

**SOLANO COUNTY COMPONENT
OF THE SUISUN MARSH
LOCAL PROTECTION PROGRAM**

2018 Amendment

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Summary of the Solano County Component

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 Suisun Marsh consists of approximately 85,000 acres of tidal marsh, managed wetlands, and waterways, as well as adjacent lowland and upland grassland areas, in southern Solano County. It is the largest remaining wetland around San Francisco Bay and comprises about 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 that provide habitats for a variety of fish and wildlife, including several rare and endangered species.

Pursuant to the Nejedly-Bagley-Z'berg Suisun Marsh Preservation Act of 1974, the San Francisco Bay Conservation and Development Commission (BCDC) prepared the Suisun Marsh Protection Plan for the orderly and long-range conservation, use, and management of the natural, scenic, recreational, and man-made resources of the Marsh. The Suisun Marsh Protection Plan contained a series of recommendations that required implementation by the Legislature. In brief, the Plan proposed (1) a primary management area encompassing tidal marshes, managed wetlands, adjacent lowland grasslands, and waterways, and (2) a secondary management area of significant buffer lands. The Plan defined the "Suisun Marsh" as including both of these management areas, as shown on the Suisun Marsh Protection Plan Map. Under specific guidelines for each management area, the County would be responsible for preparing and administering a local protection program. BCDC would represent the state's interests, serving as the land use permitting agency for major projects in the primary management area, and as an appellate body with limited functions in the secondary management area. The Plan defined the "watershed" as the area immediately upland from the secondary management area of the Marsh, including those streams and adjacent riparian areas that are tributary to, or flow into, the Marsh. The Plan sought to ensure that further development outside the Marsh but within the watershed would not adversely affect water quality within the Marsh due to sedimentation and increased urban runoff.

Suisun Marsh Preservation Act Requirements

In 1977, the California State Legislature enacted the Suisun Marsh Preservation Act (Marsh Act; Public Resources Code, § 29000 et seq.), which implements most of the recommendations contained in the Suisun Marsh Protection Plan. The Marsh Act defines the boundaries of the Suisun Marsh and establishes primary and secondary management areas within the Marsh.

The majority of the Suisun Marsh lies under the jurisdiction of Solano County. Other local governmental agencies having jurisdiction within the Marsh include the cities of Benicia, Fairfield, and Suisun City, the Solano County Local Agency Formation Commission, the Solano County Mosquito Abatement District, and the Suisun Resource Conservation District. Under the provisions of the Marsh Act, Solano County and each of these other agencies is required to bring its general and specific plans, ordinances and zoning maps, land use regulations, and other related standards and controls into conformity with the provisions of the Marsh Act and the Suisun Marsh Protection Plan. The combination of all such land use and development policies, standards, and controls adopted by all of these agencies constitutes the Local Protection Program (LPP), while the controls adopted by an individual agency constitutes that agency's component of the LPP.

As described in the Suisun Marsh Protection Plan, the LPP is to include development controls designed to meet the following objectives:

- (a) Protection of tidal and seasonal marshes, managed wetlands, sloughs, bays, and waterways within or tributary to the Suisun Marsh;
- (b) Protection of those agricultural lands both within and adjacent to the Suisun Marsh necessary to ensure that current agricultural uses within the Marsh remain economically feasible for as long as possible;
- (c) Erosion, sediment, and run-off controls in the secondary management area of the Suisun Marsh and the watershed;
- (d) Controls on creek side developments that would protect riparian habitat and the Suisun Marsh from increased siltation and water run-off caused by waterway modification along and immediately adjacent to waterways flowing into the Marsh;
- (e) Assurance of the maximum beneficial use of deep water industrial and port areas near Collinsville; and
- (f) Procedures and standards to review the design and location of any new development or structures in and adjacent to the Suisun Marsh to protect the visual characteristics of the Marsh and, where possible, enhance views of the Marsh.

The Marsh Act required each agency other than the Suisun Resource Conservation District (SRCD) to prepare and submit its proposed component of the LPP to the County. If the County determined that an agency's proposed component did not conform to the Marsh Act and the Suisun Marsh Protection Plan, the County was to advise the agency of changes necessary to bring the proposed component into conformity. The County was then to compile all agency components, other than SRCD's component, into a single LPP that it would then submit to BCDC for certification. SRCD was to submit its component directly to BCDC for certification. Alternatively, if an agency was late in preparing its proposed component, the County was to submit a partial LPP to BCDC for certification.

Original Solano County Component

Not all agencies completed preparation of their components at the same time. In April 1980, the County submitted to BCDC for certification the components prepared by the Local Agency Formation Commission, the Mosquito Abatement District, and the City of Fairfield. These three components were collectively referred to as Part 1 of the Suisun Marsh LPP.

