Inventory of Agencies with Jurisdiction in the Suisun Marsh

There are more than twenty agencies which have jurisdiction in the Suisun Marsh. The location and extent of these are shown on Figure 1 and Figure 2. Figure 1 indicates city boundaries and their LAFCO sphere of influence lines and Figure 2 delineates special districts.

Table 1 contains a list of all agencies within the marsh which are subject to LAFCO authority. Also shown on the table is each agency's legal service capability. While many of the agencies operating in the marsh provide, or have the capacity to provide, services which support urbanization, only a handful have the capacity to make decisions or provide services which are prerequisites to urbanization. Prerequisites to urbanization which pose a threat to marsh preservation are listed on Table 1 as follows: planning and land use control, transportation, sanitary waste disposal, and water supply. Agencies with the power to provide one or more of the services which could be deemed growth inducing to the marsh include the County of Solano, the cities of Fairfield, Suisun City and Benicia, the Fairfield-Suisun Sewer District and the Solano Irrigation District.

Solano County has jurisdiction over all portions of the marsh which are not presently within the cities boundaries. The County has broad powers to provide services or impose assessments which could be considered growth inducing. Urban development could be provided for through improvement districts, by the expansion of the existing Dan Wilson-Green Valley Creek channel County service area or through the formation of a new County service district. If the existing County service area were to expand or a new County service district were to be formed, it would come under LAFCO review.

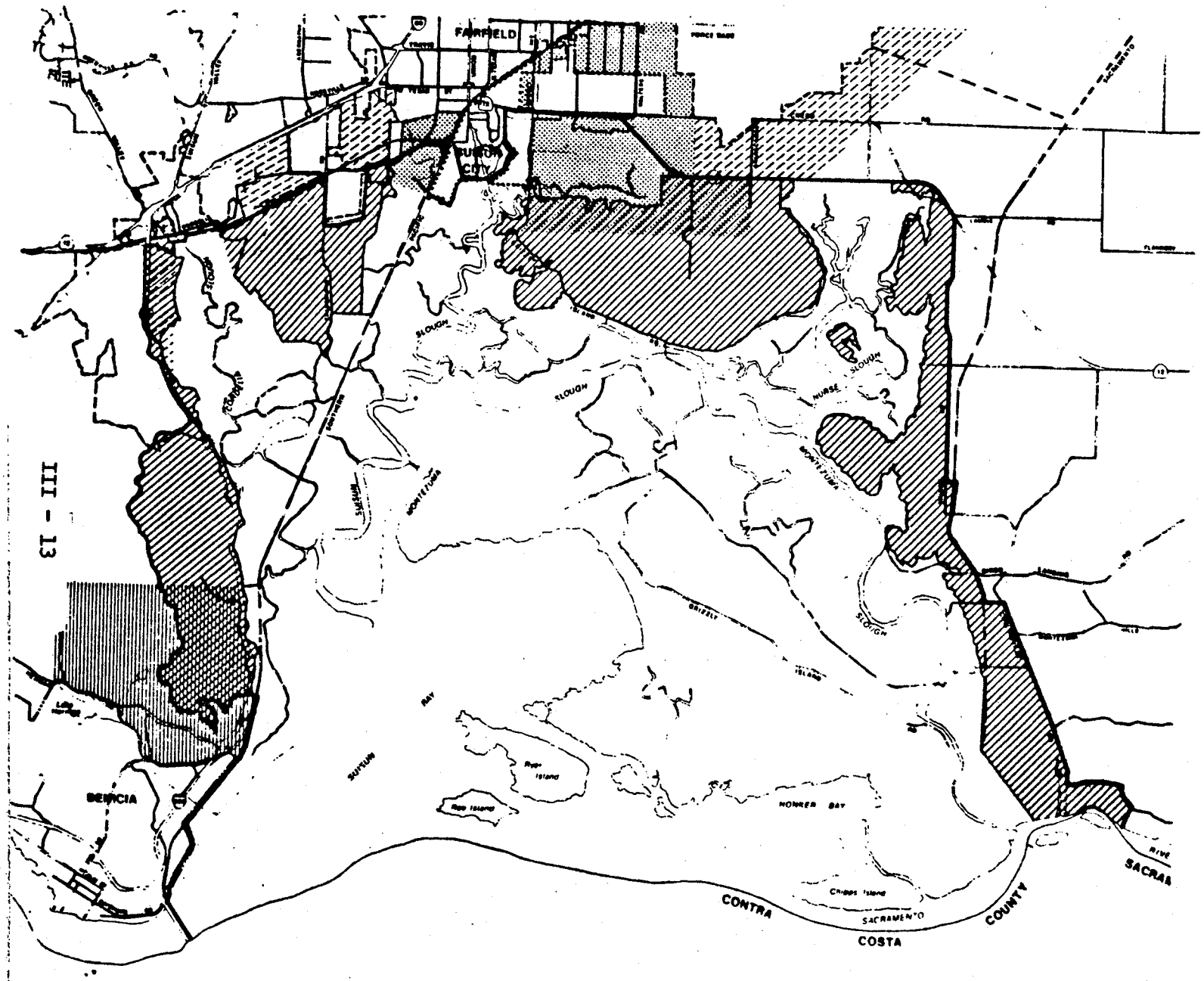

FIGURE I

CITY JURISDICTIONS IN THE SUISUN MARSH

LEGEND

- Suisun Marsh Line
- Primary Management Area
- Secondary Management Area
- Suisun City Limits
- Suisun City Sphere of Influence
- Fairfield City Limits
- Fairfield Sphere of Influence
- Benicia City Limits
- Benicia Sphere of Influence

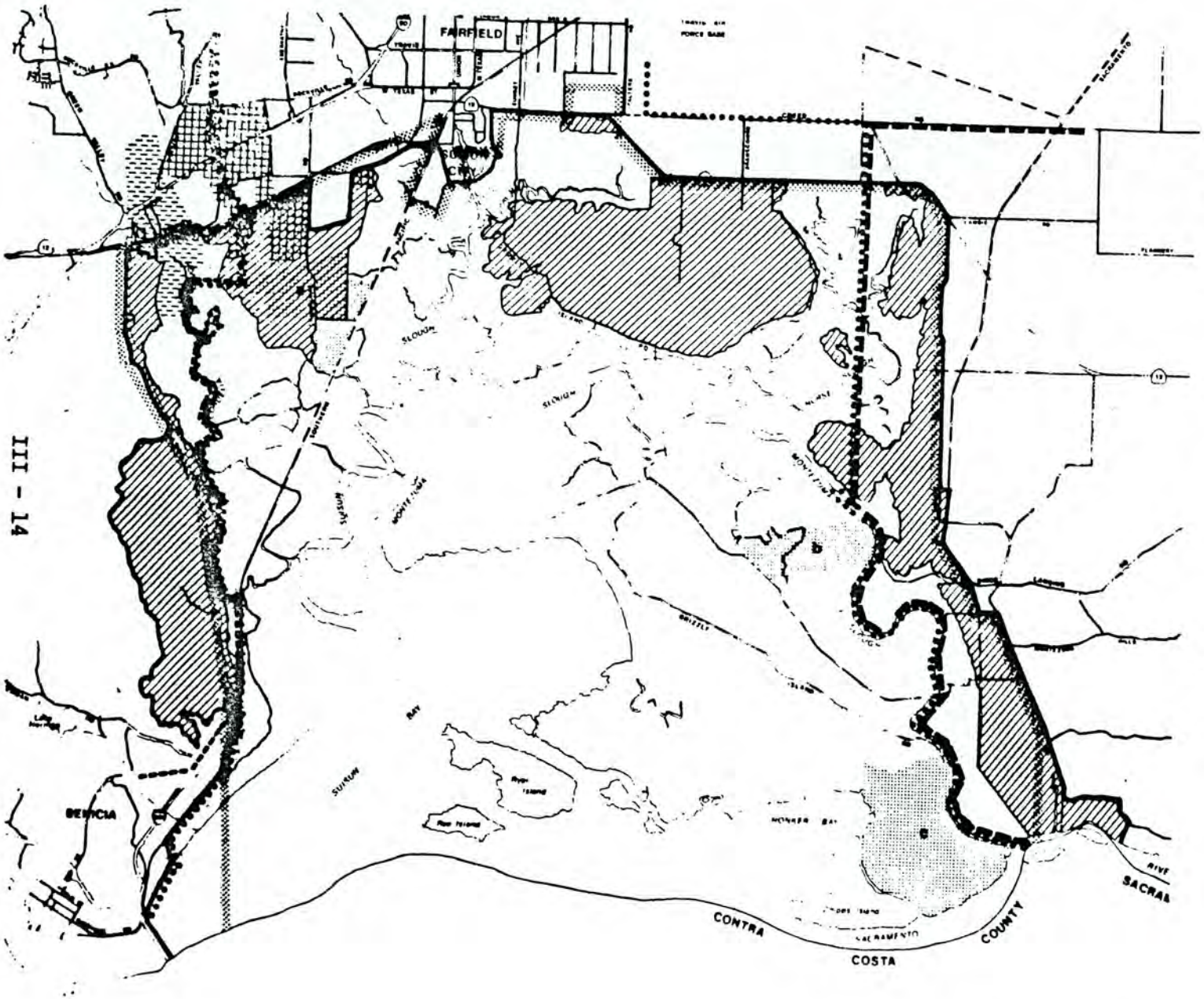

FIGURE II

SPECIAL DISTRICTS
IN THE SUISUN MARSH

LEGEND

- Suisun Marsh Line
- Primary Management Area
- Secondary Management Area
- S.I.D.
- Dan Wilson Creek and Green Valley Creek Channel Maintenance
- Reclamation Districts
  - a2034
  - b2122
  - c1607
- Suisun Resource Conservation District
- Cordelia Fire District
- Suisun Fire District
- Montezuma Fire District

TABLE I. SERVICE CAPABILITIES OF PUBLIC AGENCIES UNDER LAFCO JURISDICTION[1] IN THE SUISUN MARSH

AGENCIES / SERVICE CAPABILITIES	FIRE SERVICES	POLICE SERVICES	PLANNING AND LAND USE CONTROL	RECREATION: Parks, Open Space Development and Maintenance	Recreational Facilities and Programs	TRANSPORTATION: Road Construction and Maintenance	Public Airports-Construction and Maintenance	SANITARY WASTE DISPOSAL: Collection and Treatment	Reclamation	SOLID WASTE COLLECTION AND DISPOSAL	WATER SUPPLY: Conservation and Reclamation	Production and Treatment	Distribution	OTHER SERVICES: Cemetery Operation	Electric Generation	Mosquito Abatement
COUNTY: Solano County	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CITIES: Fairfield	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Suisun City	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Benicia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CEMETERY DISTRICTS: Fairfield-Suisun														x		
Montezuma														x		
Rockville														x		
COUNTY SERVICE AREA: Dan Wilson and Green Valley Creek Channels	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x
FIRE PROTECTION DISTRICTS: Benicia	x[4]															
Cordelia	x															
Montezuma	x															
Suisun	x															
FLOOD CONTROL: Solano County Flood Control and Water Conservation District				x							x		x			
IRRIGATION DISTRICT: Solano Irrigation District							x	x	x		x	x	x		x	
MOSQUITO DISTRICT: Mosquito Abatement[2]																x
RECLAMATION DISTRICTS: District 1607				x[5]							x		x			
District 2034				x[5]							x		x			
District 2122				x[5]							x		x			
RESOURCE CONSERVATION: Suisun Resource and Conservation District											x[6]		x[6]			
SANITARY CONTROL: Fairfield-Suisun Sewer District								x	x							

1. School districts are not under LAFCO jurisdiction. School districts which extend into the Suisun-Marsh are: Benicia Unified, Fairfield-Suisun Unified, River Delta, San Joaquin Delta College and Solano Community College.
2. Extermination of mosquitos, flies, other insects and rats. Undertakes algae research, control and monitoring projects.
3. Structural fire protection.
4. Assists Suisun Fire District near Benicia. District boundary coterminous with city limits.
5. Powers include reclaiming and protecting land from overflow and flood including irrigating land inside and outside district.
6. Powers include soil conservation, water conservation or distribution, erosion control or prevention projects.

Presently, the County provides no urban services within the marsh, nor do special districts. Projects to provide these services would be subject to a review of their conformity with the County General Plan under Section 65402 of the Government Code although currently, the outcome of the review would not be binding upon the agency proposing the project. It is unlikely that urban services could be extended into the marsh in the foreseeable future because of the County's policy of encouraging urbanization within City boundaries and because County General Plan designations within the marsh will be revised to rural land uses to reflect the mandate of the Marsh Act.

City of Fairfield jurisdiction over the Suisun Marsh is found on 1) a small parcel of land east of the sewage treatment plant on Cordelia Road 2) a strip of land between the treatment plant and Cordelia adjacent to the Southern Pacific railroad tracks and 3) a small narrow strip of land south of Cordelia, adjacent to Interstate 680. In addition, the City's LAFCO sphere of influence encompasses an area of one square mile south of the Southern Pacific Railroad and east of I-680.

Recently, the City adopted a revised general plan including an urban limit line "defining the future service area and, hence, the City boundaries to the year 2000". The adopted urban limit line excludes the land within the City's LAFCO sphere of influence south of the Southern Pacific Railroad and east of I-680.

The City of Suisun City has the following marsh areas within its boundaries. (1) an approximately 200-acre parcel west of Suisun Slough bounded by the Southern Pacific railroad tracks on the west, Peytonia Slough on the south, Suisun Slough on the east, and urbanized

Suisun City on the north, and (2) an approximately 450-acre parcel bounded by Suisun Slough on the west, Hill Slough on the south, Grizzly Island Road on the east, and State Highway 12 on the north. In addition, almost seven square miles of the marsh lie within the City's sphere of influence.

This City also has adopted a revised general plan. This plan removes urban residential and manufacturing land use designations and the City sphere of influence from the marsh. The City is also proceeding on the actions to deannex large protions of those lands within its boundaries which are also in the marsh.

