

Chapter 1. Introduction

PURPOSE OF THE BUFFERLANDS MASTER PLAN

The purpose of the Bufferlands Master Plan is to establish a long-term, cost-effective management direction for the Bufferlands that will maintain the existing buffer zone, provide for future expansion and changes in operation of the Sacramento Regional Wastewater Treatment Plant (SRWTP), and protect and enhance the area's environmental resources. The master plan will provide guidelines and policies for alternative land uses, for visitor use and access, and for vegetation and wildlife management.

The master plan is also intended to provide a consistent management framework through the year 2020 that will remain applicable as land use in the surrounding SRWTP area continues to change, as personnel at the Sacramento Regional County Sanitation District (SRCSD) and local, state, and federal agencies change, and as uses of the Bufferlands evolve over time. It is anticipated that the master plan will be periodically reviewed and that it will be revised as necessary to respond to changes in SRCSD and Sacramento County policies. The plan is designed to be flexible in order to accommodate and incorporate such changes.

ORGANIZATION AND USE OF THE BUFFERLANDS MASTER PLAN

The Bufferlands Master Plan is divided into three major parts: background information (Chapters 1, 2, and 3), direction and policies of the plan (Chapter 4), and strategies for plan implementation (Chapter 5).

Background information is provided in three chapters. Chapter 1 describes the purpose of developing the master plan, the general environmental policies and regulations that affect management of the Bufferlands, and the history of previous planning activities in the area. Chapter 2 summarizes the existing land uses, infrastructure, and natural and cultural resources that form the context for Bufferlands management guidelines and policies. Chapter 3 describes proposed future land uses and provides the administrative procedure for evaluating proposals submitted to SRCSD for alternative uses of the Bufferlands.

The plan itself is presented in Chapters 4 and 5. Chapter 4 presents principal management goals, and general and land use-specific management goals and policies, establishing the overall policy framework of the plan. Chapter 5 summarizes the four alternative management schemes proposed for the Bufferlands (representing different areas of emphasis and levels of commitment of staff time and resources), describes the processes used to evaluate the management alternatives and select the preferred alternative, and presents the preferred management alternative in detail. Chapter 6 lists sources cited in the plan.

STUDY AREA

The master plan study area consists of approximately 2,650 acres surrounding the SRWTP between Franklin Boulevard and the Sacramento River south of Meadowview Road (Figure 1-1). The area was acquired in the 1970s by SRCSD to provide a buffer between the newly constructed treatment plant facility and the neighboring community and to provide an area that would accommodate future expansion of the SRWTP (Figure 1-2). The study area is bisected by the north-south right-of-way of the Union Pacific Railroad (UPRR).