In May 1980, Solano County submitted its component to BCDC as Part 2 the Suisun Marsh LPP. On September 18, 1980, BCDC approved the County component subject to a number of conditions. The County prepared amendments to meet BCDC conditions of approval and these were submitted on August 31, 1982. BCDC certified the County's component on November 4, 1982. In 1999, Solano County amended its component of the LPP to incorporate provisions addressing wetland restoration in the Collinsville area. These amendments were certified by BCDC on June 17, 1999.

2010 Amendment to the Solano County Component

On August 24, 2010, the Solano County Board of Supervisors approved the 2010 Amendment to its component of the Suisun Marsh Local Protection Program (LPP) to incorporate Solano County Code provisions relating to sewage standards (Chapter 6.4) and grading, drainage, land leveling, and erosion control (Chapter 31), which have been amended since the County last updated its component of the LPP. The County recognized at that time that additional portions of its component of the LPP needed to be updated due to the County's adoption of a new General Plan in 2008 as well as the adoption of other regulatory amendments. The County stated that it proposed to further amend its component of the LPP upon approval by BCDC of the proposed San Francisco Bay Plan and Suisun Marsh Protection Plan amendments to reflect these additional changes. Because further amendments of the County's component were anticipated, the County did not submit the 2010 Amendment for certification at BCDC's request.

San Francisco Bay Plan and Suisun Marsh Protection Plan Amendments

On August 24, 2010, the Board of Supervisors authorized the submittal of an application to amend the San Francisco Bay Plan (Bay Plan), the Suisun Marsh Protection Plan (Marsh Plan), and Resolution 16 to modify the boundaries of the water-related industrial priority use designation at Collinsville to reconcile inconsistencies between the Commission's Bay Plan and Marsh Plan and the County's 2008 General Plan. On July 7, 2011, the Commission approved the proposed amendments.

2012 Amendment to the Solano County Component

On August 28, 2012, the Solano County Board of Supervisors approved the 2012 Amendment to the Solano County component of the Suisun Marsh Local Protection Program. The 2010 Amendment was modified and incorporated fully into the 2012 Amendment. The 2012 Amendment was submitted to BCDC for certification but was subsequently withdrawn by the County to consider further revisions in response to issues raised by the public during the Commission's certification process. On January 15, 2013, the Board of Supervisors directed County staff to investigate whether further amendments to the County's component should be considered.

One further revision to the 2012 Amendment regarding the beneficial reuse of a waste disposal site was recommended. On October 2, 2018, the Board of Supervisors reapproved the 2012 Amendment to the Solano County component of the Suisun Marsh Local Protection Program and directed that the amended component be submitted to BCDC for certification.

Solano County Component of the LPP, as Amended July 24, 2012.

1. Solano County General Plan
 - a. Chapter 2, Land Use [excerpt]
 - b. Chapter 4, Resources [excerpt]

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- c. Chapter 8, Public Facilities and Services [excerpt]
 - d. Chapter 12, Suisun Marsh Local Protection Program Policies, Including Policies Regulating Sewage Disposal Systems [full chapter]
2. Solano County Code
- a. Chapter 28, Zoning [excerpts]
 - i. Section 28.01, Definitions [excerpt]
 - ii. Section 28.22, Suisun Marsh Agricultural (A-SM) Districts [full section]
 - iii. Section 28.32, Residential-Traditional Community Districts [portion of section applicable to R-TC-4 District]
 - iv. Section 28.41, Commercial Districts [portion of section applicable to Commercial Recreation – Limited (C-R-L) District]
 - v. Section 28.42, Manufacturing Districts [portion of section applicable to Water Dependent Industrial (I-WD) District]
 - vi. Section 28.52, Marsh Preservation (MP) District [full section]
 - vii. Section 28.78, Land Use Regulations for Communication and Infrastructure Uses [excerpts]
 - viii. Section 28.104, Marsh Development Permit [full section]
 - b. Chapter 31, Grading, Drainage, Land Leveling, and Erosion Control [excerpt]
3. Figures
- a. Figure RS-3, Delta and Marsh Protection Areas [General Plan, Chapter 4]
 - b. Figure SM-1, Current View Suisun Marsh [General Plan, Chapter 12]
 - c. Figure SM-2, Suisun Marsh Management Areas [General Plan, Chapter 12]
 - d. Figure SM-3, General Plan Land Uses Suisun Marsh [General Plan, Chapter 12]
 - e. Existing Zoning Districts, Suisun Marsh [compiled from Code, Chapter 28]
 - f. Adopted Protected Channels of the Suisun Marsh Watershed [Code, Chapter 31]

