

Appendix G. Complete Text of Proposed Management Alternatives A, B, and C

This appendix contains a complete description of the three management alternatives initially developed for the Bufferlands: Alternative A – Custodial Management, Alternative B – Current Management, and Alternative C – Expanded Management. The overall management goal for each alternative is given, along with the specific management objectives and strategies proposed for implementation under that alternative. Tables G–1 through G–3 provide comparative summaries of Alternatives A, B, and C. Tables G–4 through G–6 present the projected implementation costs associated with implementing Alternatives A, B, and C. (See Chapter 5 for a discussion of the alternatives development process, for the complete text of the preferred management alternative, Alternative D, and for information on the cost of implementing Alternative D.)

Alternative A – Custodial Management

Management Goal: To allow continued plant operation and expansion while maintaining plant security, protecting plant infrastructure, minimizing conflicts with the local community, maintaining public safety and security, and ensuring compliance with local, state, and federal regulatory requirements.

Hydrology Management

Management Objective. Manage the hydrology of the Bufferlands’ water bodies for flood protection.

Management Strategies.

HM-1: Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from drainage ditches, creek channels, and around water control structures to improve flood conveyance. Regularly manipulate water control structures to maximize flood protection. Vegetation and other obstructions will be cleared regularly, as determined by the inspections.

Table G-1. Overview of Alternative A (Custodial Management)

Summary: Under Alternative A, current management activities would be eliminated or reduced to minimal levels. Management activities would focus on maintaining public safety and security, protecting plant infrastructure, promoting additional leased land uses, and complying with regulatory requirements and conditions associated with existing mitigation sites.

Management Goal: To allow continued plant operation and expansion while maintaining plant security, protecting plant infrastructure, minimizing conflicts with the local community, maintaining public safety and security, and ensuring compliance with local, state, and federal regulatory requirements.

	Hydrology Management	Water Quality Management	Mosquito Management	Habitat and Wildlife Management
Management Objective	Manage the hydrology of the Bufferlands' water bodies for flood protection.	Monitor water quality in Laguna, Mission, and Unabashed Creeks and other surface waters on the Bufferlands to measure compliance with estuarine water quality standards.	Control or manage mosquito populations such that they do not exceed site levels in the Bufferlands, and other water bodies on the Bufferlands.	Maintain and protect habitats for threatened and endangered species.
Management Strategies	<ul style="list-style-type: none"> Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from water control structures to improve floodflow conveyance. Offer obstructions regularly, as needed. Manipulate obstructions to improve or improve flood protection. Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from storm drains along the boundary of the Bufferlands to improve floodflow conveyance. Clear obstructions regularly, as needed. 	<ul style="list-style-type: none"> Participate in the SRWTP water quality monitoring program. Conduct regular ongoing water quality monitoring in Laguna, Mission, and Unabashed Creeks and other surface waters on the Bufferlands. Implement the SRWTP Toxicity Response and Assessment Plan as needed. 	<ul style="list-style-type: none"> Monitor populations of mosquitos in wetlands on the Bufferlands as directed by the State Water Resources Control Board. Increased breeding is found, implement suitable control practices, or drain the wetland, immediately. Coordinate all control activities with the Sacramento-Yuba Mosquito and Vector Control Agency. 	<ul style="list-style-type: none"> Conduct annual surveys to monitor listed species populations and sensitive habitats. Identify feral animals that may pose a risk to public safety or may adversely affect listed species or sensitive habitats. Coordinate activities with feral animal control agency.