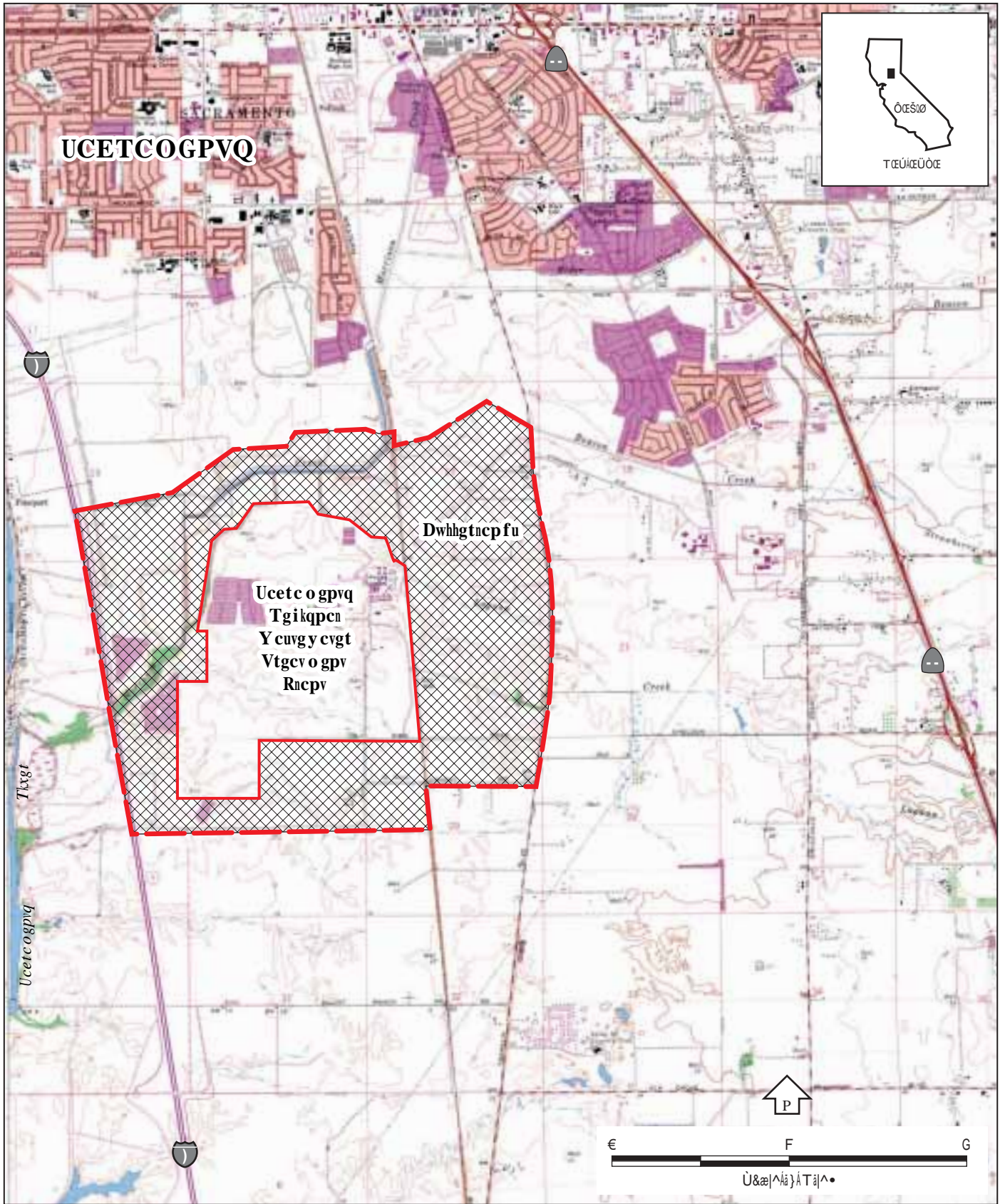
HISTORY OF BUFFERLANDS PLANNING

This section provides a description of previous planning documents that currently guide management of the Bufferlands.

Land Use Management Plan for the Bufferlands

The first land use management plan for the Bufferlands area was adopted by SRCSD in 1983 (Jones & Stokes 1982). The plan was primarily a reactive document that provided SRCSD with an established framework to guide evaluation of land use proposals received from various public agencies and private entities. The plan encouraged the maintenance of land uses that were compatible with operation and expansion of the SRWTP, including open space, agriculture, recreation, and wildlife conservation. Residential, commercial, and industrial uses were considered incompatible.

In 1983, the SRCSD Board adopted a series of management objectives to guide SRWTP staff in evaluating and responding to proposals received from public and private entities for alternative uses of the Bufferlands. In general, these management objectives encourage the maintenance of open-space land uses (e.g., agriculture and wildlife conservation) because intensive land use development, such as residential, commercial, and industrial uses, would conflict with several of the adopted objectives. The principal objectives of Bufferlands management identified in the “Land Use and Management Plan for the Bufferlands Surrounding the Sacramento Regional Water Treatment Plant” (Jones & Stokes 1982) are:



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Figure 1-2

Bufferlands Master Planning Area



LEGEND

----- Plant Property Boundary

----- Plant Process Area Boundary

- › to enable continued operation and future expansion of the SRWTP, unconstrained by Bufferlands uses;
- › to maintain Plant security and ensure safety of SRWTP personnel;
- › to maintain the buffering function of the Bufferlands, preventing land use conflicts between the Plant, the Bufferlands, and surrounding uses;
- › to prevent Bufferlands uses that would subject people to hazards;
- › to allow for productive use of the Bufferlands, including public use consistent with plant-related concerns, public safety, and environmental protection; and
- › to provide a flexible land use management plan responsive to SRCSD needs, government agency policies, and public desires as these may change over time.