Revision to Solano County General Plan Policies (Part I)

The Suisun Marsh Preservation Act of 1977 requires the County to include, as part of its component of the LPP:

“Any amendments to general or specific plans applicable to any area within the marsh necessary to bring such plans into conformity with this division and the policies of the protection plan.” (Section 29401 (a))

In 1980, the County adopted amendments to the Land Use and Circulation Element, Resource Conservation and Open Space Elements, Collinsville Montezuma Hills Area Plan and Program, Scenic Roadways Element and Health and Safety Element to bring its general plan and area plan policies into conformity with Suisun Marsh Protection Plan's policies for biologic resources wildlife habitat management and preservation; agriculture; water quality; natural gas; utilities, facilities and transportation; and recreation and marsh access.

As part of the 2012 Amendment, the General Plan provisions in the Solano County component of the LPP have been updated to incorporate provisions from the General Plan adopted in 2008 as

well as a new Chapter 12, Suisun Marsh Local Protection Program Policies, added to the General Plan in 2012 and revised in 2013. The 2008 revision of the Solano County General Plan updated County policies and programs and consolidated individual general plan elements into a single integrated document. Changes affecting the County's component of the LPP included (1) updates to the County policies previously incorporated in the LPP component and (2) changes to the land use designations in the Collinsville area.

The General Plan provisions for the Solano County component of the LPP are shown in Part I. The following summarizes the changes:

Chapter 2 – Land Use (Part I-A)

The Land Use chapter contains new land use descriptions for water bodies and courses, park and recreation, marsh, agriculture, public/quasi-public, traditional community - residential, commercial recreation and water dependent industrial land use designations which have been applied to the Suisun Marsh Management Area. The chapter incorporates provisions of the Orderly Growth Initiative which limits redesignation under the General Plan of agricultural and marsh land use designations to other land uses.

A special study was conducted in the Collinsville area as part of the General Plan update through a community based planning program. The recommendations of the special study have been incorporated in Chapter 2. They provide a policy framework for the land use changes in the Collinsville area, including the Water Related Industry Reserve Area under the Suisun Marsh Protection Plan, and for updating the Collinsville-Montezuma Hills Area Plan and Program.

Chapter 4 – Resources (Part I-B)

This chapter describes the Suisun Marsh and summarizes the County's component of the LPP. Figure RS-3 Delta and Marsh Protection Areas reflects the BCDC Suisun Marsh Protection Plan and San Francisco Bay Plan map amendments to the Water Related Industrial Reserve area.

Chapter 8 – Public Facilities and Services (Part I-C)

This chapter includes a new policy addressing the Public/ Quasi-public land use designation applied to the Potrero Hills Landfill within the secondary management area of the Suisun Marsh.

Chapter 12 – Suisun Marsh Local Protection Program Policies (Part I-D)

This Chapter consolidates all of the General Plan policies addressing the Suisun Marsh into one chapter of the General Plan. LPP General Plan policies were previously located in several elements of the General Plan including Land Use and Circulation Elements, Resource Conservation and Open Space Elements, Collinsville Montezuma Hills Area Plan and program, Scenic Roadway Element, and Health and Safety Element. General Plan policies governing the Suisun Marsh which were previously incorporated into the Solano County component of the LLP and certified by BCDC have been incorporated into Chapter 12. They include policies addressing biologic resources; wildlife habitat management and preservation; agriculture; water quality; natural gas; utilities, facilities and transportation; and recreation and marsh access. Minor revisions have been made to some policies for clarification and consolidation. The Collinsville-Montezuma Hills Area Plan and Program is no longer part of the General Plan and these water dependent industrial policies have been deleted and replaced with water related industrial policies from the Suisun Marsh Protection Plan.

Policies governing sewage disposal systems have been updated and incorporated into Chapter 12 to reflect sewage disposal requirements adopted by the County under County Code Section 6.4, Sewage Disposal Standards, in 2001 and amended in 2004.

Portions of the Marsh Act and Suisun Marsh Protection Plan are directed toward maintenance of water quality through controls on individual sewage disposal systems, currently a responsibility of the Solano County Department of Resource Management, Environmental Health Services Division. The Marsh Act provides that with the Marsh, the LPP shall include enforceable standards of the operation of septic tanks and wastewater discharges. The basis for this requirement is Policy No. 5 of the Utilities, Facilities and Transportation Section of the Suisun Marsh Protection Plan, which states;

5. Because septic tanks do not function properly in the wetland area, the Solano County Department of Public Health should institute a program to close out existing tanks in the wetlands and require new systems that would properly dispose of wastes as required by the Solano County Health Department and the Regional Water Quality Control Board.