The City of Benicia has no incorporated lands within the Suisun Marsh except for a narrow strip in the primary management area north of the Southern Pacific Railroad and east of the levee. The City does have approximately four square miles of land within the secondary management area west of I-680 which are within its sphere of influence. The Marsh Act specifically exempts this area from any land use controls other than grading and watercourse protection.

The Fairfield-Suisun Sewer District is a joint powers agency which provides sewage treatment services and trunk line installation and maintenance for the cities of Fairfield and Suisun City. The Board of Directors consists of the City Councils of the two agencies. Service with some minor exceptions is limited to the incorporated boundaries of Fairfield and Suisun City. Except in extraordinary situations, annexation to one of the cities is required prior to providing services. LAFCO has established no sphere of influence line for this agency; however, the line would undoubtedly be coterminous

with the spheres which have been established for the two cities.

The Solano Irrigation District (SID) has jurisdiction over approximately 530 acres of agricultural land in the secondary management area of the marsh. This agency's chief role is to provide irrigation water to agriculture which it does through a variety of sources. In fact, the area within the marsh served by the District is one which is irrigated by effluent from the Fairfield-Suisun Regional Sewage Treatment Plant. Under State law the district is granted broad powers which include the power to construct and operate water treatment and sewage treatment facilities. The District, through a joint powers agreement with the City of Suisun City, has recently constructed a treated water facility which provides urban water to portions of the City of Suisun City and to the unincorporated Tolenas area. LAFCO has not yet set a sphere of influence for SID.

Although SID has jurisdiction in the Marsh and it has the power to provide urban services or to assess land for urban purposes, the potential for this actually occurring is considered to be remote. Land use controls imposed by the Preservation Act and Plan strictly limit the kinds of activities which could take place in the marsh. It should be noted, however, that Section 65402 of the Government Code does not mandate that district projects conform to the general plan.

In addition to the aforementioned general purpose governments and special districts, there are a number of others with jurisdiction in the marsh. These include school districts, fire districts, the County Flood Control District, the Mosquito Abatement District, cemetery districts and others. While each has the potential to provide and

assess for urban services, normally such services would only be provided in response to land use changes facilitated by a City or the County, or by a growth inducing project.

LAFCO Response to the Mandate

The Solano County Local Agency Formation Commission (LAFCO) is a regulatory body responsible for encouraging the orderly formation and development of local jurisdictions. To exercise its mandate, the LAFCO has powers to approve or disapprove the formation of agencies and the annexation or deannexation of territory to or from agencies. In addition, it has the power to set jurisdictional spheres of influence. LAFCO, therefore, has considerable power to withhold growth inducing urban services which could threaten the integrity of the Suisun Marsh, as mandated by the Suisun Marsh Preservation Act.

Agency Formation

A significant power of the Commission is to approve or disapprove proposals to form agencies. The formation of an agency within the Suisun Marsh could pose a threat to Marsh preservation if the agency were to introduce urban services or impose assessments which would make it difficult to maintain properties in low intensity agricultural or wildlife habitat uses. Not all new agencies would be expected to threaten the integrity of the Marsh. Some, such as reclamation districts, may further the intent of the Marsh Act by promoting the construction of facilities which will enhance Marsh preservation. In judging whether or not an application to form an agency in the Marsh should be approved, the Commission should base its determination upon whether or not the new agency will impose special assessments which will threaten the long term preservation of agricultural and Marsh uses.

Annexations and Deannexations

Although the LAFCO has considerable influence in defining the urban pattern through its power to approve or disapprove annexations or deannexations, it is limited in its capacity to initiate actual changes in that pattern because the Commission normally acts only in response to specific proposals.

In meeting its mandate to restrict further urban jurisdictional expansion or annexations in the Marsh, the Commission's most appropriate response will be to adopt policies to guide its review of future annexation proposals. Among the factors LAFCO is required to review prior to approving an annexation proposal is conformity with appropriate City or County general and specific plans. Since the Preservation Act clearly indicates the kinds of land uses appropriate in the marsh and local agencies are required to bring general plans into conformity with these uses, LAFCO will have guidance as to whether the annexation conforms to the purposes of the act. Utilization of such policies will also enable annexations to occur, where appropriate.

The same approach may be applied to deannexations; however, in this case the Commission also should adopt a policy of encouraging cities to deannex lands within the marsh, especially where it is no longer possible to develop such lands for urban purposes. Such lands represent a burden to the city to provide services and to the property owner who may be paying higher taxes with no reasonable expectation of receiving city services.

Sphere of Influences

Further protection of the marsh could be provided by adjusting City sphere of influence lines to exclude areas from potential urbanization. Whereas, LAFCO is limited in its power to initiate annexations or deannexations, it can initiate studies leading to revisions of the sphere of influence lines.

A sphere of influence is defined as a plan for a jurisdiction's probable ultimate physical boundary and service area. It is determined after considering a number of factors including the present and future service needs of the area. Once established, the sphere of influence is a declaration of policy which is a primary guide in determining proposals concerning incorporated cities and adjacent territory.

Given the severe limits which the marsh act places upon land use, future service needs are expected to be minimal and cities will not reasonably expect to urbanize such areas. These then should be removed from the agency's sphere and designated as permanent open space or long-term open space. If a city demonstrates a need to retain marsh lands within its sphere, LAFCO could designate such lands as permanent urban open space. The Commission is currently studying existing city sphere of influence lines; therefore, revisions can be made in the near future.

With the above considerations in mind, it is most appropriate for LAFCO to respond to the mandate of the Marsh Preservation Act by adopting a set of policies which it will use to guide its review of proposals for incorporation, special district formation, annexation, exclusions, disincorporations, and the development of new communities and to guide

the Commission's review of proposals for sphere of influence changes. Adherence to these policies would conform to the Commission's present operating procedure and give it flexibility in exercising its power while still carrying out the State mandate.

LAFCO Policies on the Suisun Marsh

The Solano County Local Agency Formation Commission recognizes that the Suisun Marsh is a natural resource of local and State wide significance. The Suisun Marsh Preservation Act of 1977 established a program to preserve and enhance the marsh by establishing a buffer area around the marsh and by limiting urbanization activities within the marsh. The primary responsibility for implementing the measures necessary to preserve the marsh are placed in the hands of local agencies. In conformity with the provisions of the Marsh Preservation Act, the Solano County Local Agency Formation Commission will consider the following policies in determining whether to approve or disapprove an agency's formation, its request for annexation or deannexation of territory or expansion or contraction of a sphere of influence within the Suisun Marsh.

1. Within the Suisun Marsh, the managed wetlands, tidal marshes, lowland grasslands and seasonal marshes are included in the primary management area. Within this area existing land uses should continue and both land and water areas should be protected and managed to enhance the quality and diversity of the habitats.
2. The upland grasslands and cultivated lands surrounding the Suisun marsh are included in the secondary management area. Agricultural uses consistent with protection of the marsh, such as grazing and grain production, should be maintained within this area.

3. It shall be the policy of the Commission to urge cities to deannex lands within the Suisun Marsh where it is no longer possible to develop such lands for urban purposes.

4. When considering the formation or expansion of agencies, the Commission will limit special assessments against agricultural and wildlife lands for the provision of public services, the demand for which is not generated by agricultural or wildlife uses on such lands.

5. It shall be the policy of the Commission to exclude agency sphere of influence lines from the Suisun Marsh unless a need is demonstrated to retain such lands within the agency's sphere. When lands are retained within a sphere they shall be designated as permanent open space.

6. Urban utilities and public services (eg domestic water mains and sewers) should be allowed to extend into the Suisun Marsh only to serve existing uses and other uses consistent with protection of the marsh, such as agriculture.

7. In the marsh, only existing uses or uses otherwise consistent with the Suisun Marsh Protection Plan should be allowed to use the treatment capacity of the Fairfield Subregional Waste Water Treatment Plant.

8. As provided in the Suisun Marsh Preservation Act, only provisions to insure the protection of riparian habitat and limits upon grading and erosion control may be applied to the area west of I-680 and outside the city limits of the City of Fairfield.

IV. Solano County Mosquito Abatement District Component

RESOLUTION OF ADOPTION OF THE SOLANO COUNTY
MOSQUITO ABATEMENT DISTRICT COMPONENT TO THE
SUISUN MARSH LOCAL PROTECTION PROGRAM

WHEREAS, Assembly Bill 1717, The Suisun Marsh Preservation Act was enacted into law in 1977; and

WHEREAS, AB 1717 requires each local government or special district to prepare its component of a local protection program; and

WHEREAS, AB 1717 further requires each local government or special district components to be consistant with the provisions of AB 1717 and the policies of the Suisun Marsh Protection Plan; and

WHEREAS, The Solano County Mosquito Abatement District a special district having jurisdiction within the primary and secondary management areas of the Suisun Marsh; and

WHEREAS, The Solano County Mosquito Abatement District has prepared its component which delineates its management policies and that these policies are consistant with the provisions of AB 1717, the Suisun Marsh Protection Plan and the applicable provisions of the California Health and Safety Code; now therefore be it

RESOLVED that the management policies described within the component shall be utilized as policy guidelines for the protection of man and animals from mosquito borne diseases, pestiferous mosquitoes and for the protection and enhancement of the Suisun Marsh.

Adopted at the regular monthly meeting of the Board of Trustees of the Solano County Mosquito Abatement District at 8:30 p.m. this 14th day of January 1980.

Signed: Clarence Golomb
President, Board of Trustees

ATTEST: Melvin Frohrib
Secretary, Board of Trustees

SOLANO COUNTY MOSQUITO ABATEMENT DISTRICT

MANAGEMENT POLICIES FOR PRIMARY AND SECONDARY AREAS

OF THE SUISUN MARSH

COMPONENT OF THE SUISUN MARSH LOCAL PROTECTION PROGRAM

CREDITS AND CITATIONS

This publication was prepared with financial assistance from the U.S. Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, under the provisions of the Federal Coastal Zone Management Act of 1972, as amended, and from the San Francisco Bay Conservation and Development Commission under the provisions of the Suisun Marsh Preservation Act of 1977.

Adopted at the meeting of the Board of Trustees, Solano County Mosquito Abatement District this 14th day of January 1980

Clarence Golomb, President

Eugene Kliewer, Vice President

Melvin Frohrib, Secretary

Raymond Church, Trustee At Large

John Kinloch, Trustee

Milton Wallace, Trustee

Allan Witt, Trustee

Roger Deane, Trustee

Embree Mezger, Manager-Entomologist

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INTRODUCTION

Historical Background

Historically, pest and disease carrying mosquitoes have been produced in large numbers in the marshes of Solano County, the San Francisco Bay Area and other coastal counties of California. These mosquitoes caused severe discomfort in residential areas, limited outdoor recreation, inhibited real estate development and disrupted agricultural workers from harvesting crops. To alleviate the problem local civic groups organized anti-mosquito campaigns and approved the formation of Mosquito Abatement Districts under the provision of the California Health and Safety Code, The Mosquito Abatement Act of 1915. Solano County Mosquito Abatement District (SCMAD) was formed in June, 1930, specifically at the request of the local taxpayers of Solano County to abate mosquitoes migrating from local marshes, principally from marshes of the Suisun and San Pablo Bay Marshes.

Marsh management practices have developed over a period of many years to successfully reduce the production of mosquitoes in marsh habitats. The principal practices involve water management such as construction of ditches to circulate tidal water (source reduction), controling water levels on duck clubs and biological and chemical control methods.

SCMAD, a county-wide agency, has jurisdiction over the primary marsh areas and secondary upland management areas. There are distinct management control practices in secondary upland areas as opposed to primary marsh areas. Mosquito control in secondary management areas relate to upland watershed, such as creekside and drainageway development, sedimentation, land development and agriculture. In the primary area mosquito control practices are concerned with water management of duck clubs, irrigated livestock pasture lands, and tidal marshes.

SCMAD has been successful in reducing and suppressing the production of mosquitoes in primary management areas, except those problems caused by fall flooding of duck club lands for the purpose of duck hunting. Such flooding frequently results in the production of literally billions of mosquitoes which migrate into the populated areas surrounding marshes, and result in severe discomfort to area residents.

The District is empowered under the California Health and Safety Code (Chapter 5; Article 4; Sections 2270-2289) to take all necessary or proper steps for the extermination of mosquitoes,

flies, or other insects within the District boundaries or in territories outside the District which are a source of migrating pests into the District.

The District has worked closely with other agencies and private landowners to develop educational programs which foster a better understanding of mosquito control. Experience has shown that many mosquito problems can be reduced through better knowledge of mosquito prevention, particularly through water management practices advocated by the SCMAD.

Coordination and cooperation among agencies and private property owners is vital in order to avoid creation of unnecessary conditions conducive to mosquito production. Certain projects may require a contract arrangement between the owner and SCMAD. The contract would provide for surveillance and control measures that may become necessary.

Health and Economic Impact of Mosquitoes

Mosquitoes are vectors of numerous human and animal diseases. The most important and potentially dangerous are the mosquito-borne encephalitis viruses which infect man as well as animals. Wild birds, such as blackbirds and sparrows, act as reservoirs for these viruses which are transmitted from birds to humans and horses via several species of mosquitoes. Another disease of growing importance in marsh areas is dog heartworm, an internal parasitic worm transmitted between dogs and wild canines (coyote, fox) by mosquitoes. Although all types of dogs are vulnerable to infection those breeds used extensively as retrivers by hunters in the marsh receive significant exposure. It should be noted that human infections also occur, and have been confirmed in California. In addition to the disease threat is the severe nuisance created by numerous biting mosquitoes. Passive recreational uses of the marsh such as hiking and bird-watching expose people to mosquito contact. Farm workers are frequent victims of biting mosquitoes during harvesting and other farming activities near areas with large mosquito populations. Livestock exposed to large numbers of mosquitoes are detracted from feeding and suffer weight losses.