Chapter 4 of the 1983 plan described uses of the Bufferlands that were consistent with applicable management policies and site-specific constraints. Although the constraint zones identified in the 1983 plan were intended for interpretive guidance only, they did provide a basic framework for identifying compatible and incompatible land uses. The 1983 plan identified three plant-related constraints as applicable to Bufferlands land use decisions (Figure 1–3):

- › **a primary hazardous gas buffer zone** where recreational use was generally prohibited, consisting of the region east of the plant process area that could potentially be affected by gas releases resulting from handling of chlorine and sulfur dioxide gases;
- › **an odor impact zone** within approximately 2,000 feet of the process area, where high population densities were prohibited; and
- › **a solids dust impact zone** within approximately 1,000 feet of the SRWTP’s sludge solids disposal area in the south and southeast portions of the Bufferlands, where high population densities and all recreational uses were prohibited.

Although the issues associated with these plant-related constraints have changed considerably since 1983, primarily because of technological improvements in plant infrastructure, these constraint zones provide a basic rationale for the initial establishment and continued operation of the Bufferlands.

Urban Forest Master Plan

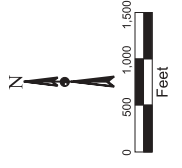
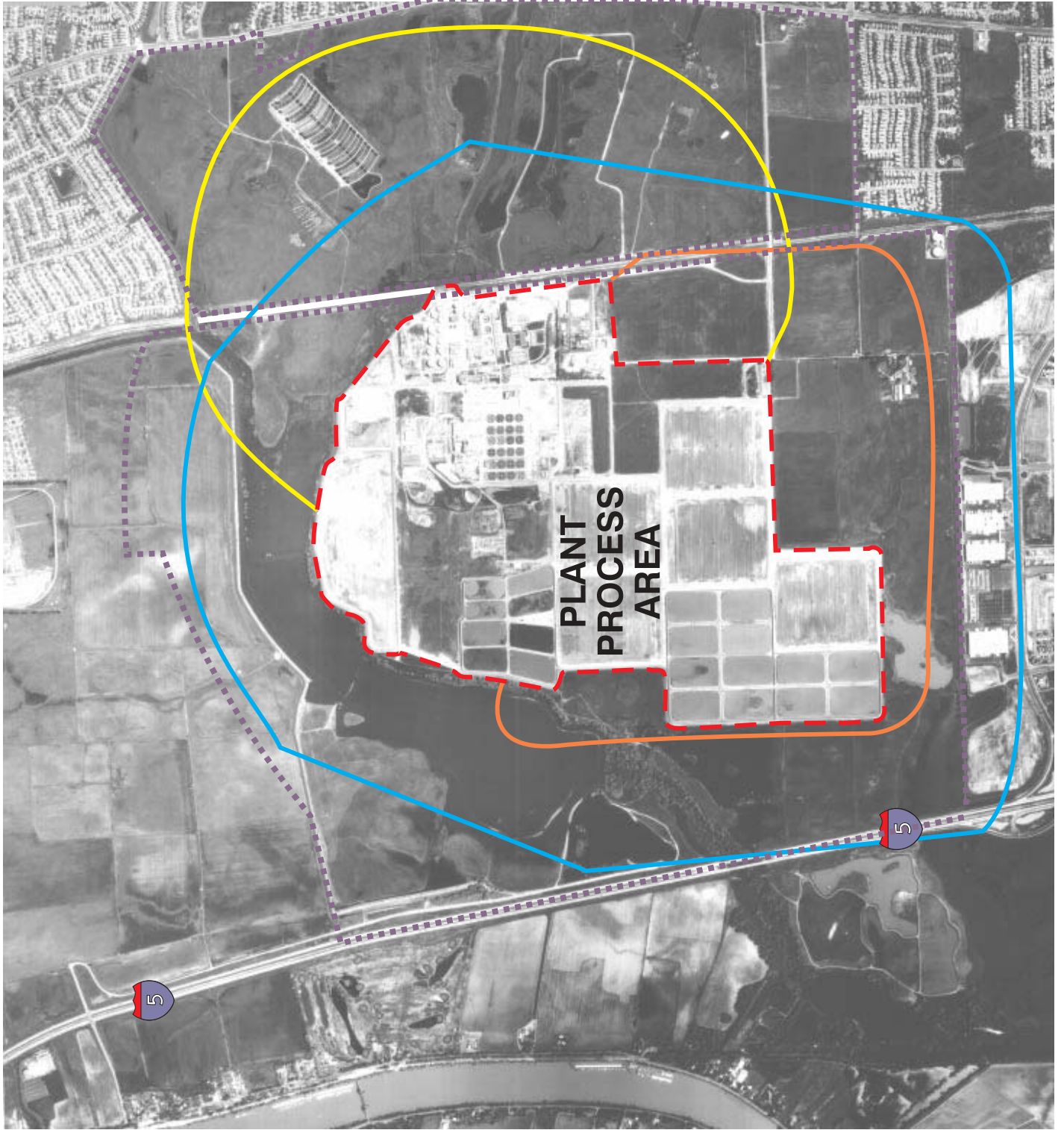
In the years following adoption of the 1983 plan, SRCSD received several formal and informal proposals for alternative uses of the Bufferlands that were consistent with the general theme of urban forestry. Such proposed uses included commercial forest operations, an arboretum, a children’s forest, and wildlife preserves. In response to these proposals, SRCSD prepared an urban