In 1975, Solano County enacted Ordinance No. 888 to regulate individual sewage disposal systems. This ordinance, which was approved by the San Francisco Regional Water Quality Control Board, controlled the installation and operation of septic tank/leachfield systems within the Suisun Marsh. Ordinance No. 888 required the Solano County Department of Public Health to inspect waste disposal systems in the County every five years, or more frequently in areas determined to be susceptible to septic tank failure. Where a system was found to be malfunctioning, a program and timetable were established to correct the malfunction.

Due to staff shortages during the time when the County originally adopted its component of the LPP, the Health Department was not then able to pursue its inspection program as vigorously as it would have liked. Instead, the Health Department responded to specific requests of owners of property in the Marsh to improve systems and worked with these people to alleviate problems. As a result, the Board of Supervisors adopted Resolution No. 80-26 in April 1980, which established a set of policies for inspection of septic systems, and replacement or abatement of nuisance systems, in the Marsh.

In July of 2001, revisions to Solano County Code were approved as Chapter 6.4, Sewage Disposal Standards. These standards were amended again in December of 2004 and are applicable within the Suisun Marsh.

Under Chapter 6.4, a permit from the Health Services Division is required to repair, modify or construct waste disposal systems. Minimum criteria for the siting and construction of a septic tank/leachfield system includes soil typing and identification, percolation rate, soil depth, depth and separation to ground water, ground slope, and adherence to setbacks, including setbacks to surface water. The use of vaults or holding tanks is allowed for specific circumstances such as for duck clubs in the primary area of the Suisun Marsh. Additional changes in the ordinance which help to improve environmental conditions include requirements for site evaluations by professional consultants to identify and mitigate separation to groundwater and the requirement for alternative type septic systems. Alternative systems provide improved effluent distribution throughout the disposal field, have high-level alarms in the dosing tank, require evidence of a maintenance contract with a service provider and ongoing monitoring, and may require pre-treatment devices that produce a higher quality effluent than effluent from conventional septic systems.

As indicated in the Marsh Plan, septic tank/leachfield systems do not operate at optimum efficiency in wetland areas and in general, site conditions for the primary marsh will not meet minimum requirements for the construction of a new standard type on-site sewage disposal system. Under Chapter 6.4, once an improper sewage disposal system is identified, it must be replaced with an on-site sewage disposal system that meets the requirements of Solano County Code. Sites which cannot accommodate a conventional in-ground leaching system due to site conditions may be replaced with alternative type sewage disposal systems if conditions allow or, as a last resort, replaced with holding tanks.

The policies regulating sewage disposal in the Suisun Marsh have been updated to reflect the new standards and requirements contained in Chapter 6.4 and have been added to the new Chapter 12 of the General Plan.

Revision to Chapter 28, Zoning (Part II-A through II-H)

The Suisun Marsh Preservation Act of 1977 requires the County to included, as part of its LPP:

"Zoning ordinances or zoning district maps, or both, designating principal permitted uses on lands within the marsh, which ordinances or maps shall designate the existing agricultural and wildlife habitat uses of such lands a principal permitted uses of such lands." (Section 29401 (e))

The County's component of the LPP, as certified in 1982, contained four zoning districts from the Solano County Code Chapter 28, Zoning: two Limited Agricultural (A-L) Districts, the Water Dependent Industrial (IWD) District, and the Marsh Preservation (MP) District.

The two A-L Districts were created to address land uses within the Secondary Management Area consistent with the following Suisun Marsh Protection Plan policy.

Environmental Policies

3. 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 reserve 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

The MP District was created to address land uses within the Primary Management Area consistent with the following Suisun Marsh Protection Plan Policy.

Environmental Policies

- 2, The Marsh waterways, managed wetlands, tidal marshes, seasonal marshes, and low-land grasslands are critical habitats for marsh-related wildlife and are essential to the integrity of the Suisun Marsh, Therefore, these habitats deserve special protection.

The I-WD district addressed land uses within the Water Related Industrial Reserve area within the Secondary Management Area at Collinsville consistent with the following Suisun Marsh Protection Plan.

Water-Related Industry

Policies 1 through 8 address water –related industries in the Collinsville area. the I-WD zoning district if consistent with these policies and the Suisun marsh Protection Plan Amendment 10-1 including:

1. The upland portion of the Collinsville site, above the 10 foot contour line, presents no significant physical constraints for development and should be reserved for water-related industry use.
2. The low-lying portion of the Collinsville site, below the 10 foot contour line, does present physical constraints for development and consists of critical Marsh-originated wildlife habitats. Never the less, the portion of this area that fronts on deep water should be reserved for water-related industry uses.