BIOLOGY OF MOSQUITOES

General Biology *

Mosquitoes are two-winged insects with biting and sucking mouth parts suitable for the penetration of skin and sucking of blood from many animals. They are probably best known for their

importance as pests and as vectors of many animal and human diseases. They are widely distributed throughout the world, locally reaching their greatest abundance in the spring, summer and fall. Mosquitoes develop through a process known as metamorphosis, passing through four successive developmental stages namely the egg, larva, pupa and adult. The principal characteristics of these four stages are described briefly:

Egg -- The female mosquito at the time of egg laying instinctively selects the habitat for the immature aquatic stages. Most Aedes (acommon genus) found in marshes deposit their eggs singly in moist depressions where they may remain dormant for months or even for several years, and are known as floodwater species. Most frequently eggs laid by Aedes in the spring and summer usually do not hatch until flooded the following year. The warmth of spring waters and the drying of Aedes eggs stimulates hatching. When water is allowed to cover the eggs after a drying period, hatching occurs. Thus, once the marshes are wet in warmer months any draining and subsequent flooding will often cause mass hatching and a potentially severe mosquito problem. Other genera of mosquitoes are Culex and Culiseta, which also occur in the Suisun Marsh. They lay eggs in rafts containing a hundred or more eggs glued together. These are deposited upon the surface of the water to await hatching into larvae.

Larva -- After the egg of a mosquito has been in contact with water for a few hours or days a larva hatches by cutting its way out of the egg by means of the egg breaker on the top side of the head. During growth the larva sheds its skin or molts four times; the stages between molts are called instars. As mosquito larvae require air they come to the water surface at frequent intervals to breath. The food of mosquito larvae consists chiefly of small plants and animals and particles of organic matter which are swept into the mouth by the mouth brushes or by nibbling. Many species of mosquitoes complete the aquatic cycle in about 7 to 10 days when conditions are favorable, but other species require more time, even several months. Aedes utilize temporary pools as aquatic habitats and may pass thorugh the larval stage in 4 to 6 days.

Pupa -- The pupal stage appears with the fourth molt. Because it is lighter than water and non-feeding the pupa rests at the surface unless disturbed and then dives in a jerking, tumbling motion. A large pair of air tubes in the head area enables the pupa to break the surface film and obtain air. At the end of this stage the pupa extends its abdomen nearly parallel to the water surface in preparation for the emergence of the adult.

Adult -- The adult swallows some of the air within the pupal

skin and exerts internal pressure by muscular action to split the dorsum of the head area, thus enabling it to emerge. The adult slowly works its way out, using the cast skin as a float until its body can dry and harden.

Female mosquitoes are best known because of their blood-sucking habits and because they often are vectors of important diseases of man and animals. However, not all female mosquitoes suck human blood; some restrict their feeding to birds, amphibia, reptiles, and other nonmammalian hosts. Many species probably utilize juices of fruits and nectar of plants for food. The mouth parts of male mosquitoes are not developed for sucking blood, and as a result do not feed on man and animals.

Many female mosquitoes restrict their feeding to nighttime or the twilight hours of morning and evening, although some feed during the daytime in the shade and even in bright sunlight. Culex usually feed only at dusk, and only a few species are avid feeders on man. Culex erythrothorax will attack man and warm-blooded animals indiscriminately during the daytime, even in bright sunlight, when their resting places are disturbed. Most of the Aedes readily attack man and other warm-blooded hosts during daytime and evening and are noted for their aggressive feeding habits.

The adult females of some species pass the winter in hibernation in protected places, whereas many others over-winter in the egg stage.

The flight habits of mosquitoes vary greatly with the different species. Several of the Aedes, particularly the salt-marsh species, are notorious wanderers, often migrating 20 miles or more from their aquatic habitats; daytime and twilight flights of 5 to 10 miles are common. Culex are not noted as strong fliers and do not move far from their aquatic habitats; however, many exceptions have been recorded by recapturing marked specimens.

"Mosquito breeding" and "mosquito breeding places" in the published literature generally refer to the developing aquatic life stages of the mosquito and to the water-holding depressions, sites or containers in which these stages occur. A site becomes a source when it holds water suitable for mosquito development and mosquitoes are produced if left uncontrolled.

* Much of the descriptive information in this section was taken from Mosquitoes of North America, Carpenter and LaCasse, 1955, University of California Press, Berkeley.

Mosquito Species In The Primary and Secondary Management Areas of The Suisun Marsh

The most important mosquitoes found in the primary marsh area are: Aedes dorsalis (Pale Marsh Mosquito), Aedes melanimon (Dark Marsh Mosquito), Aedes squamiger (California Saltmarsh Mosquito), Culex tarsalis (Encephalitis or Sleeping Sickness Mosquito), Culex erythrothorax (Tule Mosquito), and Culiseta inornata (Winter Mosquito). Most prevalent species in secondary area are: Culiseta incidens (Creek Mosquito), Culiseta inornata, Culex tarsalis, and Culex pipiens (Foul Water Mosquito). All of these species are briefly described below.

Aedes dorsalis (Pale Marsh Mosquito) — Larvae are primarily found along the coastal areas in both saline and brackish tidal marshes and ponds as well as fresh water marshes and temporary pools in overflow areas. A freshwater variety may be found in lakes and rain pools. The adults are vicious biters in both daytime and evenings. They have been known to fly in excess of 20 miles.

Aedes melanimon (Dark Marsh Mosquito) — The larvae are primarily found in semi-open, sunlit, temporary agricultural sources, resulting from irrigation, rain, seepage, etc., and are often found in company with A. nigromaculis. Adults are vicious biters, attacking during the day and early evenings, and capable of flying several miles.

Aedes squamiger (California Saltmarsh Mosquito) — The larvae are found in salt marsh areas resulting from tidal overflow or rains. Adults are vicious daytime and early dusk biter, and undergo an annual flight from their larval sources.

Culex erythrothorax (Tule Mosquito) — Large larval populations occur in ponds, lake margins, irrigation and drainage canals, swamps and marshes, all of which usually contain a heavy growth of tule-type vegetation. The adults are active at dusk, but will bite man readily during the day when their habitat is invaded.

Culex pipiens (Foulwater Mosquito) — The larvae of this species are usually found in such foul water sources such as septic tanks, dairy drains, industrial and municipal sewage treatment impoundments, catch basins, street gutters, artificial containers, and even in cemetary vases. The mosquitoes bite at dusk or later and may be commonly found inside dwellings.

Culex tarsalis (Encephalitis or Sleeping Sickness Mosquito) — The larvae may be found in a surprising variety of sources such as:

irrigated pastures, rice fields, stream margins, and in brackish and sewage waste sources. The adult is a strong flier and bites both fowl, other animals and man, and readily enters houses. This species is known as the chief vector of western equine and St. Louis types of encephalitis, and is the most common and widespread species in California.

Culiseta incidens (Creek Mosquito) — Larvae are found in a wide variety of sources such as streams, brackish water pools, log ponds, stagnant and polluted pools, clear or semi-clear pools with partial shade, and artificial containers. In some areas the adults bite man, but ordinarily feed on fowl and domestic animals. It is most abundant during the seasons of cool, moderate temperatures, and is most numerous in early spring and late fall.

Culiseta inornata (Winter Mosquito) — Larvae are found in stream pools, marshes, temporary rain pools, occasionally in artificial containers, and have been found in brackish water with A. squamiger. Adults will bite man, but they are particularly bothersome to livestock.

ABATEMENT AUTHORITY

Background Statement

California Health and Safety Code

The Solano County Mosquito Abatement District (SCMAD) is empowered to and may, under The California Health and Safety Code (Division 3, Chapter 5, Article 4, Sections 2270 thru 2289) abate mosquitoes and other insect pests. A summary of the most pertinent of these laws are as follows:

The District Board of Trustees may:

Take all necessary or proper steps for the extermination of mosquitoes, flies, or other insects either within the District boundaries or in territories outside the District which are a source of migrating pests into the District. (Section 2270a)

Build and maintain necessary dikes, levees, cuts, canals or ditches upon any land. (Section 2270d)

Enter without hinderance any land, within or without the District, for the purpose of inspection to ascertain whether breeding places

of mosquitoes, flies or other insects exist; or to treat with appropriate chemical or biological control agents any such breeding places. (Section 2270f)

When a nuisance specified by the Chapter exists upon any property the Board may notify in writing the owner or agent of the existance of the nuisance. (Section 2274)

The notice shall:

State the finding of the District that a public niusance exists. (Section 2275a)

Direct the owner to abate the nuisance within a specified time. (Section 2275b)

Direct the owner to perform, within a specified time, any work necessary to prevent the recurrence of breeding in the places specified in the notice. (Section 2275e)

Inform the owner that failure to comply with the notice shall subject the owner to civil penalities of not more than $500 per day for each day the nuisance continues after the time specified for abatement. (Section 2275d)

Inform the owners that they may appear before the District Board before complying with the requirements of the notice. (Section 2275e) Where they may give testimony in their behalf. (Section 2280)

If the nuisance is not abated within the required time, the Board may abate the nuisance by destroying the larvae or pupae and by taking appropriate measures to prevent the recurrence of further breeding. (Section 2282)

The cost of such abatement of a nuisance shall be repaid to the District by the property owners. (Section 2283)

Permits and Agreements

Other public agencies, in particular the U.S. Army Corps of Engineers and the S.F. Bay Conservation and Development Commission (BCDC), have jurisdictional authorities with SCMAD in marsh areas. As a result, SCMAD as a cooperating agency of the State Health Department has permits from these agencies in order to effectively

carry out the District duties. These permits, as well as SCMAD's cooperative agreement with the Health Department for pesticide usage and environmental modification, are described below. SCMAD is also obligated to comply with standards and regulations regarding mosquito control set by the United States Environmental Protection Agency, California Department of Food and Agriculture and Solano County Department of Agriculture.

1. U.S. Army Corps of Engineers

   The California Department of Health Services and SCMAD as a cooperating agency is authorized under General Permit No. 10918-98 to conduct abatement activities in navigable waters. Maintenance activities such as replacement of water control structures, ditching, filling and levee repair are allowed under this 5-year permit as well as certain amounts of new work. The permit requires that water quality standards be maintained and that fish, wildlife and natural habitats be minimally affected.

2. S.F. Bay Conservation and Development Commission

   The California Department of Health Services and SCMAD as a cooperating agency is authorized under Permit No. M77-37 to perform maintenance and new work in BCDC's jurisdiction. Work authorized under this 5-year renewable permit is essentially the same as that granted by the Army Corps of Engineers.

3. California Department of Health Services

   Under the annually renewed cooperative agreement between the Dept. of Health Services and SCMAD, the District agrees to calibrate and maintain in a operational condition all pesticide application equipment, prepare records and reports regarding pesticide use, report any suspected adverse effects of pesticides. The SCMAD further agrees that district employees are certified pest and vector control technicians, and agrees to comply with requirements of any permits issued to the Dept. of Health Services pertaining to environmental modification to achieve pest and vector prevention.

4. United States Environmental Protection Agency

   Through the cooperative agreement discussed in (3) above SCMAD is obligated to comply with EPA standards and regulations regarding the storage and application, and proper maintenance and calibration of equipment used to apply registered pesticides used for mosquito control.

5. California Department of Food and Agriculture

SCMAD must adhere to the application rates established in California for registered pesticides and must comply with regulations pertaining to application, recording and reporting of all uses of economic poisons.

6. Solano County Department of Agriculture

This agency receives records and reports of materials used, locations and methods of application, and rate of application for pesticides and other economic poisons used in Solano County.

General Polices for Mosquito Prevention Practices

The following recommendations for mosquito prevention practices are considered appropriate for effective mosquito control without producing deleterious effects to wildlife and their habitat.

1. When necessary trained SCMAD personnel will use appropriate control practices to prevent or abate mosquito and other pest nuisances. Control practices will be used only when necessary and will minimally affect fish, wildlife, natural habitat and water quality.

2. Private property owners and public agencies owning land in primary and secondary marsh areas should consult with the SCMAD to determine the most effective methods for mosquito control.

3. Plans for expansion or alteration of uses, and/or restoration or marsh areas must have appropriate water management plans. The plans must be developed in cooperation with the SCMAD to ensure adequate mosquito control.

4. The SCMAD will assist all private property owners and public agency land owners to achieve adequate prevention of mosquitoes through the use of its staff and equipment.

MANAGEMENT POLICIES FOR INTEGRATED MOSQUITO CONTROL*

A. Drainageway Construction and Maintenance Practices

Background Statement

Mosquitoes breed in creeks and ditches where ponding occurs due to obstructions, overflow of banks, excessive siltation

*Definitions for many of the technical terms in this section may be found in the Appendix, Section VI.

and back-eddys created from low water flow during dry months. Consequently, modification of drainageways (digging, and filling, etc.) is often necessary to allow free flow of water. Construction of new ditches must be undertaken to maintain adequate circulation of water.

Although obstructions and ponding in creeks and ditches most often occur naturally, alterations to water flow also arise from new construction, refuse deposits and agricultural activities. The correction and costs of such alterations become the responsibility of the person(s) or agency(s) involved when mosquito production results, any abatement expenditures incurred by SCMAD may be billed to the responsible party, pursuant to the proceedures set forth in the California Health and Safety Code, Sections 2274 et. seq.

SCMAD constructs one type of drainageway to adequately drain low lands in the marsh. Spreader ditches are small ditches (18 inches by 18 inches) which drain into main ditches or tidal water sloughs. Main ditches direct flow to a water control outlet structure and thence into a tidal water slough.

SCMAD will assist property owners by providing its lightweight tractor and plough at a nominal hourly charge (see Contractual Agreement, Section V) to construct and maintain spreader ditches.

Policies for Management of Drainageway Construction and Maintenance

1. Water control structures (flap gates, slide gate, weir box, etc.) should be maintained in working condition to facilitate the flooding and complete draining of managed wetlands.

2. Clear and retrench spreader ditches approximately every three years.

3. Excavate or dredge existing main ditches when necessary.

4. Repair levees and remove debris and vegetation which are obstructing natural stream channels if such materials create a situation which may endanger public health and safety.

5. Fill isolated potholes (depressions found in marsh areas) which may create mosquito problems and cannot feasibly be connected to circulating water.