Figure 1-3

Plant-Related Constraint Zones

LEGEND

- Plant Property Boundary
- Plant Process Area Boundary
- Hazardous Gas Buffer Zone
- Odor Impact Zone
- Solids Dust Impact Zone



forest master plan for the Bufferlands to evaluate and recommend appropriate future land uses for the Bufferlands. The Urban Forest Master Plan and Plan Supplement for the Lands Surrounding the Sacramento Regional Wastewater Treatment Plant (Jones & Stokes 1989), formally adopted by the Sacramento County Board of Supervisors in April 1990, recommended land use and management guidelines for the Bufferlands and identified appropriate land uses, including agriculture, commercial forestry, commercial leases for aquaculture and power cogeneration, environmental preserves and habitat mitigation areas, and open space with limited public access.

The Urban Forest Master Plan incorporated the principal management objectives of the 1983 plan and adopted the following new objectives for managing the Bufferlands:

- › to maintain, in perpetuity, an extensive open space within the rapidly developing southern portion of Sacramento County;
- › to provide forested and natural-appearing landscapes that would enhance the visual, watershed, vegetation, and air quality resources of the area;
- › to provide an abundance of high-quality wildlife habitat;
- › to allow for limited public enjoyment of the Bufferlands for educational purposes within a wildland context; and
- › to generate lease revenues for SRCSD.

Upper Beach Lake Wildlife Area and Blue Oak and Wetlands Preserve Specific Plans

Two additional planning studies were prepared for the Bufferlands in 1991: the Upper Beach Lake Wildlife Area Specific Plan (Jones & Stokes 1991a) and the Blue Oak and Wetlands Preserve Specific Plan (Jones & Stokes 1991b). The primary purposes of these plans were to create or enhance natural areas to attract wildlife populations, to improve the aesthetic value of the Bufferlands, to recommend water and wildlife management guidelines and habitat enhancement procedures, to maintain the security of the SRWTP, and to integrate natural area management with the Bufferlands' primary objective of buffering populated areas from the wastewater treatment plant process area.

GENERAL POLICIES AND REGULATIONS

This section presents the mission, vision, and values of the Sacramento County Water Quality Division and summarizes applicable federal, state, and local environmental policies and regulations that affect management of the Bufferlands.