The County's component of the LPP also contain zoning code provisions for the issuance of Marsh Development Permits.

The 2012 Amendment contains the following revisions to Chapter 28, Zoning:

Definitions (Part II-A)

Definitions for Complementary Commercial Facilities, Hunting and Fishing Club, and Marsh Oriented Recreation have been added to the zoning code. These are shown in Part II-A.

Suisun Marsh Agricultural District (A-SM) District (Part II-B)

The title of the Limited Agriculture (AL) District has been changed to Suisun Marsh Agricultural (A-SM) District. The zoning regulations applicable to the revised district are shown in Part II-B. Changes to the District text include reformatting of the chapter consistent with the new zoning code and providing clearer definitions and standards addressing agriculture, marsh oriented recreation, and non-conforming uses within the Suisun Marsh. Agricultural Processing has been deleted from the district. Agricultural and marsh education and research facilities, and conservation and mitigation banks, have been added to the District. Non-conforming Use provisions have been added consistent with the Suisun Marsh Preservation Act.

Residential - Traditional Community (R-TC-4) District (Part II-C)

The County has adopted a new zoning district, Residential-Traditional Community (R-TC), to replace the Suburban Residential and Urban Residential zoning districts. A new R-TC-4 classification has been added to the LPP as shown in Part II-C and applied to the existing residential area of the Collinsville Township. The Collinsville Township was previously zoned A-20, Exclusive Agriculture. The establishment and application of this new zoning district is consistent with the new Traditional Community-Residential designation under the General Plan and reflects the residential character of the area. R-TC-4 establishes new setback standards and a 4,000 square foot parcel size which is more consistent with the existing parcel sizes in Collinsville than the standards provided under the prior A-20 district. Non-conforming Use provisions have been added consistent with the Suisun Marsh Preservation Act.

Commercial Recreation - Limited (C-R-L) District (Part II-D)

A new Commercial Recreation - Limited (CR-L) zoning district has been established as shown in Part II-D. This classification has been applied to the Commercial Recreation area in the Collinsville area within the Suisun Marsh. The C-R-L district includes provisions for outdoor recreation, marinas,

interpretive centers, stables, boating and fishing clubs and ecological and agricultural education uses. Non-conforming Use provisions have been added consistent with the Suisun Marsh Preservation Act and the following Suisun Marsh Protection Plan policies:

Recreation and Access

3. Land should also be purchased for public recreation and access to the Marsh for such uses as fishing, boat launching and nature study. These areas should be located on the outer portions of the Marsh near the population centers and easily accessible from existing roads. Improvements for public use should be consistent with protection of wildlife resources.
4. Public agencies acquiring land in the Marsh for public access and recreational use should provide for a balance of recreational needs by expanding and diversifying opportunities for activities such as bird watching, picnicking, hiking and nature study.

Water Dependent Industrial (I-WD) District (Part II-E)

As part of the County's zoning code update, the I-WD district has been reformatted as shown in Part II-E. No changes to the allowed and permitted uses are proposed for the I-WD District. This district will be reviewed and updated at a later date as part of a new specific plan or policy plan for the Collinsville area as required under the General Plan. Non-conforming Use provisions have been added consistent with the Suisun Marsh Preservation Act.

Marsh Preservation (MP) District (Part II-F)

Changes to the MP District as shown in Part II-F include reformatting the chapter and providing clearer definitions and standards addressing crop production, marsh oriented recreation, complementary commercial facilities, and non-conforming uses within the Suisun Marsh. Non-conforming Use provisions have been added consistent with the Suisun Marsh Preservation Act.

Land Use Regulations (Part II-G)

As part of County's zoning code update, a new article, Land Use Regulations has been adopted which consolidates in one place the regulations and standards contained in the General Provisions and Exceptions, and Use Permit sections, of the previous Zoning Code. Land Use Regulations for applicable land uses in the Suisun Marsh have been incorporated into the LPP. The utility provisions have been clarified.

Marsh Development Permit (Part II-H)

The amendments update the Department name and clarify the County's process for approving marsh development permits. Information required as part of a Marsh Development application has also been clarified, along with revisions to bring consistency between Marsh Development Permit and Use Permit provisions of the zoning code.

Revision to Chapter 31, Grading, Drainage, Land Leveling, and Erosion Control (Part II-I)

Chapter 9, Drainage and Land Leveling (previously titled Drainage and Flood Control), and Chapter 31, Grading and Erosion Control, of the Solano County Code were updated and consolidated into a single revised Chapter 31 of the Solano County Code in 2007. Minor clarifying amendments were adopted in 2012 and 2013. Portions of the new Chapter 31, Grading, Drainage, Land Leveling and Erosion Control, are included as Part II-I of this Amendment.