	Cultural Resource Management	Aesthetic Resource Management	Infrastructure Management	Mitigation Commitments Management	Lease Management
Management Objective	Protect important cultural resources on the Bufferlands.	List the negative aesthetic effects of plant operations on the public and the surrounding community.	Maintain and manage access and infrastructure to provide for public safety.	Maintain mitigation commitments and manage mitigation areas in a manner that is consistent with regulatory requirements for lands within the Bufferlands.	Maintain existing land uses that do not create excessive management costs or conflicts with operations or other Bufferlands management objectives.
Management Strategies	<ul style="list-style-type: none"> Coordinate SRWTP and leases construction activities to ensure that historic cultural resources are protected and newly discovered sites are identified and reported to the appropriate local authorities. 	<ul style="list-style-type: none"> Coordinate and/or conduct trash removal and trash control. 	<ul style="list-style-type: none"> Install and maintain fencing, utility culverts, and other facilities to ensure public safety and plant security. Coordinate security patrol activities. Establish and maintain firebreaks around the perimeter of the Bufferlands. Control vegetation on designated leases as required by the Corps. 	<ul style="list-style-type: none"> Maintain and provide specific terms specific mitigation sites to ensure consistency with regulatory requirements and conditions. Maintain and monitor uses placed as mitigation to ensure consistency with regulatory requirements and conditions. Operate water control structures to manage vegetation in the Wetlands Preserve in a manner consistent with regulatory requirements and conditions. 	<ul style="list-style-type: none"> Administer current lease agreements and amendments to ensure that these Bufferlands management objectives and requirements are consistent with other requirements, and that they do not conflict with adjacent land uses. Work with lessees to address and resolve any issues or concerns. Coordinate lease documentation with Sacramento County Real Estate Division.

Table G-2. Overview of Alternative B (Current Management)

Summary: Under Alternative B, current management activities and levels will continue. No new wildlife management, habitat restoration, or research and development activities will be initiated under this alternative. Existing public use and public education opportunities will be formalized but will not be expanded.

Management Goal: To allow continued plant operation and expansion while maintaining plant security, minimizing conflicts with the local community, protecting sensitive natural and cultural resources, maintaining leased areas, managing wildlife habitats, and providing limited public use and education opportunities on the Bufferlands.

Management Objectives	Hydrology Management	Water Quality Management	Mosquito Management	Habitat and Wildlife Management	Cultural Resource Management	Aesthetic Resource Management	Environmental Education Management	Research and Development Management	Infrastructure Management
	<p>Manage the hydrology of the Bufferlands' water bodies for flood protection.</p> <ul style="list-style-type: none"> Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from water control structures to improve floodflow conveyance. Clear obstructions regularly, as needed. Coordinate flood protection. Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from normal drains along the boundary of the Bufferlands to improve floodflow conveyance. Clear obstructions regularly, as needed. 	<p>Monitor water quality in the ponds, lakes, and other water bodies on the Bufferlands.</p> <ul style="list-style-type: none"> Participate in the SRWTP water quality monitoring program. Conduct regular, ongoing water quality monitoring in Laguna, Morrison, and Unibonase Creeks and other surface waters on the Bufferlands. Implement the SRWTP Toxicity Response and Assessment Plan as needed. 	<p>Control or manage mosquito populations such that they do not exceed safe levels in the ponds, lakes, and other water bodies on the Bufferlands.</p> <ul style="list-style-type: none"> Monitor populations of mosquito larvae on the Bufferlands as dictated by climate control practices, or drain the wetland, immediately. Coordinate all control activities with the Sacramento-Yolo Mosquito and Vector Control Agency. 	<p>Maintain and enhance biological resources values on the Bufferlands through science management and integration with other resource management programs.</p> <ul style="list-style-type: none"> Conduct annual surveys to monitor listed species populations and sensitive habitats. Identify focal animals that may pose a risk to public safety or may adversely affect listed species or sensitive habitats. Coordinate removal activities with local animal control agency. Conduct annual vegetation surveys to monitor trees and extent of vegetation change and species affected, and to assess the effectiveness of management activities. Control or eradicate noxious weeds and invasive plants in or near sensitive habitats using cultural (e.g., fire, grazing), mechanical and/or chemical measures. Implement vegetation control to promote the establishment and survival of native grasses. Manage wetland vegetation to enhance productivity for waterfowl. Conduct inventories of waterfowl and other wildlife to assess the effectiveness of management activities. Install and maintain artificial post structures to enhance habitat for desired wildlife species. Manage wetland water levels. Maintain beaver populations and coordinate with DFG to assess the need for control measures. Conduct bi-annual fish surveys to determine rate and extent of change in species affected, and to assess the effectiveness of management activities. Prepare reports documenting survey results. Enhance aquatic habitat for fish species. Maintain existing fisheries restoration plantings; further enhance existing restoration sites with additional plantings to promote the establishment of complete populations. 	<p>Protect important cultural resources on the Bufferlands.</p> <ul style="list-style-type: none"> Coordinate SRWTP and lesser construction activities with cultural resources to protect and preserve newly discovered sites identified and reported to appropriate local authorities. 	<p>Maintain important aesthetic features on the Bufferlands and limit the negative aesthetic effects of an activities on the general public and the surrounding community.</p> <ul style="list-style-type: none"> Coordinate and/or conduct trash removal and trash control. Conduct the maintenance work (e.g., irrigation, weed control, pest control) required to ensure continued survival of aesthetic features in the Trail of Trees Project area. 	<p>Maintain existing opportunities for environmental education and public outreach.</p> <ul style="list-style-type: none"> Respond to requests from community groups for public education and outreach opportunities (e.g., field trips). As needed, provide assistance to the SRCSO Public Information Officer. Continue coordinating and participating in the annual "Walk on the Wild Side" event with the Sacramento-San Joaquin Wildlife Refuge. 	<p>Maintain existing opportunities for research and development.</p> <ul style="list-style-type: none"> Promote research activities that may support improved management of the Bufferlands. 	<p>Maintain and manage access and infrastructure to protect human life and property, protect sensitive resources, and provide for public safety.</p> <ul style="list-style-type: none"> Install and maintain fencing, signage, culverts, and other facilities to ensure public safety and plant security. Establish and maintain firebreaks around the perimeter of the Bufferlands. Control vegetation on designated areas as required by the Corps. Coordinate fire protection and fire management activities with the Elk Grove Fire Protection District.