Mission of the Sacramento County Water Quality Division

The SRWTP is operated and managed by Sacramento County employees working within the Water Quality Division of the Department of Engineering, Sacramento County Public Works Agency. Therefore, management objectives for the Bufferlands must embody the mission, vision, and values established for the Water Quality Division. These are as follows:

Vision *To always provide outstanding and environmentally responsible water quality services.*

Mission *To protect and enhance the environment and health of a growing Sacramento community by providing the following services in a safe, efficient, and innovative manner:*

- › · Wastewater collection and conveyance,
- › · Wastewater treatment,
- › · Biosolids and water reuse,
- › · Storm and potable water system operations.

Values *With constant effort toward exceeding our customers' expectations, the values listed below must be exhibited to meet our mission and achieve excellence:*

- › · Cooperation: work together with respect for others.
- › · Continuous Improvement: do the best you can today and even better tomorrow.
- › · Concern for Safety: safety first – yours, your coworker's, and the public's.

Wetlands

Section 404 Clean Water Act

The U.S. Army Corps of Engineers (Corps) has jurisdictional authority to issue permits for activities that result in discharge of dredged or fill materials into waters of the United States, including, but not limited to, perennial and intermittent streams, lakes, ponds, and wetlands, under the authority of Section 404 of the Clean Water Act.¹ An individual permit is required for a project that is not eligible for an exemption, a nationwide permit, or other general permit.

¹ On June 19, 1998, the United States Court of Appeals, in U.S. Army Corps of Engineers v. National Mining

In addition to the basic permit application, requirements for supporting documentation will be determined in consultation with the Corps for each permit application. The Corps' decision to issue a Section 404 permit must document that the permit is being issued in the absence of practicable alternatives that would have less adverse impacts on the aquatic ecosystem. All permit decisions made by the Corps require compliance with other federal laws, including the National Environmental Policy Act, the federal Endangered Species Act (ESA), Section 401 of the Clean Water Act, and Section 106 of the National Historic Preservation Act.

State Regional Water Quality Control Board Policies

If reclaimed water is eventually released to surface waters, the use of reclaimed water for wetland creation or enhancement requires a National Pollutant Discharge Elimination System (NPDES) permit from the applicable Regional Water Quality Control Board (RWQCB) in conjunction with the U.S. Environmental Protection Agency (EPA). Pertinent water quality objectives and requirements are defined on the basis of the water's beneficial uses and are found in the applicable regional Water Quality Control Plan ("Basin Plan"). Use of reclaimed water for irrigation purposes requires a waste discharge permit, which is issued by the RWQCB in conjunction with the California Department of Health Services.

Applicants for a federal license or permit to conduct activities that may result in discharge of a pollutant into waters of the United States (e.g., permits under Section 404) must obtain a Section 401 Water Quality Certification or a waiver of certification verifying that the discharge does not violate state water-quality requirements. If an NPDES permit has been issued, a Section 401 Water Quality Certification is generally not needed.

Additionally, the RWQCB has the responsibility under Section 303 (d) of the Clean Water Act to monitor water quality within the State and to submit a report to EPA every 2 years. As part of the report, the RWQCB is required to update the Section 303 (d) list of impaired water bodies. Water bodies listed as impaired under Clean Water Act Section 303 (d) are not expected to meet water quality standards even if point sources are regulated to comply with the current level of treatment technology required by law. For these impaired water bodies, the State is required to establish Total Maximum Daily Loads (TMDLs) for the pollutants impacting water quality. Loads are allocated among different pollutant sources so that appropriate control actions can be taken and water quality standards achieved.

Association, upheld a lower court decision invalidating the Corps' 1993 "Tolloch Rule" that clarified the definition of "discharge of dredged or fill materials" as including activities involving incidental fallback of materials. Pending the government's decision to appeal this case to the U.S. Supreme Court, activities that do not involve the actual placement of fill materials into waters of the United States are not activities requiring permits from the Corps under Section 404.

California Department of Fish and Game Streambed Alteration Agreement

The California Department of Fish and Game (DFG) regulates activities that will: substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. These activities, when conducted by state or local agencies (including public utilities that are project proponents) are regulated under Sections 1600–1607 of the California Fish and Game Code. DFG may take jurisdiction over any stream or water body in which wildlife lives or from which wildlife receives benefit. DFG includes under its jurisdiction the riparian habitat associated with perennial or intermittent streams that may be altered by a project. If streams would be affected by implementation of a project, SRCSD is required to obtain a streambed alteration agreement from DFG before flow, bed, or bank modifications can proceed.