6. Connect pools (depressions found in streambeds) to the main flow of water by minor hand ditching when it appears that they are problem mosquito breeding sites.

7. Maintain all access roads and levees in good repair to allow continuous mosquito surveillance, and provide access for

control equipment.

8. Install and maintain water control structures whenever possible to expedite flood water removal.

B. Water Management Schedules

Background Statement

The SCMAD in cooperation with the Suisun Resource Conservation District, U.S. Soil Conservation Service and the California Department of Fish and Game has participated in the preparation of various water management schedules for duck clubs in the Suisun Marsh.

These schedules will form a segment of the Suisun Resource Conservation District Component and therefore are not presented here as part of the SCMAD Component.

The SCMAD recommends and encourages the use of these schedules by all duck clubs in the Suisun Marsh.

C. Leveed Irrigated Pastures

Background Statement

There are several hundred acres of managed wetlands which are irrigated from tidal slough water and are used for pasture grazing by livestock within the Suisun Marsh. Marsh mosquitoes are invariably produced from standing water left more than 5 days. Thus, in order to maintain good forage pasture without producing mosquitoes, a flood/drain cycle during high tides of 6 feet must be carried out.

Policies for Management of Leveed Irrigated Pastures

1. To enable complete flooding, flood only during a series of high tides (6 feet).

2. Set water control structures open to drain within 5 days; drainage capacity should be a minimum of 5 days to allow complete draining of wetlands.

3. Spreader ditches should be placed in appropriate intervals to ensure complete drainage.

4. Spreader ditches should be properly connected to each main ditch with a water control structure to enable a one way flow during drainage.

5. Disc cracked ground as needed.

6. Maintain and repair water control structures.

D. Tidal Marsh Management

Background Statement

Historically, tidal marshes in Solano County were prolific sources of mosquitoes, an aggressive, migrating, day-biting species. In addition to direct abatement, water management practices have been developed by SCMAD to prevent the production of mosquitoes in tidal marshes. The principal prevention method consists of the construction of ditches to circulate tidal water into sloughs and bays to avoid ponding. The following recommendations should be followed to reduce the mosquito production in tidal marshes.

Policies For Tidal Marsh Management

1. All marsh lands should be periodically surveyed to determine if ditches and drainage water control structures are properly placed to ensure effective drainage.

2. Ensure that all spreader ditches are constructed and maintained free and clear of debris and vegetation. Clear and retrench approximately every three years.

3. Spreader ditches should be properly connected to a slough via a main ditch or by having a flapgate, wier box or other adequate water control mechanism.

4. The drainage capacity of the drainage systems (spreader and main ditches) should be no more than 5 days to ensure full removal of water from the surface of the marsh prior to potential mosquito production.

5. To ensure the effectiveness of the drainage system and water control structures for the prevention of mosquitoes, SCMAD will conduct surveillance after each bi-monthly high tide.

E. Salt Marsh Restoration of Exterior Levee Lands

Background Statement

These lands were originally tidal marshes, vegetated areas subject to daily tidal action. These lands were reclaimed for agricultural and other uses by the construction of levees and the installation of one or more water control structures to control the inflow and outflow of water. The Suisun Marsh Protection Plan recommends the restoration of former tidal marshes to tidal action where and when possible.

Salt marsh restoration projects on former exterior areas generally have a great potential for producing large numbers of mosquitoes.

Removing or breaching the levee will subject the sites to tidal flow. The extent of tidal flow depends, of course, on the relative elevation of the site to tide. Tidal flushing itself does not create mosquito problems. Mosquito problems arise from the residual tidal and flood waters remaining in depressions and cracked ground.

The following District Practices were adopted in December 1977, and are made for preventing problems, and should be implemented prior to removal or breaching of any levee or water control structure.

Policies for Management of Salt Marsh Restoration of Exterior Levee Lands

1. Develop a management program for the control of mosquitoes. Such a plan should be developed in coordination with SCMAD.

2. If necessary, obtain an engineering survey to locate depressions that would retain tidal water, and to determine the location of ditches for water circulation and drainage.

3. Establish a water recirculation system by interconnecting depressions with ditches that will enhance water movement and provide access for predator fish.

4. Disk or harrow all cracked ground caused by shrinkage and subsidence.

5. Plan and fund a long-term maintenance program on the marsh. The maintenance should include:

    a. Dredging and cleaning of sloughs, spreader ditches and main ditches to provide adequate water circulation.

    b. Disking of cracked ground as needed.

    c. Maintenance and repair of water control structures.

F. Wastewater Reclamation

Background Statement

Recent changes in California water pollution regulations and current emphasis for reuse of wastewater have serious prospects for mosquito production. Proposals for reusing effluent and surface runoff or preventing these waters form flowing directly into estuaries or water

cources can create new mosquito sources. The types of proposals under consideration for the diversion and reuse of wastewater are; (1) impoundments for reclamation; (2) agriculture irrigation; (3) recharge of ground warer; (4) development of marshland and wetland habitat; and (5) industrial recycling.

The following District Practices were adopted in December 1977, and are made for preventing problems, and should be implemented prior to removal or breaching of any levee or water control structure.

Policies for Management of All Lands Which Utilize Wastewater

1. All sites designated for wastewater reclamation should either be graded or ditched as necessary for proper drainage.

2. Sites for temporary impoundments used for waterfowl feeding areas or for production of food should be flooded according to the water management schedules developed by Suisun Resource Conservation District, Soil Conservation Service, California Department of Fish and Game and Solano County Mosquito Abatement District.

3. The use of wastewater for crop irrigation requires careful land preparation and judicious water management to prevent standing water.

4. Establishment of wetland habitat using wastewater requires land grading or ditching to allow removal of all water from the shallow areas, water control structures, pumps, etc., for complete water management. Access provisions for marsh management equipment such as boats and aquatic or terrain vehicles are also required.

5. Excess wastewater at the low ends of sites used for marsh flooding or crop irrigation must be recycled, utilizing a return system or be disposed of in a drainage facility.

6. Water control devices such as pumps, weir boxes and flap gates should be of sufficient capacity to drawdown the temporary wastewater impoundments within a time designated by the Solano County Mosquito Abatement District.

Wastewater Storage Ponds

1. Ponds filled with wastewater may be any shape but should not have small coves or irregularities around their perimeters.

2. Ponds should be designed to be emptied by gravity or pumping for cleaning or drying and have graded bottoms so all water can be removed.

3. Side slopes of excavations and levees should be as steep as possible, consistent with soil characteristics and risk factors of slope failure.

4. Where steep side slopes cannot be economically achieved, the slopes should be lined with suitable material such as concrete to 3 feet below the water line or sterilized to achieve weed control.

5. The top width of embankments should be a minimum of 12 feet and should be adequately constructed to support maintenance vehicular traffic.

6. An access ramp should be provided on an inside slope for launching a small boat for mosquito control.

7. Ponds designed for long term wastewater storage should have a minimum storage depth of four feet.

8. A maintenance program for weed and erosion control along inner slopes is essential.

9. All accumulations of dead algae, vegetation and debris should be routinely removed form the impounded wastewater surface and properly disposed.

Wastewater Conveyance Facilities

1. Ditches for wastewater must be maintained free of emergent, marginal and floating vegetation.

2. Ditches should be sized and graded for adequate flow and must not be used for water storage.

3. Unpressurized and low pressure pipelines, commonly used in irrigation distribution systems, should be designed to be emptied when not in use and should not be used for wastewater storage because of the mosquito breeding potential in the partially filled pipes.

Septic Tanks

1. Septic tanks should be adequately sealed to prevent mosquito entry and production.

2. Tanks should be designed and installed as per Solano County Health Department standards to prevent ground cracks which would serve as access to mosquitoes.

G. Dredge Material Disposal

Background Statement

Land disposal of dredge material by hydraulic dredging of rivers and sloughs creates in many instances mosquito breeding sources. Due to the initial high water content and characteristice of the dredged material, shrinkage cracks occur in the drying process. These shrinkage cracks provide ideal habitat for the production of mosquitoes. Experience by mosquito abatement agencies has shown the use of chemicals to kill mosquito larvae in the cracks is very inefficient and generally not practical. Solution of the problem lies in water management and periodic manipulation of the surface of the deposited material. Disking the spoil material fills and closes the cracks. Drainage of storm water and keeping the elevation of the ground water below the shrinkage cracks also prevents mosquito problems.

The following District Practices were adopted in December 1977, and are made for preventing problems, and should be implemented prior to establishing of any dredge material disposal site.

Policies For Management of Dredge Material Disposal Sites

1. Provide ditches and/or water control structures for drainage of surface water. An engineering survey may be necessary.

2. Disking of the area may be required to close shrinkage cracks.

3. Provide access roads that are capable of supporting maintenance, inspection and mosquito control equipment.

4. Areas designated for permanent water should be constructed and managed for mosquito prevention as necessary for the specific site. Generally, dense aquatic vegetation, algae mats and shallow water cause or lead to mosquito production.

5. Areas designated for wetland development need ditches to promote and enhance tidal water circulation and/or water control structures to provide water management capabilities. The exterior levee system should be retained until sufficient drying has occurred and all necessary grading and ditching has been finished.

6. Retention of exterior levees and water control structures may be necessary or desirable for water management to prevent excessive production of mosquitoes.

7. Plan and fund a maintenence program for the area to provide for:

a. Maintenace of ditches and water control structures.

b. Disking as necessary.

c. Maintenance of levees and access roads.

d. Occasional mosquito control with pesticides and/or a biological agent such as mosquito-fish.

H. Permanent Ponds

Background Statement

The diversity of waterfowl habitat in the Suisun Marsh is increased by the occurence of permanent ponds. Permanent ponds, however, should remain a minor part of the marsh habitat because (1) they require specific conditions to provide optimum habitat and (2) other more intensive types of management can generally be carried out that provide for higher yields of waterfowl food.

Seeding of permanent ponds is not necessary since plants such as sago pondweed and widgeongrass should become established in the ponds naturally.

Policies For Management of Permanent Ponds

Establishment:

1. Permanent ponds are recommended only in areas where at least 70% of the total permanent water area will be maintained year round at a minimum depth of 3½ to 4 feet. This depth limits the occurrence of cattails and tules and stimulates the production of desirable pondweeds.

2. Levees surrounding permanent ponds must have a shelf on which cattails and tules can become established to serve as a buffer against wave action.

3. Permanent ponds should be established only in areas where the gates and ditches can provide maximum circulation of water without fluctuation in water level.

Maintenance:

1. Set gates to allow maximum circulation without change in water level. Maintain circulation year round, but especially during warmer months (April-Sept.). Poor circulation during these months could increase salinity, mosquito reproduction, and the probability of botulism.

2. Once every five years, completely drain the pond in February

and keep it dry through September. This will control carp populations, allow oxidation of the sediment in pond bottoms resulting in the release of nutrients, and allow for mowing or burning of undesirable vegetation. At this time an inspection of gates and levees will be undertaken and needed repairs will be made.

Notice:

The Solano County Mosquito Abatement District (SCMAD) has participated in the preparation of this management plan and endorses this Water Management Schedule to minimize the production of mosquitoes. This plan is suitable for use on private duck club land and all other lands owned by public agencies managed as water fowl habitat, and in normal weather cycles will limit the production of mosquitoes if water levels are managed properly. However, if adverse variations in water levels occur, SCMAD may take action to abate any production of mosquitoes pursuant to the procedures set forth in the California Health and Safety Code Sections 2274 et.seq, at the property owners expense when ever larvae and adult mosquitoes are found to be present in sufficient densities to warrant control procedures.

I. Controlled Burning

Background Statement

The SCMAD recognizes burning may be the preferential method for removing vegetation in duck clubs, agricultural lands and tidal marshes. However, in certain instances such fires become uncontrolled. Uncontrolled fires can be dangerous, costly to extinguish and detrimental to adjacent lands. Fires in peat soil, common in the marsh, are often impossible to extinguish without flooding. SCMAD is frequently asked by the Solano County Fire Warden and other local and State agencies to open water control structures to extinguish the fires. If flooded lands are not drained quickly and completely marsh properties produce billions of mosquitoes which necessitate aerial pesticide spraying to control.

Policies For Management of Controled Burning

1. Burning should be accomplished in the spring, when vegetation is dead and dry and the soil is wet.

2. Property owners should have sufficient manpower and equipment at the time of burning to prevent wild fires.

3. Backfire away from or disking around buildings, levees, etc. at the start of burning to prevent their destruction.

4. If flooding becomes necessary to put out uncontrolled fires and such flooding results in the production of mosquitoes, the SCMAD may take action to abate the mosquitoes pursuant to the proceedures set forth in the California Health and Safety Code, Sections 2274 et. seq. and Section III of this document.

J. Utility Construction Practices

Background Statement

Installation of natural gas lines and wells, electrical lines, telephone lines, petroleum pipelines and the like can alter both topography and habitat. Activities which disrupt drainage patterns, obstruct water flow or water control structures, prevent access, or leave mounded debris can cause mosquito production.

Policies For Management of Utility Construction In Marsh Areas

1. SCMAD should be notified of proposed utility construction activities in marsh areas through lead agencies or responsible parties. Such activities should be reviewed by SCMAD at both the project development phase and after the work has been completed to ensure the project is carried out in conformance with SCMAD policies.

2. Installation of utilities should not obstruct water flow or alter drainage patterns without prior notification of SCMAD.

3. Following installation of utilities the topography ahould be returned to original conditions, circulation ditches or natural drainageways should drain effectively and levees and/or access roads should be put back in good repair.

4. If mosquitoes are produced as a result of negligent utility construction practices, all costs necessary to abate mosquitoes by SCMAD will be borne by the responsible agencies or property owners, pursuant to the proceedures set forth in the California Health and Safety Code, Sections 2274 et. seq. and Section III of this document.

K. Biological Control

Background Statement

Many natural predators of mosquitoes are found within marshes. They are, however, often limited in their abundance and effectiveness

because they require permanently ponded water. Fish such as mosquitofish and three-spined stickleback are often found throughout sloughs and other permanent bodies of water in marshes. Additionally, many useful insect predators coexist within these permanent ponds and contribute to natural biological control of mosquitoes. In well-managed ponds these predators can control mosquito populations and often eliminate the need for chemical control.