Management Strategies

Management Objective	Management Strategies
	<p>Mitigation Commitments Management</p> <ul style="list-style-type: none"> Maintain mitigation commitments and manage mitigation areas in a manner that is consistent with the requirements and conditions adopted by SRCSO and regulatory agencies for limits within the Bufferlands. Maintain and monitor special-status species populations in accordance with regulatory requirements and conditions. Maintain and monitor toxic plant species in accordance with regulatory requirements and conditions. Manage and maintain wetlands mitigation areas in accordance with regulatory requirements and conditions.
	<p>Lease Management</p> <p>Maintain land uses that do not create excessive management costs or conflict with plans operation or other Bufferlands management objectives.</p> <ul style="list-style-type: none"> Administer current lease agreements and assessments to ensure that lease entitlements are consistent with other Bufferlands management objectives and with local, state, and federal regulatory requirements, and that they do not conflict with adjacent land uses or the needs of the local community. Work with lessees to address and resolve any issues or concerns. Coordinate lease documentation with the Sacramento County Real Estate Division.

Table G-3. Overview of Alternative C (Expanded Management)

Summary: Under Alternative C, environmental education, research and development, public outreach, and supervised and unsupervised public access would be expanded beyond current level. Management activities such as water quality monitoring, wildlife habitat, infrastructure, and lease management would be moderately expanded beyond current levels, while other activities (mosquito control, hydrology) will be maintained at current levels.

Management Goal: To allow continued plant operation and expansion while maintaining plant security, minimizing conflicts with the local community, protecting sensitive natural and cultural resources, maintaining leased areas, and enhancing wildlife habitats, while providing expanded public use, education, and research and development opportunities.