Special-Status Species and Biological Communities

The following sections provide a description of the regulations governing habitats and species recognized as important by local, state, and federal agencies, or legally protected under state or federal law.

Federal Endangered Species Act

The federal ESA contains several provisions that are potentially relevant to management of the Bufferlands’s resources. Section 9 of the ESA prohibits the “take” of any fish or wildlife species listed by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) as threatened or endangered without prior approval through either Section 7 or Section 10. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Therefore, take is any action that harms the species or adversely affects its habitat. Section 7 of the federal ESA requires all federal agencies, in consultation with the Secretaries of the Interior and Commerce (acting through USFWS and NMFS, respectively), to ensure that their actions do not jeopardize the continued existence of species listed as endangered or threatened, or result in the destruction or adverse modification of the critical habitat of these species. Section 10 of the ESA establishes the “incidental take permit” process, which authorizes nonfederal entities to take federally listed wildlife or fish if such taking occurs incidentally during otherwise lawful activity. Issuance of a Section 10 incidental take permit requires concurrent approval by the USFWS or NMFS of a habitat conservation plan for the listed species.

California Endangered Species Act

The California ESA prohibits the take of plant and animal species designated by DFG as endangered or threatened. As defined by the California ESA, take includes hunting, pursuing, catching, capturing, killing, or attempting such activity. Section 2081 of the California ESA

authorizes DFG to issue permits to or to enter into memoranda of understanding with individuals, public agencies, universities, zoological gardens, and scientific and educational institutions to import, take, or possess any threatened or endangered species for scientific, educational, or management purposes. Although it is not required, DFG encourages preparation of a habitat management plan specifying management actions that will be taken to provide benefits to the local population or to the species overall. Section 2090 of the California ESA requires a state agency acting as a California Environmental Quality Act (CEQA) lead agency to consult with DFG when preparing CEQA documents to ensure that any action authorized, funded, or carried out by the state lead agency is not likely to jeopardize the continued existence of any species listed under the California ESA as threatened or endangered, or to destroy or adversely modify habitat necessary to the continued existence of the species.

California Environmental Quality Act

CEQA applies to all discretionary projects proposed or approved by California public agencies, including state, regional, county, and local agencies, unless an exemption applies. Under CEQA, environmental impact assessments must be prepared to disclose the impacts of a proposed project and to outline project alternatives and mitigation measures. CEQA also requires public agencies to circulate these documents to other agencies and to the public for comment before making decisions. CEQA provides protection not only for state-listed species but also for any species that can be shown to meet the criteria for state listing (CEQA Section 15380). This generally includes plant species listed in categories 1A, 1B, and 2 by the California Native Plant Society, because in a majority of cases these species would qualify for state listing.

Sacramento County General Plan Policies

The Sacramento County General Plan Conservation Element contains policies to protect and expand marsh and riparian woodland habitats, vernal pools, and wetlands (County of Sacramento 1993). Measures that are relevant to management of the Bufferlands include the following:

CO-60. Marshland and riparian areas of special significance shall be designated as natural preserves in the Sacramento County General Plan.

CO-61. Natural preserves shall not include adjacent irrigated pasture or cropland. However, they may include up to 200 feet of adjoining grassland or grazing area, or up to 0.25 mile of grassland between parallel riparian or marsh areas.

CO-62. Ensure no net loss of marsh and riparian woodland acreage, values, or functions.

CO-64. Seasonal and permanent marshland within designated natural preserves shall not be drained or filled for the purpose of converting the land to another use.

CO-65. In any cases where complete or selective removal of riparian woodland or scrub habitat is necessary for channel maintenance, public safety, or installation of

infrastructure, it will be planned and carried out, or mitigated, so as to minimize unavoidable impacts upon biological resources.