Mosquitofish, the most efficient mosquito predator are well adapted to many aquatic habitats. They can withstand a wide range of conditions (mild alkali to brackish water). They eat a wide variety of aquatic micro-organisms, most notably, mosquitoes. Mosquitofish select food depending on its relative availability. They will consume living organisms in preference to dead matter. Mosquitofish are highly reproductive and bear live young. Because of these characteristics they have the potential of proliferating under favorable conditions.

Winter/spring rains cause flushing of marshes which results in the annual reduction of mosquitofish populations. When necessary SCMAD periodically re-stocks creeks, ponds and ditches with mosquitofish to expedite their re-distribution within the marshlands.

There are other biological control agents which appear promising for mosquito control. There are several fungus diseases (Lagenidium beauveria), bacterial agents (Bacillus sphericus) and nematode worms (Mermithids) which may be useful in marshes in the future.

The success of biological agents for mosquito control in the marsh habitat rests with good water management. Once chemical pesticides are required to suppress mosquito populations, the survival of other organisms (including biological agents) may be in jeopardy.

Policies For Management of Biological Control

1. After the spring flushing-leaching and circulation cycles (various Suisun Resource Conservation District Water Management Schedules) main ditches may be kept flooded during the summer months to maintain predator populations and ensure their dispersal into duck clubs with the fall flooding. Water must be confined within the main ditches, and not be allowed to overflow the ditches during the summer months, otherwise mosquitoes will be produced.

2. SCMAD will continue to investigate other potential biological control agents which may be of assistance in reducing mosquito populations.

L. Chemical Control

Background Statement

Marshes within Solano County provide several types of wetland habitat, each having unique characteristics. When not managed properly, these habitats can produce massive mosquito populations which are uncontrollable by natural control agents. SCMAD is authorized under federal, state and county regulatory agencies to use chemical agents (pesticides) as necessary to abate these nuisances. Chemical agents are used only in extreme emergency conditions when no other methods will control the nuisance. Pesticides may be applied to control immature mosquitoes to prevent the emergence of adults or in extreme cases to control emerged adults.

SCMAD has therefore entered into a cooperative agreement with the California Department of Health (Vector Biology & Control Section) to comply with U.S. Environmental Protection Agency, California Department of Agriculture, and County Agriculture Commissioner requirements to ensure the proper storage and application of registered pesticides and calibration of equipment for mosquito control. (See Section III of this document.)

Policies For Management of Chemical Control

1. When biological and/or physical control methods are ineffective or infeasible SCMAD will apply appropriate pesticides to abate mosquitoes.

2. Property owners may consult with SCMAD regarding preventive practices such as ditches and may enter a contractual agreement with the District for payment of treatment costs and estimated re-treatment costs. These treatments will depend on current water management practices.

3. Property owners may also enter a seasonal contractual agreement with SCMAD for pre-emergence pesticide application as may be judged necessary by SCMAD to prevent large outbreaks of mosquitoes. These treatments may be necessary on marshes in which preventive water management practices have not yet been undertaken.

4. Pesticide applications described in recommendations (2) and (3) above will only be conducted to provide time for completion of water management plans to be fully executed by property owners. They are not intended as preventive control measures to be applied regularly on an annual basis.

SOLANO COUNTY MOSQUITO ABATEMENT DISTRICT
P. O. BOX 304
SUISUN, CALIF. 94585

CONTRACTUAL AGREEMENT

V.

I, _____, the owner/manager of property located at _____, Solano County, agree to the following mosquito control program which will be conducted by the Solano County Mosquito Abatement District.

1. SCMAD may provide construction of new or maintenance of old lateral (18" x 18") re-circulation ditches. Such ditches are necessary for the re-circulation of trapped water in the marsh in order to prevent mosquito occurrence on the above said property.

2. If conditions are allowed to exist that may necessitate aerial spraying to control mosquitoes, I will reimburse the SCMAD for all costs of pesticide application on the above said property.

3. SCMAD will maintain adequate general liability and Workers' Compensation insurance coverage at all times while this agreement is in effect and, to the extent that it legally may, agrees to hold harmless for any injuries to employees of, or under contract to, the District while in performance of their duties on my property.

4. This agreement shall be effective for the yearly period commencing with the date of my approval of it and shall continue from year to year thereafter, subject to termination at any time either by the District or myself upon 30 days' prior written notice to the other party.

Signed, _____ (Owner/Manager)

_____ (SCMAD Manager)

Date _____

SOLANO COUNTY MOSQUITO ABATEMENT DISTRICT
P. O. BOX 304
SUISUN, CALIF. 94585

CONTRACTUAL AGREEMENT
DITCH CONSTRUCTION AND MAINTENANCE

Between Solano County Mosquito Abatement District and _____ _____, the owner/manager of property located at _____ _____, Solano County. I _____ enter into agreement with Solano County Mosquito Abatement District to have the District provide construction of new or maintenance of old lateral (18" x 18") re-circulation ditches at the rate of _____ per hour. Such ditches are necessary for the re-circulation of trapped water in the marsh in order to prevent mosquito occurrence on the above said property.

Signed _____ (Property Owner/Manager)

_____ (SCMAD Manager)

Date _____

SOLANO COUNTY MOSQUITO ABATEMENT DISTRICT
P. O. BOX 304
SUISUN, CALIF. 94585

CONTRACTUAL AGREEMENT
PESTICIDE APPLICATION

Between Solano County Mosquito Abatement District and _____ _____, the owner/manager of property located at _____, Solano County. I _____ enter into agreement with Solano County Mosquito Abatement District to reimburse Solano County Mosquito Abatement District for all costs of pesticide application at the rate of _____ per acre necessary to abate mosquito nuisances that may arise on the above said property.

Signed _____ (Owner/Manager)

_____ (SCMAD Manager)

Date _____

APPENDIX

Definitions of Technical Terms

Main Ditch - (also called supply or circulation ditches) are water conveyance facilities whose purpose is to deliver water from intake structures located at the exterior levees to the ponds or to remove water from the ponds to the outlet structures located at the exterior levees. They include any spurs leading to the individual ponds.

Spreader Ditches - (also called lateral or collector ditches) are water conveyance facilities whose purpose is to connect low spots within the ponds to the main ditches.

Levees

Exterior Levees - embankments which prevent uncontrolled flooding of marshland due to tidal action. The crown of these levees is normally about 9 feet above zero tide with a 12 food top width.

Interior Levees - embankments which allow for management of water inside exterior levees. They are not exposed to tidal action. The crown of these levees is normally less than 4 feet above the natural ground with a top width of 10 feet.

Water Control Structures

Culvert - a corregated steel pipe placed in a levee for the purpose of conveying water from one side of the levee to the other.

Flap Gate - a hinged wooden or metal cover installed on the end of a culvert or redwood box designed to allow free water flow in one direction and prevent back flow in the other direction. In the free flow direction the size of the opening is controlled by the water pressure against the flap.

Lift Flap Gate - similar to a flap gate but with a winch and chain or other mechanism added to permit mechanical lifting of the flap and allowing a controlled amount of backflow to occur.

Slide Gate (alos called a Screw Gate)- a wooden or metal cover which slides up and down in a frame attached to the end of a culvert or redwood box. It is raised and lowered by a screw mechanism which is usually turned by hand. Water flow is equal in either direction and volume is determined by the degree of opening.

Slide/Flap Gate (also called a Screw/Flap Gate) - similar to slide gate but with a flap gate added to prevent back flow.

Flashboard Box or Weir Box - a wooden box with grooved runs for inserting wood planks. The planks are placed, one on top of the other, to the desired water height. Any excess water about this height will overflow over the boards and out through the box. The boards can be removed for complete water drainage.

Flashboard Riser - a length of corregated metal pipe cut in half longitudinally and placed vertically on top of the inlet or outlet of a culvert. The riser is fitted with wood planks than can be placed, on top of the other, to the desired height. These function the same as that of a weir box.

Marsh Types

Managed Wetlands - leveed areas within the Primary Management Area (PMA) in which water inflow and outflow is artificially controlled, or in which waterfowl food plants are cultivated, or both, to enhance habitat conditions for water associated birds and wildlife.

Tidal Marshes - vegetated areas within the PMA subject to daily tidal action.

Tidal Waters - open water areas within the PMA subject to daily tidal action.

Management

Circulation - a system of ensuring slow, but continuous movement of water across the club or pond to reduce insect and water quality problems associated with stagnation of standing water.

Flushing Cycles - a cycle of flooding and draining a pond for the purpose of reducing soil salinities.

Pond - any area of the club that is underwater when club is flooded to normal shooting level. Ponds are not limited to open water areas or to the mowed (or otherwise more intensively managed) areas around an established blind.

Shooting Level - the depth of water found to be the most attractive to water fowl. Most of the ducks utilizing the Suisun Marsh are "dabblers" and are attracted to areas flooded with 12 - 18 inches of water.

V. City of Fairfield Component

TH:brh: 3/12/80

CITY OF FAIRFIELD

RESOLUTION NO. 80-69

A RESOLUTION SUBMITTING THE PROPOSED COMPONENT OF THE CITY OF FAIRFIELD FOR THE LOCAL PROTECTION PROGRAM (SUISUN MARSH PRESERVATION ACT OF 1977).

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FAIRFIELD:

Pursuant to Public Resources Code Section 29411(a), the City of Fairfield hereby transmits to the County of Solano its proposed component of the local protection program, which consists of the following:

1. Exhibit A: Policies from the Fairfield General Plan.

2. Exhibit B: Land Use Diagram from the Fairfield General Plan.

3. Exhibit C: Specific Plan for Creekside Protection.

4. Exhibit D: Planned Development Zoning Regulations Applicable to the Cordelia Area Specific Plan.

5. Exhibit E: Proposed Grading and Erosion Control Ordinance.

6. Exhibit F: Proposed Creekside Protection Ordinance.

PASSED AND ADOPTED this 18th day of March, 1980, by the following vote:

AYES: Councilmen CAMPOS-CARLSON-MOON-HUDER-FALATI

NOES: Councilmen None

ABSENT: Councilmen None

Mayor

ATTEST:

City Clerk

CITY OF FAIRFIELD COMPONENT OF THE SUISUN MARSH LOCAL PROTECTION PROGRAM

Prepared by
Department of Environmental Affairs,
City of Fairfield

This publication was prepared with financial assistance from the U. S. Office of Coastal Zone Management, National Oceanic and Atmospheric Adminstration, under the provisions of the Federal Coastal Zone Management Act of 1972, as amended, and from the San Francisco Bay Conservation and Development Commission under the provisions of the Suisun Marsh Preservation Act of 1977.

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EXHIBIT A. POLICIES FROM THE FAIRFIELD GENERAL PLAN

OPEN SPACE AND CONSERVATION POLICIES

8. Development on slopes greater than five percent shall be conditioned carefully with respect to road design, grading, structural foundations, surface and soil drainage, excavation, earthfills, and other operations to avoid soil erosion, scarring of the natural landscape, obstruction of scenic vistas, and the loss of natural vegetation and fish and wildlife habitat.

9. A land grading and leveling statute shall be adopted by the cities and county to guarantee public guidance of all grading, leveling and excavation.

14. To protect critical habitat areas from increased sedimentation, erosion control measures should be implemented. These would include:

    a. Elimination of erosion hazards due to unnecessary or excessive grading and excavation activities.

    b. Incorporation into project plans of soil stabilization measures which consider rainfall, slope, and vegetation.

    c. Construction of sediment basins and temporary grade-stabilization devices.

    d. Revegetation of cut-and-fill slopes immediately following construction.

    e. Control of heavy equipment traversing active streams.

Water and Biological Resources

1. Intergovernmental efforts to assure the protection and enhancement of the Suisun Marsh should be reinforced by land use controls which emphasize characteristics of the marsh environment rather than agricultural use. Development regulations shall be devised which restrict land use both within and at the fringe of the Marsh to nature-oriented recreation, hunting, fishing, wildlife habitat, low-speed boating, and only those specific types of agricultural operations which will avoid alteration of topography, vegetation, water courses and soil/water relationships. An additional important measure to ensure protection and enhancement of the Suisun Marsh would be a long-term agreement between appropriate jurisdictions which ensures protection of the Marsh from urban encroachment and provides positive programs for wastewater management and reclamation.

2. The minimum site area for uses and activities which are compatible with Marsh preservation shall be increased to avoid a proliferation of private recreation developments which can combine to degrade the Marsh environment through over-intensive use.

3. Natural watercourses shall be protected and preserved in their natural state to the extent possible, with runoff from urban development and watershed lands contained by channels and reservoirs designed to control debris, sediment and the rate and dispersal of runoff to the Suisun Marsh.

4. Natural watercourses and canals within Urban Limits shall be maintained as components of the recreation corridor system within the planning area. They shall be enhanced by the development of pedestrian, bicycle and equestrian trails along their alignment, with public access provided at frequent intervals.

5. Natural watercourses should be preserved through requirements of land dedication and open space improvement imposed during initial stages of the land development process.

6. Special attention shall be given to the preservation of of fish and wildlife habitat along natural watercourses by integrating regulating ponds with watercourses. Riparian and other vegetation along such water courses shall be preserved.

13. For projects proposed in oak woodland or riparian areas, individual development plans shall include a vegetation management program addressing the long-term protection, reproduction, and preservation of natural plant communities. Such programs shall be prepared by competent, professional landscape architects and/or foresters.

16. A riparian zone should be established on both sides of mosts creeks in the planning area to maintain diverse wildlife communities and to protect the Suisun Marsh. A specific plan for creekside protection should be developed to implement this policy. The specific plan shall be superseded by the local protection program adopted pursuant to the Suisun Marsh Preservation Act of 1977.

17. Salt and freshwater marshes should be preserved to maintain the viability of Suisun Marsh and provide valuable sources of food and water.