Management Objective	Hydrology Management	Water Quality Management	Mosquito Management	Habitat and Wildlife Management	Cultural Resource Management	Aesthetic Resource Management
	<p>Manage the hydrology of the Bufferlands? water bodies for flood prevention.</p> <ul style="list-style-type: none"> Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from drainage ditches, creek channels, and other water courses to ensure unobstructed flow. Conduct water quality monitoring to ensure water quality standards are met. Implement water quality control measures to maintain water quality standards. Conduct inspections to determine the need for clearing debris and other obstructions from storm drains along the boundary of the Bufferlands. Conduct inspections to determine the need for clearing debris and other obstructions from storm drains along the boundary of the Bufferlands. 	<p>Enhance water quality in the ponds, lakes, and other water bodies on the Bufferlands.</p> <ul style="list-style-type: none"> Participate in the SRWTP water quality monitoring program. Conduct regular, ongoing water-quality monitoring in Laguna, Moribow, and Unabehouse Creeks and other surface waters on the Bufferlands. Implement the SRWTP Toxicity Response and Assessment Plan as needed. In consultation with local agencies, develop and implement an expanded water quality monitoring program to identify sources of contaminants and develop appropriate pollution control measures. Investigate the feasibility of (nutritional, physical, and chemical) pollution-control methods and of nonstructural methods such as establishing wetland vegetation. Develop and implement best management practices (BMPs) to reduce soil erosion, sedimentation, and nutrient inputs throughout the Bufferlands. Ensure that all staff, contractors, residents, visitors, leasees, and others performing construction, maintenance, or other activities within the Bufferlands adhere to standards and BMPs. 	<p>Control or manage mosquito populations such that they do not exceed safe levels in the ponds, lakes, and other water bodies on the Bufferlands.</p> <ul style="list-style-type: none"> Mosquito populations (populations) have to be kept at a level that does not exceed safe levels by various conditions. If evidence of increased breeding is found, implement control measures. If evidence of increased breeding is found, immediately implement control measures, including: <ul style="list-style-type: none"> Coordinate mosquito abatement and eradication and enhancement projects with the Sacramento-Yuba Mosquito and Vector Control District. Direct to prevent the creation of mosquito breeding sites and preclude the need for increased vector control. Coordinate all summer eradication activities on the Bufferlands with the Sacramento-Yuba Mosquito and Vector Control District. 	<p>Maintain and enhance biological resource values on the Bufferlands through active management and integration with other resource management programs.</p> <ul style="list-style-type: none"> Conduct annual surveys to monitor listed species populations and sensitive habitats. Identify potential risks that may pose a risk to public safety or any other resource values. Coordinate removal activities with local natural resource agencies. Conduct annual vegetation surveys to monitor rates and extent of vegetation loss and develop a plan to address the effectiveness of management activities. Control or eradicate noxious weeds and invasive plants in or near sensitive habitats (e.g., riparian, vernal pools, and other natural resource areas). Implement vegetation control to promote the establishment and survival of native species. Manage wetland vegetation to enhance productivity for waterfowl and other wildlife. Conduct inventories of wetland and other wildlife to assess the effectiveness of management activities. Install and maintain artificial nest structures to enhance habitat for listed wildlife species. Manage wetland water levels. Monitor beaver populations and coordinate with DFG to assess the need for control measures. Conduct annual fish surveys to determine the need for change in management activities. Prepare reports documenting survey results. Enhance aquatic habitat for fish species. Maintain existing riparian restoration plantings; further enhance existing restoration sites with additional plantings to promote the establishment of complete ecosystems. Manage wetland water levels, to the extent feasible, to maximize wildlife habitat values. Implement riparian or other control methods to manage forest habitat that may adversely affect native wildlife populations or pose a risk to public safety. Coordinate removal activities with the local natural control agency. Develop and implement a cooperative agreement with the Sierra Lakes National Wildlife Refuge to promote information and resource sharing. Actively pursue funding to develop habitat enhancement and restoration projects. 	<p>Protect important cultural resources on the Bufferlands.</p> <ul style="list-style-type: none"> Conduct SRWTP and best management activities to ensure that known cultural resources are protected and that newly discovered sites are identified and reported to the appropriate local authorities. Restore and maintain existing historic structures, such as historic barns. 	<p>Maintain historic landmarks in or near the Bufferlands and limit the adverse public effects of their activities on the general public and the surrounding community.</p> <ul style="list-style-type: none"> Coordinate author contact with removal and trash removal. Conduct the maintenance work (e.g., painting, cleaning, etc.) as needed to ensure continued survival and visibility of plantings in the Trail of Trees Project area.
Management Strategies						