CO-66. Encroachments within the designated floodway of Sacramento waterways shall be consistent with policies to protect marsh and riparian areas.

CO-68. Consistent with overall land use policies, the County shall support and facilitate the creation and biological enhancement of large natural preserves or wildlife refuges by other government entities or by private individuals or organizations. Such areas may, but need not necessarily, function as mitigation banks for other impacts upon biological resources due to development.

CO-69. Review projects for potential to restore marsh/riparian woodlands and consider effects on vernal pools, groundwater, flooding, and proposed fill or removal of marsh and riparian habitat.

CO-70. Public or private projects involving filling or removal of marsh/riparian habitat shall be mitigated outside of natural preserves where onsite mitigation is not desirable or appropriate through the purchase of mitigation credits for restored wetlands/riparian areas at no net loss.

CO-83. Ensure no net loss of vernal pool acreage, and/or values and functions, and mitigate any loss in relation to the values of quality of habitat.

CO-84. Evaluate feasible onsite alternatives in the environmental review process that reduce impacts on vernal pools and provide effective onsite preservation in terms of minimum management requirements, effective size, and evaluation criteria.

Additionally, the Conservation Element recommends implementing the following practices to protect special-status species:

CO-143. Control human access to critical habitat areas on public lands to minimize the impact on and disturbance of threatened and endangered species.

CO-144. Protect critical habitat on public lands from pesticide and other similar chemical residues.

CO-145. Work with the county and the mosquito abatement district to ensure that mosquito control measures having the least effect on non-target species are implemented in preserved wetlands throughout the county.

Cultural Resources

CEQA Cultural and Historical Resources Regulation

CEQA requires that where a project may adversely affect a unique archaeological resource, the lead agency for that project must treat that effect as a significant environmental impact and prepare an environmental impact report. When an archaeological resource is listed in or eligible for listing in the California Register of Historical Resources, CEQA requires that any substantial adverse effect on that resource be considered a significant environmental impact. Under CEQA, a project that may cause a substantial adverse change in a historical resource is also a project that may have a significant impact on the environment; historical resources include, but are not necessarily limited to, resources listed in or determined to be eligible for listing in the California Register of Historical Resources.

Flood Control

U.S. Army Corps of Engineers and Sacramento Area Flood Control Agencies' Policies

Construction activities in proximity to creeks and levees may require an encroachment permit from the Reclamation Board of the California Department of Water Resources. Before an application for an encroachment permit can be submitted to the Reclamation Board, the application must be endorsed by the agency responsible for maintaining levees within the area of the proposed work (such as a reclamation district, drainage district, flood control district, levee district, county, or city). The Reclamation Board uses three general standards to evaluate applications for encroachment permits: (1) conformance with the Reclamation Board's adopted standards for encroachments, (2) conformance with any designated floodway plan for the project area, and (3) the environmental effects of the action.

The Bufferlands are within a Federal Emergency Management Agency (FEMA)-designated floodplain. Hence, the Sacramento Public Works Department Water Resources Division has jurisdiction to enforce floodplain management ordinances that implement a no-net-loss floodplain storage policy. Loss of floodplain storage as a result of construction activities may need to be offset by the provision within the floodplain of additional floodplain storage equal to the amount lost. In addition, use of existing streams to carry increased levels of treated effluent may be subject to seasonal limitation to avoid loss of floodplain storage capacity. Where significant changes are proposed within a federal floodplain, such that the activities would change the way the floodplain is drawn on the FEMA maps, a FEMA submittal consisting of a Letter of Map Revision or a Conditional Letter of Map Revision is required.

Vector Control

Sacramento-Yolo Mosquito and Vector Control District Policies

The Sacramento-Yolo Mosquito and Vector Control District provides wetland development and management guidelines for mosquito control. Guidelines address water management, vegetation management, waterway maintenance, water quality, biological control, chemical control, and surveillance. Examples of guidelines include:

- › **Water Management:** have an independent water level control system for each permanent and seasonal wet area.
- › **Vegetation Management:** limit dense stands of aquatic vegetation from shore margins in shallow areas to lower harborage and enhance wave action.
- › **Waterway Maintenance:** levees, drain ditches, and other water structures should be constructed and maintained to prevent seepage or flooding into adjacent lowland areas.
- › **Water Quality:** inhibit all organically enriched effluent, biological, or chemical pollutants and contaminants from entering wetlands.