The primary reason for modifying the County's grading and drainage ordinances was to bring those ordinances into conformance with the County's NPDES (National Pollution Discharge Elimination System) permit requirements. This permit, regulated by the Regional Water Quality Control Boards, is part of the national effort to improve water quality under the Federal Clean Water Act, and requires the County to prepare a Storm Water Management Plan. The technical changes accomplished by the ordinance amendment allowed the County's Storm Water Management Plan to be more effective, allowing for better compliance with the NPDES permit. In addition, there were a number of technical changes to make the County's grading regulations consistent with the California Building Code and with grading ordinances from other public agencies.

The Marsh Act requires that the LPP include enforceable standards for development designed (1) to minimize soil erosion, especially during construction in areas of soil instability, (2) to require special provisions for surface and subsurface drainage, (3) to ensure that grading restores, rather than disrupts, natural patterns and volumes of surface runoff, and (4) to limit construction of impermeable surfaces over naturally permeable soils and geologic areas, all to control erosion, sedimentation, and runoff within the Marsh. In addition, the LPP must include enforceable standards for development adjacent to creeks and watercourses to protect riparian habitat and to prevent waterway modification or vegetation removal that increases sedimentation or runoff into the Marsh, to an extent that a significant, adverse environmental impact will occur in the Marsh. These enforceable standards are to be applicable both within the Marsh and within the watershed. For that portion of the Secondary Management Area west of State Highway Route 680 and outside the city limits of the City of Fairfield, the LPP may include only County ordinances that control grading, erosion, sediment, runoff, and creek side development.

The Suisun Marsh Protection Plan found that the fresh water habitats in streams tributary to the Marsh are important to the continued high quality of water in the Marsh sloughs. Tributary streams such as American Canyon and Jameson Canyon Creeks support important riparian vegetation along their banks. This vegetation helps to retain proper water temperatures in the stream channels and filter sediments that would be carried into the Marsh sloughs. It also provides an important habitat for Marsh wildlife, particularly birds, as well as insects and algae that are food for larger aquatic life. Tributary streams such as Suisun, Green Valley, and McCoy Creeks are also important for migratory fish that spawn upstream from the Marsh.

The Suisun Marsh is located where the salt water of the Pacific Ocean and the fresh water of the Sacramento and San Joaquin River Delta meet and mix. Because of its location, it provides a transition between salt and fresh water habitats that creates the unique diversity of fish and wildlife habitats characteristic of a brackish marsh. Changes in land use in the watershed outside the Suisun Marsh could adversely affect water quality in the Marsh through changes in turbidity, temperature, or pollution levels.

The watershed of the Suisun Marsh is also directly related to the protection of the aquatic and wildlife resources of the Marsh. In particular, land uses in the watershed can affect water quality and supply. Activities such as improper grading during development, over-grazing, and construction on steep slopes or highly erodible soils can lead to the transfer of soil materials to fresh

water streams and ultimately to the Marsh. Moreover, riparian vegetation along tributary streams is important habitat to many species of Marsh wildlife and helps to maintain water quality in streams and sloughs. To adequately protect the Marsh, control over runoff, erosion, and sediment transfer are necessary in the immediate Marsh watershed. In addition, controls limiting disruption of riparian vegetation and habitat are necessary.

The Water Supply and Quality section of the Suisun Marsh Protection Plan made the following findings regarding the need to regulate grading and development practices within the Watershed in order to protect water quality within the Marsh:

12. The Fairfield-Suisun groundwater basin drains into the Marsh by subsurface flow and provides fresh water mixing and flushing action. It is recharged with fresh water runoff from the watershed by percolation on the Suisun Valley floor and along the stream channels. Any disruption or impedance of runoff and streamflow such as might occur from stream channelization or further upstream diversions within the watershed may adversely affect the function of the groundwater basins and their relationship with the Marsh. Additionally, any substantial removal of groundwater by pumping or subsurface drainage could interrupt natural subsurface discharges into the fresh water aquifers.

13. Waste water flowing into the Suisun Marsh area that can affect water quality comes from four principal sources: municipal sewage treatment plants, industrial discharges, agricultural return, and stormwater runoff from the watershed. The present level of wastewater discharge to the Suisun Marsh does not appear to have seriously affected the ability of the Marsh to support desired fish and wildlife species.

14. The existing level of turbidity in the Marsh sloughs and bays is an important element of water quality in the Marsh. Changes in the amount of sediments in the water could have adverse effects on fish and wildlife populations. Increased sedimentation caused by soil erosion into tributary streams in the watershed would increase turbidity and reduce light penetration into the water. This could be detrimental to phytoplankton populations which form the basis of the aquatic food chain.