Table G-3. Overview of Alternative C (Expanded Management), continued

Management Objective	Environmental Education Management	Research and Development Management	Infrastructure Management	Mitigation Commitments Management	Lease Management
<p>Provide increased opportunities for environmental education, public outreach, and public access.</p> <ul style="list-style-type: none"> Respond to requests from community groups for public education and outreach, such as speaking engagements, tours, and school field trips. As needed, provide assistance to the SRCSO Public Information Office. Coordinate coordination and participating in the annual "Wade on the Wet Side" environmental education event with the Stone Lake National Wildlife Refuge. Implement programs to provide both supervised and unsupervised public access to wetlands, including public safety courses, and other SRMTP and SRCSO policies. Promote use of the Bufferlands by public organizations for public education activities such as field trips, lectures, and talks. Develop and conduct a public outreach program, possibly including visits by Bufferlands staff to local communities or schools, and/or placement of public information displays at public locations, including schools. Develop and distribute public information materials on management issues and activities on the Bufferlands, such as species status reports, water quality, resource protection, and management, habitat enhancement, wildlife habitat management, etc. Prepare and make available a multimedia brochure on the Bufferlands that provides an overview of the area's resources, function, and values, and emphasizes the potential for educational opportunities. Develop and conduct an environmental education program that allows community participation in Bufferlands management activities such as field courses and habitat restoration projects. 	<p>Maintain existing opportunities for research and development.</p> <ul style="list-style-type: none"> Conduct research activities that may improve management of the Bufferlands. Actively pursue funds for focused research projects on management and restoration of the Bufferlands. Dedicate staff time for applied research activities and for coordinating activities of other researchers. 	<p>Maintain and manage access and infrastructure to protect and enhance public safety and other resources, and provide for public safety.</p> <ul style="list-style-type: none"> Install and maintain fencing, signage, culverts, and other facilities to ensure public safety and other resources. Coordinate security patrol activities. Establish and maintain firebreaks around the perimeter of the Bufferlands. Control vegetation on designated levees as required by the Corps. Coordinate fire prevention and fuels management activities with the Elk Grove Fire Protection District. 	<p>Maintain mitigation commitments and manage mitigation conditions subject to SRCSO and regulatory agencies for leases within the Bufferlands.</p> <ul style="list-style-type: none"> Maintain and monitor specific lease species mitigation sites and consistency with regulatory requirements and conditions. Maintain and monitor trees planted as mitigation to ensure consistency with regulatory requirements and conditions. Manage and maintain wetlands mitigation areas to ensure consistency with regulatory requirements and conditions. 	<p>Encourage new lease uses, particularly agricultural activities that are compatible and/or beneficial to wildlife, while ensuring that leases do not create excessive management costs or conflicts with other operations, historical land uses, or other Bufferlands management objectives.</p> <ul style="list-style-type: none"> Administer current lease agreements and cooperate to ensure that these agreements are consistent with other Bufferlands management objectives. Work with leases to address and resolve any issues or concerns. Coordinate lease documentation with the Sacramento County Real Estate Division. Work with agricultural leases to: <ul style="list-style-type: none"> discourage lease establishment around sensitive species locations, riparian zones, water bodies, and sensitive cultural resource areas; encourage the production of crops (e.g., hay, grain) that would provide benefits for wildlife; encourage delayed harvesting (July 1) to avoid destroying nests and displacing or killing ground nesting birds; encourage delays in tillage harvested fields to provide a food source for waterfowl, songbirds, and other wildlife species during the fall and winter (if spring cultivation is planned, tillage should be completed before the March nesting season); and develop a required annual compliance plan that outlines cultivation, irrigation, pesticide application, pesticide reporting, and harvesting operations. Encourage construction of rainwater return and/or other systems to manage and enhance the quality of agricultural drain water. Work with agricultural leases to: <ul style="list-style-type: none"> develop annual grazing plans for all livestock leases; establish grazing units to limit or provide use within buffer zones established around sensitive species locations, riparian zones, and sensitive cultural resource areas; and use controlled grazing as a cost-effective management tool to reduce fuels and manage vegetation for other resource needs. Develop and implement standard practices, best management practices, and other measures for incorporation into annual grazing plans to resolve conflicts between grazing and other uses of the Bufferlands. 	
<p>Management Strategies</p>					