21. No development project shall be permitted to increase downstream flood hazard.

22. To the extent possible, all existing stream channels, perennial, intermittent and ephemeral, shall be preserved in their natural state.

32. Topsoil removed from excavated areas should be retained and replaced following construction to accelerate revegetation.

33. Disruption or impediments to runoff and stream flow in the Suisun Marsh watershed should not be permitted if it

would result in adverse effects on the water entering the Marsh. Riparian vegetation in the immediate Suisun Marsh watershed should be preserved, and stream modification permitted only if it is necessary to ensure the protection of life and existing structures from floods. Only the minimum amount of modification necessary should be allowed in such cases. Local runoff, erosion, and sediment control ordinances should be established to protect the Marsh from potential adverse impacts.

34. The diversity of habitat in the Suisun Marsh and surrounding upland areas should be preserved and enhanced wherever possible to maintain the unique wildlife resource.

35. Existing uses should continue in the upland grasslands and cultivated areas surrounding the critical habitats of the Suisun Marsh in order to protect the Marsh and preserve valuable marsh-related wildlife habitats. Where feasible, the value of the upland grasslands and cultivated lands as habitat for marsh-related wildlife should be enhanced.

36. The Eucalyptus groves in and around the Marsh, particularly those on Joyce and Grizzly Islands, should not be disturbed.

37. 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.

39. The development of industrial facilities adjacent to or upstream from the Marsh should not be permitted if they have the potential to cause significant adverse 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.

40. Any development in the Suisun Marsh watershed or secondary management area 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 immediate Suisun Marsh watershed to protect the Marsh from these potential adverse effects.

41. Riparian vegetation in the immediate Suisun Marsh 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 only be permitted if it is proved necessary to ensure the protection of life and existing structures from floods and only the minimum amount of modification necessary should be allowed.

42. 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.

43. 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.

44. New telephone lines installed in the Marsh and within one-half mile of the Marsh should be buried underground. Existing telephone lines in the Marsh should be buried at the time of line repair. All new telephone cables routed through the Suisun Marsh area should avoid wetland areas whenever possible.

45. 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 within that area designated for such use in the protection plan at Collinsville. Reconstruction of the Sacramento right-of-way on the east side of the Marsh should be permitted to serve water-related industrial development at Collinsville. Wherever the reconstructed line would pass through wetland areas, it should be constructed on trestles, except for the section of rail between Montezuma and the Sacramento River shoreline. This portion may be constructed on solid fill to protect the inland industrial area from flooding.

46. In the Marsh only existing uses or uses otherwise consistent with the Suisun Marsh Protection Plan should be allowed to use the treatment capacity of the Fairfield Subregional Wastewater Treatment Plant.

Recreation Resources

4. Natural watercourses and canals shall be maintained as components of the recreation corridor system within the planning area. They shall be enhanced by the development of pedestrian, bicycle and equestrian trails along their alignment, with public access provided at frequent intervals within area of urbanization.

8. Recreation corridors shall be established within urban growth centers through the use of utility rights-of-way, natural watercourses, parks, parkways, water reservoirs and canals, earthquake fault zones, and other land areas as appropriate; recreation corridors shall be established along the Urban Limit Lines as a buffer between urban and agricultural lands, and shall be secured to avoid trespass on agricultural lands.

9. Watershed lands shall be protected and preserved through development policies which foster and encourage both publicly and privately sponsored, low intensity, outdoor recreation use of such lands.

10. Watershed lands are to be preserved as a means of controlling storm water runoff, retaining scenic quality, wildlife habitat and natural vegetation, and as a continuing source of water for municipal, industrial, agricultural, recreational, and other beneficial uses.

Water-Sewer-Drainage Development Policies

12. Natural watercourses should be protected and preserved in their natural state, with runoff from urban developments accommodated by manmade channels and/or reservoirs designed to control the rate and dispersal of runoff into the Suisun Marsh.

13. Natural watercourses and drainage channels should be maintained as recreation corridor components of development within the Cordelia and Fairfield-Suisun urban growth centers and shall be enhanced by the development of pedestrian and bikeways along their alignments and with public access provided at frequent intervals.

14. Areas subject to natural flooding beyond urban areas shall be preserved as flood plain areas; or shall be protected by flood control works similar to those proposed within the urban areas. Where such works are not constructed, the natural flood plains shall be protected by the exclusion of permanent structures for habitation and commerce (other than for agricultural use) through the establishment of flood plain management plans and regulations as provided under the Cobey-Alquist Flood Plain Management Act.

Specific Policies for Upstream Land Use

1. The county and/or cities should undertake a precise

hydrological analysis of study area uplands, identifying the different watersheds which drain into the planning area, establishing flood-related objectives and priorities on a study area basis, and translating those into a coordinated series of flood-preventive measures for each watershed.

2. Where possible, upstream watersheds should remain essentially devoted to open space land uses such as recreation and extensive agriculture (grazing).

3. The following upstream land use practices often contribute to increased rates of surface water runoff and should, therefore, be prevented or regulated:

   a. Overgrazing by livestock;

   b. Logging, clearing, burning, and other activities which can reduce natural vegetative cover.

   c. Construction of extensive impermeable surfaces (large developments which might include a number of structures, patios, dwellings, roads, etc.) over naturally permeable soil and geologic areas.

4. Upstream land use controls shall be formulated to protect riparian corridors (the stream, its banks, and creekside vegetation) from encroachment and degradation by development.

5. 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.

6. Integration of riparian corridors (the stream, its banks, and creekside vegetation) into park or trail systems and other open space uses should be required as a condition for the development of adjoining lands for nonagricultural uses.

7. Where channel capacity is restricted, the county or city shall make channel and embankment improvements, providing that such measures do not conflict with adopted open space and conservation policies.

8. The county and cities shall provide periodic stream maintenance as necessary to clear channels of blockages by debris and silt buildup.

9. In those watersheds which are the major contributors to downstream flood problems, the county and cities undertake or advocate the construction of upstream floodwater retention devices such as ponds (dams) and/or diversion channels.

Specific Policies for Downstream Land Use

1. The primary flood plain zones (the stream channel and

portions of the adjacent flood plain that carry the design flood flows of the stream) shall be protected and maintained through strict limitations on land use, road construction, and land fill. Land uses should be limited to nonurban, low capital investment types of uses.

5. The county and cities should implement flood control and drainage improvement recommendations included in locally-formulated plans, and should advocate those policies made by the San Francisco Bay Conservation and Development Commission in the Suisun Marsh Protection Plan for the protection of the Suisun Marsh environment.

EXHIBIT B: LAND USE DIAGRAM FROM THE FAIRFIELD GENERAL PLAN

Copies of the land use diagram are on file with the City of Fairfield Department of Environmental Affairs, Solano County Planning Department and the San Francisco Bay Conservation and Development Commission

EXHIBIT C: SPECIFIC PLAN FOR CREEKSIDE PROTECTION

CITY OF FAIRFIELD

RESOLUTION NO. 80 - 15

A RESOLUTION ADOPTING A SPECIFIC PLAN FOR CREEKSIDE PROTECTION

WHEREAS, the Fairfield General Plan recommends adoption of a specific plan for creekside protection; and

WHEREAS, such a plan has been prepared and notice has been duly given, and a public hearing held as provided in Government Code Section 65500;

WHEREAS, the Planning Commission has recommended the specific plan be adopted;

NOW, THEREFORE, BE IT RESOLVED BY THE FAIRFIELD CITY COUNCIL as follows:

1. The Fairfield City Council adopts the attached Creekside Protection Specific Plan.

2. This plan shall be superseded by the local protection program adopted pursuant to the Suisun Marsh Preservation Act of 1977.

ADOPTED this 15 day of January, 1980, by the following vote:

AYES: Councilmen CAMPOS-CARLSON-HANSON-HUBER-FALATI

NOES: Councilmen none

ABSENT: Councilmen none

Mayor

ATTEST:

City Clerk

STREAM DEVELOPMENT AND MAINTENANCE POLICIES FOR JAMESON CANYON, AMERICAN CANYON, GREEN VALLEY, SUISUN, DAN WILSON, AND PORTIONS OF LAUREL AND LEDGEWOOD CREEKS.

A. The following development and maintenance policies shall apply to Jameson Canyon Creek, American Canyon Creek, Green Valley Creek, Suisun Creek, Ledgewood Creek upstream from Interstate 80, and Laurel Creek upstream from the Dover Valley Subdivision within the City of Fairfield.

1. The City shall require dedication of and maintain in its natural or existing state each stream channel and a strip of land at least 50 feet wide on each side of the creek measured from the top of the bank, or wider, if appropriate in light of the particular streamside habitat.

2. Within the stream channel:

   (a) The streambed and streambanks shall not be filled, graded, excavated, or obstructed by any development, construction, or activity associated with such development except for placement of approved stormdrain outflows. Such outflows and the associated drainage facilities shall be designed so as to eliminate or minimize increases in the rate and amount of stormwater discharge.

   (b) Vegetation in the streambed or streambank shall not be cut or removed.

   (c) The City of Fairfield may allow alteration of the stream channel and vegetation as an exception to subparagraphs (a) and (b) above for minor restoration or maintenance necessary to prevent flooding, reduce siltation, or otherwise provide for the public health or safety. Such restoration and maintenance shall be kept to a minimum and limited to situations where no reasonable alterative is available. Except in the case of emergency, all such restoration and maintenance shall be confined to the dry months (April 15 to October 15), and all erodeable slopes and surfaces exposed by such work will be hydromulched or secured by equally effective erosion control prior to October 15. If it is determined necessary by the California Department of Fish and Game, any revegetation program carried out as part of such restoration and maintenance shall use indigenous plants approved by the Department.

3. Within the width of land maintained in a natural state along each creek:

   (a) The riparian zone determined under Section 1 shall not be filled, graded, excavated, or obstructed, except for purposes of low intensity, passive recreation, or conservation uses (e.g., pedestrian

and bicycle trails and paths, and foot bridges) approved by the Fairfield City Council. Such development shall be kept to the minimum amount necessary to accomplish its aims and designed and executed so as to minimize erosion, sedimentation or runoff in or into the stream channel. Such development shall be confined, except in cases of emergency, to the dry months (April 15 to October 15),and all erodeable ground surfaces will be hydromulched or secured by a similar erosion control prior to October 15.

(b) Growing vegetation in the riparian zone shall not be cut or removed except when necessary for the low intensity, passive recreation and conservation uses referred to in paragraph (a). Such cutting or removal of vegetation shall be limited to the minimum amount necessary, with special care to avoid removal of vegetation immediately adjacent to the banks of the stream. If determined necessary by the California Department of Fish and Game, a revegetation program will be carried out using indigenous plants approved by the Department.

(c) The City of Fairfield may allow an exception to subparagraphs (a) and (b) for minor restoration and maintenance activity including removal of debris when necessary to protect the public health and safety, or minor weed abatement activity necessary to protect life or property. Such alterations shall be confined to the minimum amount necessary, and except in cases of emergency, to the dry months.

B. The following development and maintenance policies shall apply to Dan Wilson Creek:

1. No development which substantially diverts or obstructs the natural flow or substantially changes the bed, channel or bank of the creek, or uses any material from the streambeds shall occur except pursuant to Fish and Game Code Sections 1601 or 1603. Except for the Arbors Project, such development shall be limited to flood control projects. Sedimentation basins shall not be permitted in stream. Any such development shall be designed to minimize erosion and sedimentation.

2. Development adjacent to the creek shall be designed wherever possible to minimize erosion, sedimentation, or runoff, and to maintain the natural streamside vegetation. If it is determined necessary by the California Department of Fish and Game, any revegetation program carried out in this area shall use indigenous plants approved by the Department.

3. Except as provided in paragraph B.1., within the stream channel the policies expressed in paragraphs A(2)(a) through A(2)(c) shall apply, except for inlets and outfalls for flood and sedimentation retention basins.

EXHIBIT D: PLANNED DEVELOPMENT ZONING REGULATIONS APPLICABLE TO THE CORDELIA AREA SPECIFIC PLAN

Article V. Cordelia Development Regulations.

Division 1. Generally.

Sec. 25.218 Purpose.

The purpose of this section is to set forth the procedures for processing development proposals which lie within the Urban Limit Line as shown on the Cordelia Area Specific Plan.

Planned Developments (P.D.'s) involving the careful application of design, are required to achieve a more functional, aesthetically pleasing, economical and harmonious living and working environment within the Cordliea growth center than would otherwise be possible by strict adherence to other provisions of the Zoning Ordinance. (Ord. No. 75-3, § 1; Ord. No. 76-35, § 1.)

Sec. 25.219 Definitions.

For the purpose of this article, the following words and phrases shall have the meanings respectively ascribed to them by this section:

Applicant. Means the person who is acting on behalf of the developer in submitting the required materials for P.D. approval in accord with this Article. (Ord. No. 76-35, § 1.)

Architectural approval committee. The architectural approval committee of the city as specified in Section 25.26 of this Code.

City manager. The city manager of the city.

Commission. The planning commission of the city.

Developer. A person, firm, corporation, partnership or association who proposes to develop real property with the concurrence of the property owner on whose land the development is proposed.

Director of environmental affairs. The director of environmental affairs of the city.

Environmental documents. Draft and final environmental impact reports, initial studies, negative declaration, notices of completion, and notices of determination.

Environmental impact report. A detailed statement which sets forth the environmental effects and consideration pertaining to a project as specified in Section 21100 of the Public Resources Code of the state, and may mean either a draft or a final EIR.

(a) Draft EIR. An environmental impact report containing the information specified in Sections 25.97 and 25.98 of this Code.

(b) Final EIR. An environmental impact report containing the information specified in Section 25.107 of this Code.

Initial study. A preliminary analysis prepared by the director pursuant to Section 25.83 of this Code to determine whether an environmental impact report or a negative declaration must be prepared for a project.

Negative declaration. A statement prepared pursuant to Sections 25.87 to 25.95 of this Code.

Zoning Ordinance. The Zoning Ordinance of the city and all applicable amendments thereto. (Ord. No. 75-3, § 2.)

Sec. 25.220 Conditions.