Based on these findings regarding how grading and development practices outside the Marsh but within the watershed could impact water quality within the Marsh, the Water Supply and Quality section of the Suisun Marsh Protection Plan established the following policy:

7. 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 quality of 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.

In addition, the Land Use and Marsh Management section of the Plan established the following policies:

15. 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.

16. 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.

These three policies established in the Suisun Marsh Protection Plan have previously been adopted as general plan policies relating to water quality and are part of the County's component of the LPP. General Plan Water Quality Policies SM.P-13, SM.P-15, and SM.P-18, which are part of the County's component of the LPP, are implemented through the County's ordinances controlling grading, drainage, land leveling, and erosion.

Water Quality Policy SM.P-13 requires controls preventing disruption or impediments to runoff and stream flow that could adversely affect the quality of waters in or entering the Marsh, while Water Quality Policy SM.P-15 requires controls preserving riparian vegetation along tributary streams in the watershed and streams within the Marsh. These types of controls were previously in Chapter 9 at section 9-3(g) of the Solano County Code but have now been moved to Chapter 31 at section 31-20(c)(2). The streams within the watershed for which modifications may be permitted only if necessary to ensure protection of life and existing structures from floods are specifically identified and delineated on the figure entitled "Protected Channels of the Suisun Marsh Watershed," included as part of the County's component of the LPP in 1982. Because this figure is referenced in the updated version of Chapter 31 but not reproduced within that ordinance, it is attached to this 2012 Amendment of the County's LPP.

Within the Marsh, the County may require a Marsh Development permit in addition to a grading permit. Chapter 28 of the Solano County Code regulates the issuance of a Marsh Development permit within the Secondary Management Area of the Marsh. The Marsh Development permit process ensures that grading activities within the Marsh will not adversely impact water quality.

In combination, Chapters 28 and 31 of the Solano County Code implement the water quality policies of the County's component of the LPP both within the watershed and within the Suisun Marsh.

Consistency Between Provisions of the Suisun Marsh Protection Act and Existing County Policy

Section 29427 of the Marsh Act required the County to designate an area within the Watershed that should be retained in agricultural use, or in uses compatible with agricultural use, in order to ensure the long term agricultural use and productivity of agricultural lands within the Marsh. Within this designated area, the County was to do the following:

- (1) Determine the minimum size parcels necessary for long-term agricultural use and productivity,
- (2) Establish enforceable standards limiting or prohibiting land divisions or other types of development that are inconsistent with protection of the marsh and continued agricultural use,
- (3) Establish enforceable standards precluding agricultural uses by type and intensity that are inconsistent with the long-term preservation of the marsh, and
- (4) Limit special assessments against agricultural lands for the provision of public services, the demand for which is not generated by agricultural uses on such lands.

These requirements were not part of the County's component of the LPP but were instead to be completed prior to BCDC's original certification of the County's component. The County fulfilled these requirements through the Board's adoption of Resolution No. 82-115 in June 1982. The Board designated an area 300 feet from the edge of the Suisun Marsh to be retained in agricultural use and determined that retention of this designated area in agricultural use, or uses compatible with agricultural use, would be sufficient to protect the long term agricultural use and productivity of lands within the Marsh.

Any change to the designation, standards, or limitation established pursuant to section 29427 does not become effective unless the County makes specific findings that the change will not adversely affect, directly or indirectly, the long term agricultural use and productivity of agricultural lands within the Marsh. Further, no such change becomes effective until the County has notified BCDC. In order to make the specific findings required by section 29427 and to notify BCDC of various changes, the County has updated the determinations made as part of Board Resolution No. 82-115.

Consistency of Existing Land Use Designations and Zoning Regulations for Certain Land in the Secondary Management Area of the Suisun Marsh West of Interstate 680 with Provisions of the Suisun Marsh Preservation Act

Sections 29403 and 29405 of the Marsh Act require the County to determine enforceable land use standards which are compatible with long-term preservation of the Marsh and to apply the standards to the secondary management area west of I-680.

In preparing its local component, the County reviewed the general plan land use designations and zoning regulations for the area. The hills above I-680 are designated Agriculture on the County's General Plan Land Use Diagram with a twenty acre minimum parcel size under General Plan policy. The entire area is within the Exclusive Agriculture Zoning District with a minimum parcel size of twenty acres. It is County policy to place these land use and zoning designations upon lands that are intended for long term retention in agriculture. The Land Use designation and minimum parcel size are further governed by the Orderly Growth Initiative. Any change in land use from Agriculture is subject to voter approval under provisions of the Orderly Growth Initiative.