Tree Protection

The Bufferlands supports numerous native and cultivated trees that constitute an important aesthetic resource and provide habitat for a variety of birds and small mammals. The following section provides a description of state and local policies that provide varying degrees of protection for this resource.

California Department of Fish and Game

It is the policy of DFG to encourage projects to be designed to prevent or minimize the loss of California native oak trees. If removal of native oak trees is unavoidable, DFG requires that a mitigation plan be prepared. The mitigation plan should include: protection of trees that are retained; replacement at a ratio of 5:1 of trees greater than 2 inches in diameter at breast height (dbh) (“breast height” is defined as 4.5 feet above ground on the high side of the tree); replacement of trees less than 2 inches dbh at a ratio of 1:1 for each inch of dbh; and development of a 5-year maintenance and monitoring plan with a minimum 80% success rate.

County of Sacramento

The County of Sacramento provides for protection of native tree species and non-native oaks through policies in its general plan (County of Sacramento 1993) and through the County Tree Preservation Ordinance (Sacramento County Code, Chapter 19.12 .010–19.12.240).

County General Plan. The Conservation Element of the County General Plan includes the objective of preserving and protecting native oak woodlands and landmark trees, which are defined as non-native oaks with a dbh of 19 inches or more. The stated intent of this objective is to conserve native trees (excluding cottonwoods), as well as landmark trees. The following policies designed to meet this objective are relevant to the Bufferlands Master Plan:

- CO-130 Make every effort to protect and preserve non-oak native trees, excluding cottonwoods, and landmark trees and protect and preserve native oak trees measuring 6 inches in diameter at 4.5 feet above the ground in urban and rural areas, excluding parcels zoned exclusively for agriculture.
- CO-132 If the project site is not capable of supporting all the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated shall be paid to the County’s Tree Preservation Fund. The replacement cost of trees shall be established in accordance with the Council of Tree and Landscape Appraisers’ standards for appraising trees.
- CO-133 For discretionary projects involving native oaks, ensure no net loss of canopy area by (1) preserving the main, central portions of consolidated and isolated groves constituting healthy and unhealthy native oak canopy; and (2) provide an area onsite to mitigate any canopy lost. Native oak mitigation area must be a contiguous area onsite which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration. If [an] onsite mitigation area is not available due to area limitations, developer shall provide offsite mitigation consistent with policy proposed in CO-136.
- CO-134 Mitigate for loss of trees for road expansion and development consistent with County Tree Ordinance and General Plan Policies.
- CO-135 In 15 years the native oak canopy within onsite mitigation areas shall be 50 percent canopy coverage for valley oak and 30 percent canopy coverage for blue oak and other native oaks.
- CO-136 If onsite mitigation is not possible given site limitations, offsite mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be used as a suitable site for replacement tree plantings required by ordinances or other mitigations:

- a. Equal or greater to the total area that is included within a radius of 30 feet of the dripline of all trees to be removed;
- b. Adjacent to protected stream corridor or other preserved natural areas;
- c. Supports a significant number of broadleaf trees; and
- d. Offers good potential for continued regeneration of an integrated woodland community.

County Tree Preservation Ordinance. The County Tree Preservation Ordinance states that a permit will be required for the removal of any tree or for grading, excavating, or trenching within the dripline (defined as an area delineated by projection of the periphery of the crown area of a tree down to the ground surface) of any native tree within designated urban areas. Designated urban areas in the vicinity of the Bufferlands include the area north of Elk Grove Boulevard, east of Interstate 5, south of the Sacramento City limits, and west of Highway 99. Under the ordinance, “tree” is defined as any native oak tree having at least one trunk of 6 inches dbh, or a multi-trunked native oak tree having an aggregate trunk diameter of 10 inches or more. Permit procedure requires submittal of a permit application to the Director of Public Works not less than 10 days before such a tree is scheduled for removal.