The planning commission is hereby empowered to grant Planned Unit Development permits in P.D. Districts in accord with Section 25.21 of this Code, provided that such developments comply with the conditions set forth below and other provisions of this section:

(a) The tract or parcel of land involved must either be in one ownership or the subject of an application filed jointly by the owners of all the property included.

(b) The proposed development must be designed to produce an environment of stable and desirable character consistent with all applicable goals, objectives, policies, proposals, criteria, standards and procedures of the Cordelia Area General Plan and the Cordelia Area Specific Plan.

(c) The proposed development must exhibit creativity, and where possible, innovation in architectural, engineering, planning, and environmental design.

(d) No use shall be permitted and no process, equipment or materials shall be employed which are found by the planning commission to be objectionable or to be injurious to property located in the vicinity by reason or odor, fumes, dust, smoke, cinders, glare, unsightliness, traffic congestion or to involve any hazard of fire or explosion. (Ord. No. 76-35, § 1.)

Sec. 25.221 Permitted uses.

A planned development may include a combination of different types of housing units and/or a variety of public and private land uses which are designed to complement each other, and to harmonize with existing or proposed land uses in the vicinity and which are consistent with the Cordelia Area General Plan and Specific Plan, by design. (Ord. No. 76-35, § 1.)

Sec. 25.222 Filing of application fee.

An application for planned development zoning shall be made to the planning commission on a form prescribed by the commission, which form shall include the data and information prescribed by Sec. 25.223 of this Code and the following data:

(a) The name and address of the applicant;

(b) A statement that the applicant is the owner of the property or is the authorized agent of the owner or the plaintiff in an action of eminent domain to acquire the property involved;

(c) The address or legal description of the property.

The application shall be accompanied by a fee set by resolution of the city council sufficient to cover the actual cost of processing the application as set forth in this section. (Ord. No. 76-35, § 1.)

Sec. 25.223 Same - Processing procedure.

This first stage in the procedure for processing an application shall involve at least one pre-planning conference between the applicant and the city department of environmental affairs. The purpose of this conference is to explore development concepts, determine respective capacities for assuring a successful project, and to provide a clear understanding of governmental policies and regulations which will condition the approach, responsibilities and commitments which each party may be expected to assume.

(a) The applicant shall describe the general magnitude and extent of the proposed development, the development concepts to be employed, the probable timing of development, and the developer's financial and managerial capacity to carry out the project. Development concepts shall be indicated by reference to and at the scale of the specific plan diagram.

(b) Acting through the director of environmental affairs, the city shall interpret as clearly as possible, all development policies and regulations of other agencies of government. Where policies and regulations of other agencies of government are or may be involved, the city shall request the attendance of authorized representatives of such agencies.

(c) The city shall call such additional conferences as may be required to carry out the purposes of this section. At the conclusion of the pre-planning conference, the applicant and the city shall exchange initial letters of understanding concerning their respective roles and commitments agreed upon during

the conference, which will condition subsequent steps in the procedure,

(d) Prior to undertaking the next step in the procedure, the director of environmental affairs and the applicant shall present the initial letters of understanding to the planning commission and, if necessary, to the city council. In any event, copies of the letters shall be referred to the city manager and to each member of the city council. The planning commission shall scrutinize carefully any possible inconsistency with established general or specific plan policies of the city and make a determination as to whether such inconsistency exists. In the event the applicant is not satisfied with the action of the planning commission, the applicant may appeal the commission's action to the city council. The city council, on its own initiative, may review any deviation from established city policy and determine if such deviation will be permitted. At the direction of the council, the city manager or the city manager's authorized designee shall indicate in writing to the applicant the official position of the city concerning the results of the commission or council review.

(e) Changes in general plan or specific plan policy which might be agreed upon in principle shall first be processed formally as required by law before undertaking the next stage in the procedure. If the results of the pre-planning conference indicate that the proposed development will be in conflict with the general plan or specific plan, and that changes in such plans are not justified, the city council shall order the procedure terminated until such time as the applicant agrees, in writing, to accept the official position of the city.

(f) If the applicant accepts the official position of the city, the applicant shall notify the city of the applicant's acceptance in writing. If the applicant rejects the official city position, the applicant shall notify the city of the applicant's rejection in writing, and the procedure shall terminate. (Ord. No. 75-3, §6.)

Sec. 25.224 Process.

Recognizing the existence of both large and small ownerships in the Cordelia area, two P.D. processes are provided.

A special planned development (SPD) process shall apply to small parcels (usually under five acres), where the concept of "trade-offs" are not easily implemented and where there is a lack of complexity and/or design innovation potential in the proposal.

Where the full implementation of the design concepts of this plan are possible, a more detailed process will be required: planned development.

The determination of which process will be required shall be made by the director of environmental affairs and shall be based on the following:

(a) Size of the project - generally, projects under five acres would qualify for the SPD process, although parcels larger than five acres may also qualify, particularly if they are in an area of small parcels.

(b) Proposed use - individual parcels proposed for a single use, such as a warehouse or other manufacturing or commercial use, may qualify because of its lack of complexity.

(Ord. No. 75-3, § 6; Ord. No. 76-35, § 1.)

Division 2. Procedure for Special Planned Unit Developments.

Sec. 25.225 Request for determination and study by director of environmental affairs; additional information to be supplied; negative declarations.

The first step in the SPD process involves the submission of a request for determination by the project sponsor in accord with the requirements of the city's EIR Ordinance. Upon receipt of the request for determination, the director of environmental affairs shall prepare an initial study concerning the project. Such study shall contain relevant, scientific and factual data. The project sponsor shall furnish such further data and information as may be required by the director of environmental affairs. This additional information may include preparation of an environmental assessment, including an environmental inventory and determination of development suitability for the project area. The requirements for a negative declaration or an EIR shall be based upon the initial study.

Preparation of a negative declaration or an EIR shall be processed in accord with the applicable sections of the city's EIR Ordinance. (Ord. No. 76-35, § 1.)

Sec. 25.226 Final application.

The next step in the SPD process involves submission of a formal application to the planning commission containing the following information:

(a) A site development plan indicating the following:

(1) Existing topography;

(2) Proposed grading plan;

(3) The location of each proposed building or structure;

(4) The location of public and private roadways, driveways, walkways and other elements of internal and external circulation;

(5) All areas proposed to be landscaped.

(b) A land use summary showing the proportion of the total site for each of the categories of use proposed for the project.

(c) Preliminary architectural drawings showing elevations of proposed structures as they will appear upon completion with specification of exterior surface materials and color and showing their relationship to adjacent existing or proposed buildings.

(d) Environmental documents as specified in the City's EIR Ordinance.

(e) Such other information as may be deemed necessary to carry out review of the SPUD in accordance with this Plan. (Ord. No. 76-35, § 1.)

Sec. 25.227 Public notice, public hearing and action by planning commission and council.

Public notice, public hearing and action by planning commission and city council shall be as provided in Section 25.21 of this Code as set out in Article I of this chapter. (Ord. No. 75-3, § 7.)

Sec. 25.228 Submission of plan and drawings to architectural approval committee; architectural approval committee to advise commission.

Prior to making its final recommendation to the city council on any SPD request, the site plan and preliminary architectural drawings shall be submitted to the architectural approval committee for their recommendation. It is not expected that the architectural approval committee will take final action on the matter, but is is expected to advise the planning commission as to its findings on the plan. (Ord. No. 75-3, § 7; Ord. No. 76-35, § 1.)

Division 3. Procedure for planned unit development.

Sec. 25.229 Request for determination and study by director of environmental affairs; additional information to be supplied; negative declaration.

The first step in the PD process involves the submission of a request for determination by the project sponsor in accord with the requests of the city's EIR ordinance. Upon receipt of the request for determination, the director of environmental affairs shall prepare an initial study concerning the project. Such study shall contain relevant, scientific and factual data. The project sponsor shall be the director of environmental affairs. This additional information may include preparation of an environmental assessment, including an environmental inventory and determination of development suitability for the project area. The requirements for a negative declaration or an EIR shall be based upon the initial study.

Preparation of a negative declaration or an EIR shall be processed in accord with the applicable sections of the city's EIR ordinance

Sec. 25.230 Schematic development plan; action or commitment by city.

This second stage in the PD procedure involves the submission of a schematic development plan and statements related thereto as a means for reaching more specific understanding and agreement on the acceptability of the applicant's development concept in relation to the general plan, and the specific plan, and avoid unnecessary or exhorbitant commitments of financial resources by the developer and of administrative and technical resources of governmental agencies. Sufficient preliminary planning and engineering is required at this stage to test the validity of various concepts and components of the proposed development as agreed upon in principle at the conclusion of the pre-planning conference by both the applicant and the city.

The developer, with concurrence from the planning commission, may combine the schematic development plan and final development plan submittals in a single package. This should only be done where little controversy is expected, or when the project is of such a scale or magnitude to warrant the combining of submittals.

At the conclusion of this stage, the applicant can expect to receive commitments in writing from the city of the approval or conditional approval of the applicant's proposal. Such approval or conditional approval shall also be conditioned by the requirements that a final development plan shall be submitted by the applicant for review and approval as described in this section prior to the city's issuance of official authorization to pro-

ceed with final engineering plans, financial and service agreements, tentative subdivision map approval, final design of structures and facilities, and actual development.

The schematic development plan shall include the following submissions for evaluation:

(a) A schematic development plan of the entire property drawn to an appropriate scale, showing existing topography and the proposed general arrangement, distribution and type of residential, commercial, industrial, public, semi-public, and institutional land use, transportation and circulation facilities; and applicable categories of open space, as described in specific plan. The plan shall include contours of the site in intervals of not more than one foot for areas under six percent slope, and not more than five feet for areas over six percent slope.

(b) The schematic drawing at the same scale provided under (a) above, showing the proposed layout of water, sewer, and drainage facilities and systems.

(c) A schematic drawing at the same scale provided under (a) above, showing the proposed relationship of transit facilities, major arterial, collector and minor streets, local and community recreation corridors, areas where access rights would be dedicated, projected traffic volumes and sketches showing the proposed cross-sections of streets and recreation corridors and channelized intersections.

(d) A schematic drawing drawn to appropriate scale showing the relationship of design proposals of the plan prepared under (a) above, to adjacent properties and to design proposals depicted to the specific plan diagram.

(e) A schematic drawing or sketch which illustrate typical arrangements of the various types of housing units contemplated by the plan prepared under (a) above.

(f) The necessary environmental documents prepared in accordance with the guidelines adopted by the city for the preparation of an environmental impact report (EIR).

(g) A preliminary discussion of the project including the following statements:

(1) A statement of goals and objectives which demonstrates concern for the physical, social, and economic goals and policies of the general plan and specific plan;

(2) A preliminary projection of the population to be accommodated by the proposed development, which is related realistically to the type and mix of housing units to be included in the project.

(3) Sufficient information to enable the city to determine the number and mix of housing types in support of population projections provided under (g)(2) above.

(4) A land use summary showing the proportions of the total site for each of the categories of public and private land use depicted on the plan prepared under (g)(2) above.

(5) A preliminary statement regarding land and improvement dedications, financial contributions and/or construction proposed by the applicant to provide recreational, civic, cultural, educational, health and other institutional facilities.

(h) A statement describing optional design concepts which the developer wishes to remain open for any part of the property because of uncertainties of the land market or pending technological developments.

(i) A statement of confirmation from utility companies serving the area that gas, electrical and communications facilities will be placed underground, including a centralized system for receiving television signals.

Sec. 25.231 Submittal of plan and drawings to and advisement by architectural approval committee.

Prior to making its final recommendation to the city council on any PD request, the site plan and preliminary architectural drawings shall be submitted to the architectural approval committee for its recommendation. It is not expected that the architecutral approval committee will take final action on the matter, but it is expected to advise the planning commission as to its findings on the plan.

Sec. 25.232 Action by planning commission; criteria for approval; additional time for action when environmental impact report needed.

(a) Upon the filing of a schematic development plan, the planning commission shall act upon said plan as an application for planned development district zoning provided in Section 25.21 of this Code, and when applicable, the tentative subdivision map or parcel map included in the application. Except as provided below, such action shall occur within ninety (90) days of such application, and the commission shall need to grant

approval of such application as applied for or in modified form if, on the basis of the application and the evidence submitted, the commission makes the following findings:

(1) That the application meets all of the conditions set forth under paragraph (3) of this section;

(2) That the proposed location and design of the proposed planned development, and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety or welfare or materially injurious to properties or improvements in the vicinity.

(3) That the standards of population density, building intensity, site area and dimensions, site coverage, yard spaces, height of structures, distance between structures, off-street parking and off-street loading facilities, street design, landscaped areas, and other facilities and utilities will produce an environment consistent with the purpose of this section.

(4) That the proposed planned development will comply with all applicable provisions of all existing development regulations of the city.

(b) When it is determined by the city that an environmental impact report is required in accordance with guidelines adopted by the city, the time within which the planning commission shall act shall be extended by the additional time provided under said guidelines. (Ord. No. 75-3, § 8; Ord. No. 76-35, § 1.)

Sec. 25.233 Conditions of approval.

In recommending approval of a planned development district zoning, the commission shall state that conditions of approval are necessary to protect the public health, safety and general welfare. Such conditions may include requirements for:

(a) Special yards, spaces and buffers;

(b) Fences and walls;

(c) Street dedications and improvements;

(d) Walks and bikeways;

(e) The regulation of points of vehicular ingress and egress;

(f) The dedication of access rights;

(g) The provision of pedestrian underpass or overpass structures crossing the right-of-way of a major arterial street;

(h) The regulations of signs;

(i) Landscaping of grounds and maintenance thereof.

(j) The regulation of noise, vibration, odors, and other similar characteristics;

(k) Submission of detailed site plans, architectural plans and specifications, and plans for the construction of public improvements;

(l) Reservation of school sites; dedication of elementary school sites when the development is sufficiently large to warrant such dedication, in accordance with the procedures prescribed by the State Subdivision Map Act.

(m) Reservation of recreation-park sites; dedication of neighborhood recreation park sites when the development is sufficiently large to warrant such dedication in accordance with the procedures prescribed by the State Subdivision Map Act.