In addition, a portion of this area is governed by the Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation. This plan was adopted by the County and the cities of Vallejo, Benicia, and Fairfield in 1994 as part of each jurisdiction's general plan. The plan is

intended to protect land within the Cooperative Planning area in open space and agricultural use.

The Board of Supervisors has found the existing agricultural policies and regulations to be consistent with the long-term protection of agriculture and with the provisions of the Suisun Marsh Preservation Act and Protection Plan.

Areas Adjacent to the Suisun Marsh to be Retained in Uses Compatible with Protection of Long Term Agricultural Use within the Suisun Marsh

In preparing the local component of the Suisun Marsh Local Protection Program, the County has reviewed its existing general plan designations, general plan policies and zoning regulations in order to designate the area adjacent to the Marsh to be retained in agricultural use or uses compatible with long-term agricultural use so as to ensure long term agricultural use and productivity of agricultural lands within the Suisun Marsh. The County has established a zone 300 feet deep adjacent to the marsh boundary to meet the requirements of Section 29427 (a). A review of policies and regulations has also been conducted to establish compliance with Section 29427(b) which directs the County to establish certain enforceable standards to protect long term agriculture in the designated area adjacent to the Marsh. Documentation of compliance with the above mentioned sections of the Public Resources Code is outlined below.

The County, as part of its 2008 General Plan update, has carefully studied and evaluated agricultural use and activity in Solano County. The County commissioned concurrent with the General Plan update an Agricultural Futures Study prepared by UC Davis Agricultural Issues Center. In addition, the General Plan Citizens Advisory Committee (CAC) established an Agricultural Subcommittee. Both the UC Davis study and the CAC Agriculture Subcommittee conducted workshops throughout the County to gather information and input from local farmers and landowners. The findings and recommendations from the UC Davis study and the CAC Agricultural Subcommittee have been incorporated into a new Agricultural Chapter within the 2008 General Plan.

Within the Agricultural Land Use designation, the 2008 General Plan identifies ten separate agricultural regions throughout the County. Four Agricultural Regions surround the Suisun Marsh: Western Hills, Suisun Valley, Jepson Prairie and Montezuma Hills with minimum lot sizes identified for each region.

The Solano County Zoning Regulations contain a Exclusive Agricultural Zoning District (A) and the Zoning Regulations state that "the purpose and intent of the A district is to preserve lands best suited for permanent agricultural use from the encroachment of incompatible uses" and that A-20, A-40, A-80 and A-160 areas "shall be used exclusively for agriculture... and there is no reasonable probability of the removal or modification of this zoning restriction within the near future".

The County has with the following agricultural regions established the following minimum parcel sizes and zoning districts: (1) Western Hills agricultural region west of I-680 established a 20-acre minimum lot size and applied the Exclusive Agricultural District with a minimum parcel size of 20 acres; (2) Suisun Valley agriculture region established a 20-acre minimum lot size and applied the Suisun Valley Agricultural District with a minimum parcel size of 20 acres; (3) Jepson Prairie agriculture region established a 160 acre minimum lot size and applied the Exclusive Agricultural District with a minimum parcel size of 160 acres; and (4) Montezuma Hills agricultural region

established a minimum lot size of 160 acres and applied the Exclusive Agriculture District with a minimum parcel size of 160 acres. The General Plan agricultural land use designations and minimum lot sizes established for each agricultural region are further supported and protected through the Orderly Growth Initiative. Any change to the agricultural land use designations and/or minimum lot sizes established for each region under the 2008 General Plan is subject to voter approval.

Agriculture is a highly dynamic and rapidly changing industry. The agricultural regions represent a snapshot in time and reflect agricultural conditions present in the county at the time of the General Plan update. The agricultural characteristics that make these areas distinct regions also affect marketing and economic characteristics. For these reasons, the County believes that regions should be treated as units and that strategic plans, with specific policies and programs, should be developed to address the issues and needs unique to each region to maintain sustainable agricultural economy in the County.

Because of General Plan policies to protect agricultural lands in productive agricultural use, agricultural zoning districts which retain agricultural parcels in large farmable units, and the existing large parcel sizes of agricultural uses, the County has determined that an area 300 feet from the edge of the Suisun Marsh as shown on the map entitled "Boundaries of the Suisun Marsh" will be sufficient to protect the long-term agricultural use and productivity of agricultural lands within the Marsh.

Proposition 218, passed by the California Voters in 1996, prevents the County from imposing new assessments except with the approval of the majority of the property owners. In addition, Proposition 218 prevents assessments unless the property on which the assessment is levied receives a special benefit from the proceeds of the assessment. These provisions now incorporated into the California Constitution effectively limit any special assessment against agricultural land for the provision of public services, the demand for which is not generated by agricultural uses on such land.