Table G-4. Implementation Costs, Alternative A (Custodial Management)

Management Elements and Strategies	Managed Wildlife Habitat Areas						Open Space Areas						Leased Areas						Horticultural Areas						Process Facilities									
	NRSUP	SR NRS	NRS III	PMW I	PMW II	PMW III	NRSUP	SR NRS	NRS III	PMW I	PMW II	PMW III	NRSUP	SR NRS	NRS III	PMW I	PMW II	PMW III	NRSUP	SR NRS	NRS III	PMW I	PMW II	PMW III	NRSUP	SR NRS	NRS III	PMW I	PMW II	PMW III	Total Cost			
Hydrology Management																																		
HM-1 Conduct inspections and maintain channels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HM-2 Conduct inspections and maintain stormdrains	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water Quality Management																																		
WQ-1 Participate in SRWTP onsite monitoring program	5	10	15	0	0	0	5	10	15	0	0	0	5	10	15	0	0	0	5	10	15	0	0	0	5	10	15	0	0	0	0	0	0	0
WQ-2 Conduct regular, ongoing, water quality monitoring	5	25	30	0	0	0	5	15	20	0	0	0	5	15	20	0	0	0	5	15	20	0	0	0	5	15	20	0	0	0	0	0	0	0
WQ-3 Implement SRWTP Toxicity Response and Assessment Plan	5	30	15	0	0	0	5	30	15	0	0	0	5	30	15	0	0	0	5	30	15	0	0	0	5	30	15	0	0	0	0	0	0	0
WQ-4 Conduct vegetation or diaspersion levels	15	65	85	0	0	0	15	55	60	0	0	0	15	45	65	0	0	0	15	45	65	0	0	0	15	50	60	0	0	0	0	0	0	0
Mosquito Management																																		
MM-1 Monitor mosquito larvae populations and maintain safe levels	5	20	30	0	0	0	5	10	5	0	0	0	5	15	15	0	0	0	5	10	5	0	0	0	5	10	5	0	0	0	0	0	0	0
MM-2 Coordinate SRWTP and leases construction activities to protect cultural resources	5	20	30	0	0	0	5	10	5	0	0	0	5	15	15	0	0	0	5	10	5	0	0	0	5	10	5	0	0	0	0	0	0	0
Habitat and Wildlife Management																																		
WH-1 Conduct annual surveys of listed species populations and sensitive habitats	5	60	200	0	0	0	5	10	20	0	0	0	5	10	10	0	0	0	5	10	10	0	0	0	5	10	10	0	0	0	0	0	0	0
WH-2 Identify feral animals and coordinate removal activities	5	10	10	0	0	0	5	5	5	0	0	0	5	5	5	0	0	0	5	5	5	0	0	0	5	5	5	0	0	0	0	0	0	0
WH-3 Establish and maintain feedlots	5	65	210	0	0	0	5	15	25	0	0	0	5	15	15	0	0	0	5	15	15	0	0	0	5	15	15	0	0	0	0	0	0	0
WH-4 Coordinate SRWTP and leases construction activities to protect cultural resources	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Aesthetic-Resource Management																																		
ARC-1 Coordinate and/or conduct trash removal	5	10	0	0	0	0	5	10	0	0	0	0	5	5	0	0	0	0	5	10	0	0	0	0	5	5	0	0	0	0	0	0	0	0
ARC-2 Coordinate and/or conduct trash removal	5	10	0	0	0	0	5	10	0	0	0	0	5	5	0	0	0	0	5	10	0	0	0	0	5	5	0	0	0	0	0	0	0	0
Infrastructure Management																																		
IM-1 Install and maintain fencing, signage, culverts, and other facilities	5	25	25	0	0	0	5	25	25	0	0	0	5	25	25	0	0	0	5	25	25	0	0	0	5	25	25	0	0	0	0	0	0	0
IM-2 Coordinate security patrols	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0
IM-3 Establish and maintain feedlots	0	15	40	0	0	0	0	5	20	0	0	0	0	5	40	0	0	0	0	5	40	0	0	0	0	5	40	0	0	0	0	0	0	0
IM-4 Control vegetation or diaspersion levels	0	15	30	0	0	0	0	5	20	0	0	0	0	5	15	0	0	0	0	5	15	0	0	0	0	5	15	0	0	0	0	0	0	0
Mitigation Commitments Management																																		
MC-1 Maintain and monitor special-use species sites	5	45	0	0	0	0	5	45	0	0	0	0	5	45	0	0	0	0	5	45	0	0	0	0	5	45	0	0	0	0	0	0	0	0
MC-2 Maintain and monitor special-use species sites	5	50	85	0	0	0	5	50	85	0	0	0	5	50	85	0	0	0	5	50	85	0	0	0	5	50	85	0	0	0	0	0	0	0
MC-3 Manage and maintain mitigation wetlands	15	75	100	0	0	0	15	75	100	0	0	0	15	75	100	0	0	0	15	75	100	0	0	0	15	75	100	0	0	0	0	0	0	0
Lease Management																																		
LM-1 Administer current lease agreements and easements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LM-2 Work with lessors to address and resolve any issues or concerns	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hours	50	350	690	0	0	0	50	350	690	0	0	0	50	350	690	0	0	0	50	350	690	0	0	0	50	350	690	0	0	0	50	350	690	0
Hourly Rate	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04	\$ 27.04		
Subtotals	\$ 2,702.50	\$ 13,150.00	\$ 18,058.80	\$ 0	\$ 0	\$ 0	\$ 2,702.50	\$ 13,150.00	\$ 18,058.80	\$ 0	\$ 0	\$ 0	\$ 2,702.50	\$ 13,150.00	\$ 18,058.80	\$ 0	\$ 0	\$ 0	\$ 2,702.50	\$ 13,150.00	\$ 18,058.80	\$ 0	\$ 0	\$ 0	\$ 2,702.50	\$ 13,150.00	\$ 18,058.80	\$ 0	\$ 0	\$ 0	\$ 2,702.50	\$ 13,150.00	\$ 18,058.80	\$ 0
Total Cost																																		
																												\$ 87,522.95						