(n) The regulation of time for certain activities to be conducted on the site;

(o) The regulation of the time period when development shall occur;

(p) A bond, deposit of money, or letter of credit for the completion of public facilities and improvements to assure faithful performance by the applicant; and

(q) Such other conditions as weill make possible the development of the Cordelia growth center in an orderly and efficient manner, and in conformity with the provisions of the Cordelia Area and General Plan and Specific Plan, and the purpose and conditions set forth in this section. (Ord. No. 76-35, § 1.)

Sec. 25.234 Review and action by city council.

At the first regular meeting of the city council held more than ten (10) days after a decision by the planning commission, the council shall review the decision. The council may affirm, reverse or modify a decision by the commission; provided, however, if a decision denying a permit is reversed or modified, the Council shall, on the basis of the record transmitted and such additional evidence as may be submitted, make the findings prerequisite to the approval of a planned development district as set forth in paragraph (f)(4) of this section. (Ord. No. 75-3, § 8; Ord. No. 76-35, § 1.)

Sec. 25.235 Final development plan; review of plans by site plan and architectural review committee.

The final development plan is intended to facilitate actual development of the planned development as approved by the city. The planning commission shall issue a PUD permit in accord with provisions of Section 25.21 of this Code unless the city council has determined that a PUD permit is not required.

This stage of the procedure involves the preparation and submission of final plans, tentative subdivision maps, specifications and agreements and other details, as are called for under the approved PD zoning for review, approval or certification by the city prior to the issuance of building permits.

In order to avoid delays in receiving such approval of certification, it is incumbent upon the applicant to provide sufficient information, plans and other data as part of the final development plan as will enable the planning commission to make a finding that the final development plan is in conformity with the approved schematic development plan and to guide the city in the issuance of building permits. The submission of plans, specifications and other data required as a condition precedent to the approval of a tentative subdivision map and subsequent recording of a final subdivision map shall be governed by procedures of the city's subdivision ordinance. In addition, the applicant shall submit plans for review and certification by the site plan and architectural review committee, as provided under Section 25.236 of this Code. (Ord. No. 75-3, § 8; Ord. No. 76-35, § 1.)

Sec. 25.236 Site plan and architectural review process; "architectural approval committee" defined.

(a) Purposes.

(1) The purposes of the site plan review process are to enable the city to make a finding that the proposed development is in conformity with the intent and provisions of this division and to guide the city in the issuance of building permits. More specifically, site plan review is provided to ensure that structures, parking areas, landscaping and street improvements, are properly related to their sites and to surrounding sites and structures; to prevent excessive grading of the land and creation of drainage hazards; to prevent the indiscriminate clearing of property and the destruction of trees and shrubs of ornamental value; to avoid ugly, inharmonious, monotonous and hazardous site development; and to encourage originality in site design and development in a manner which will enhance the physical appearance and attractiveness of the community.

(2) The purpose of the architectural review process is to avoid the ugly, inharmonious and monotonous appearance of structures and signs through the review of the design, materials, textures, colors and such other elements of

construction which affect the exterior appearance of structures; to encourage orginality in building design and construction in a manner which will enhance the physical appearance and attractiveness of the community; to preserve the investments in properties which exhibit tasteful consideration of the external physical appearance of the site and structures thereon; and to encourage and enhance the desirability of investment within the surrounding areas.

(b) Architectural approval committee.

The architectural approval committee referred to in this article shall be that committee authorized in section 25.29 of the Zoning Ordinance of the city. (Ord. No. 75-3, § 8.)

Slide/Flap Gate (also called a Screw/Flap Gate) - similar to slide gate but with a flap gate added to prevent back flow.

Flashboard Box or Weir Box - a wooden box with grooved runs for inserting wood planks. The planks are placed, one on top of the other, to the desired water height. Any excess water about this height will overflow over the boards and out through the box. The boards can be removed for complete water drainage.

Flashboard Riser - a length of corregated metal pipe cut in half longitudinally and placed vertically on top of the inlet or outlet of a culvert. The riser is fitted with wood planks than can be placed, on top of the other, to the desired height. These function the same as that of a weir box.

Marsh Types

Managed Wetlands - leveed areas within the Primary Management Area (PMA) in which water inflow and outflow is artificially controlled, or in which waterfowl food plants are cultivated, or both, to enhance habitat conditions for water associated birds and wildlife.

Tidal Marshes - vegetated areas within the PMA subject to daily tidal action.

Tidal Waters - open water areas within the PMA subject to daily tidal action.

Management

Circulation - a system of ensuring slow, but continuous movement of water across the club or pond to reduce insect and water quality problems associated with stagnation of standing water.

Flushing Cycles - a cycle of flooding and draining a pond for the purpose of reducing soil salinities.

Pond - any area of the club that is underwater when club is flooded to normal shooting level. Ponds are not limited to open water areas or to the mowed (or otherwise more intensively managed) areas around an established blind.

Shooting Level - the depth of water found to be the most attractive to water fowl. Most of the ducks utilizing the Suisun Marsh are "dabblers" and are attracted to areas flooded with 12 - 18 inches of water.

EXHIBIT E: PROPOSED GRADING AND EROSION CONTROL ORDINANCE

CITY OF FAIRFIELD

ORDINANCE NO. 80-_____

AN ORDINANCE AMENDING ARTICLE VI OF CHAPTER 25 OF THE FAIRFIELD CITY CODE RELATING TO GRADING AND EROSION CONTROL.

THE CITY COUNCIL OF THE CITY OF FAIRFIELD DOES ORDAIN AS FOLLOWS:

SECTION 1: This Ordinance is adopted pursuant to Public Resources Code Section 29402.

SECTION 2: Section 25.247(c) is hereby added to the City Code to read as follows:

(c) The following basic design principals and standards shall serve as minimum guidelines to control erosion and reduce sedimentation:

(1) Stripping or burning of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion.

(2) Existing natural vegetation shall be retained, protected, and supplemented where necessary. Site development shall be accomplished so that existing trees can be preserved whenever possible and practical.

(3) 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 shall not exceed an area in which development can be completed during a single construction season to ensure that soils are stabilized and vegetation is established well in advance of the rainy seasons (October 15 - April 15).

(4) Facilities shall be constructed to retain sediment produced on site.

(5) Sediment basins, sediment traps, diversions or similar required measures shall be installed well in advance of any clearing or grading and maintained through any such operations until removal is authorized by the City Engineer.

(6) Temporary seeding, mulching, or other suitable stabilization measures shall be used to protect exposed erodible areas during development and in advance of the rainy season (October 15 - April 15).

(7) Permanent control structures and final vegetation should be installed as soon as practical in the development,and a long-range maintenance plan developed and adhered to.

(8) Provisions shall be made to accommodate the increased runoff caused by altered soil surface conditions during and after development.

(9) Surface runoff rates in excess of predevelopment levels shall be retarded where needed by appropriate structural and vegetative measures.

(10) Slopes, both cut and fill, shall not be steeper than two horizontal to one vertical (2:1) unless a thorough geological and engineering analysis indicates that steeper slopes are safe and appropriate erosion control measures are specified.

(11) Cuts and fills shall not encroach upon natural watercourses, their flood plains, or constructed channels in a manner so as to adversely affect other properties.

(12) Disposal of cleared vegetation and excavated materials shall be done in a manner which reduces the risk of erosion and shall strictly conform to the provisions of the approved grading permit. Topsoil shall be conserved for reuse in revegetation of disturbed areas whenever possible.

(13) Proposed development and roadway alignments should be fitted to the topography and soils to minimize erosion.

(14) Waterways shall be designed to avoid erosion as much as practical. Wide channels should be constructed with flat slopes, and the channel and slopes should be lined with grass or other appropriate vegetation. Every effort must be made to preserve natural channels and drainageways.

SECTION 3: Section 25.250 of the City Code is hereby amended to read as follows:

Sec. 25.250 Runoff Control.

The City Engineer may require a surface water runoff control plan. The runoff control plan shall calculate runoff from the site under natural conditions, and shall estimate runoff after development using City drainage design standards. The runoff control plan shall demonstrate that such peak runoff from the site will not increase after development, and shall include all necessary measures to ensure this result to the satisfaction of the City Engineer.

SECTION 4: This Ordinance shall be printed and published one time in The Daily Republic, a newspaper of general circulation, printed and published in the City of Fairfield.

INTRODUCED the _____ day of _____, 1980; and

PASSED AND ADOPTED the _____ day of _____, 1980, by the following vote:

AYES: Councilmen _____

NOES: Councilmen _____

ABSENT: Councilmen _____

_____
Mayor

ATTEST:

_____
City Clerk

EXHIBIT F: PROPOSED CREEKSIDE PROTECTION ORDINANCE

CITY OF FAIRFIELD

ORDINANCE NO. 80-_____

AN ORDINANCE ADDING ARTICLE IV TO
CHAPTER 25 OF THE CITY CODE
RELATING TO CREEKSIDE PROTECTION.

THE CITY COUNCIL OF THE CITY OF FAIRFIELD DOES ORDAIN AS FOLLOWS:

SECTION 1: The provisions of this Ordinance are enacted pursuant to Public Resources Code Section 29402.

SECTION 2: Article IV is hereby added to Chapter 25 of the Fairfield City Code to read as follows:

ARTICLE IV.

CREEKSIDE DEVELOPMENT.

Sec. 25.170 Purpose.

It is the purpose of this Article to provide for the maintenance and protection of waterways in a manner consistent with the recreational, residential, commercial, agricultural, or industrial character of the adjoining property, and in a manner which protects riparian habitat and prevents significant adverse environmental impacts to the Suisun Marsh.

Sec. 25.171 Creekside Regulation.

(a) The following provisions shall apply to Jameson Canyon Creek, American Canyon Creek, Green Valley Creek, Suisun Creek, Ledgewood Creek upstream from Interstate 80, and Laurel Creek upstream from the Dover Valley Subdivision within the City of Fairfield.

(1) The City shall require dedication in its natural or existing state each stream channel and a strip of land at least 50 feet wide on each side of the creek measured from the top of the bank (the riparian zone), or wider, if appropriate in light of the particular streamside habitat.

(2) The streambed and streambanks within the stream channel shall not be filled, graded, excavated, or obstructed by any development, construction, or activity associated with such development except for placement of City-approved stormdrain and irrigation outflows. Such outflows and the associated drainage facilities shall be designed so as to eliminate or minimize increases in the rate and amount of stormwater discharge.

(3) Vegetation in the streambed or streambank within the stream channel shall not be cut or removed.

(4) The City Engineer may allow alteration of the stream channel and riparian vegetation as an exception to subsections (2) and (3) above for:

A. Minor restoration and maintenance of watercourse channels .

B. Public and nonpublic utility lines.

C. Bridges and their connecting roadways.

D. Minor restoration or maintenance necessary to prevent flooding, reduce siltation, or otherwise provide for the public health or safety.

(5) Erosion in excess of natural levels shall be prevented and riparian vegetation shall be protected utilizing the following basic standards:

A. Removal of riparian vegetation shall be limited to the minimum amount necessary. If it is determined necessary by the California Department of Fish and Game, any revegetation program carried out as part of such restoration and maintenance shall use indigenous plants approved by the Department.

B. Development work shall be accomplished between April 15 and October 15. When necessary, extensions of this time period may be granted by the City Engineer on a case-by-case basis.

C. Disturbed areas shall be revegetated by October 15. When necessary, extensions of this deadline may be granted by the City Engineer on a case-by-case basis.

D. Where needed to prevent erosion, exposed soil surfaces shall be hydromulched or stabilized by other erosion control measures prior to October 15. When necessary, extensions of this deadline may be granted by the City Engineer on a case-by-case basis.

(6) The riparian zone determined under subsection (1) shall not be filled, graded, excavated, or obstructed, except for purposes of low intensity, passive recreation, or conservation uses (e.g., pedestrian and bicycle trails and paths, and foot bridges) approved by the Fairfield City Council. Such development shall be kept to the minimum amount necessary to accomplish its aims and designed and executed so as to minimize erosion, sedimentation or runoff in or into the stream channel.

(7) Growing vegetation in the riparian zone shall not be cut or removed except when necessary for the low intensity, passive recreation and conservation uses referred to in subsection (6). Such cutting or removal of vegetation shall be limited to the minimum amount necessary, with special care to avoid removal of vegetation immediately adjacent to the banks of the stream.

(8) The City Engineer may allow an exception to subsections (6) and (7) for minor restoration and maintenance activity including removal of debris when necessary to protect the public health and safety, or minor weed abatement activity necessary to protect life or property, or other activities described in subsection (4). The standards set forth in subsection (5) shall apply to such activity.

(b) The following development and maintenance policies shall apply to Dan Wilson Creek downstream of Interstate 80:

(1) No development which substantially diverts or obstructs the natural flow or substantially changes the bed, channel or bank of the creek, or uses any material from the streambeds shall occur except pursuant to Fish and Game Code Sections 1601 or 1603. Except for the Arbors Project, such development shall be limited to flood control projects. Sedimentation basins shall not be permitted in stream. Any such development shall be designed to minimize erosion and sedimentation.

(2) Development adjacent to the creek shall be designed wherever possible to minimize erosion, sedimentation, or runoff, and to maintain the natural streamside vegetation. If it is determined necessary by the California Department of Fish and Game, any revegetation program carried out in this area shall use indigenous plants approved by the Department.

(3) Except as provided in subsection (b)(1), within the stream channel the policies expressed in subsections (a)(4) and (a)(5) shall apply, except for inlets and outfalls for flood and sedimentation retention basins.

SECTION 3: This Ordinance shall be printed and published one time in The Daily Republic, a newspaper of general circulation, printed and published in the City of Fairfield.

INTRODUCED the_____day of_____, 1980; and

PASSED AND ADOPTED the_____day of_____, 1980 by the following vote:

AYES: Councilmen_____

NOES: Councilmen_____

ABSENT: Councilmen_____

_____
Mayor

ATTEST:

_____
City Clerk