- HM-2: Conduct inspections to determine the need for clearing debris and other obstructions from storm drains located along the boundary of the Bufferlands to improve flood conveyance. Debris or other obstructions will be cleared regularly, as determined by the inspections.

Water Quality Management

Management Objective. Monitor water quality in Laguna, Morrison, and Unionhouse Creeks and other surface waters on the Bufferlands to measure compliance with relevant water quality standards.

Management Strategies.

- WQ-1: Participate in the SRWTP onsite water quality monitoring program.
- WQ-2: Conduct regular, ongoing monitoring of water quality for Laguna, Morrison, and Unionhouse Creeks and other surface waters on the Bufferlands.
- WQ-3: Implement the SRWTP Toxicity Response and Assessment Plan as needed.

Mosquito Management

Management Objective. Control or manage mosquito populations such that they do not exceed safe levels in the ponds, lakes, and other water bodies on the Bufferlands.

Management Strategies.

- MM-1: Monitor mosquito larvae populations on the Bufferlands as dictated by climatic conditions. If evidence of increased breeding is found, suitable control practices should be implemented immediately, or the wetland should be drained. All control activities should be coordinated with the Sacramento-Yolo Mosquito and Vector Control Agency.

Habitat and Wildlife Management

Management Objective. Maintain and protect habitat for threatened and endangered species.

Management Strategies.

- WH-1: Conduct annual surveys to monitor listed species populations and sensitive habitats.
- WH-2: Identify feral animals that may pose a risk to public safety or may adversely affect listed species populations or sensitive habitats. Coordinate removal activities with the local animal control agency.

Cultural Resource Management

Management Objective. Protect important cultural resources on the Bufferlands.

Management Strategies.

- CR-1: Coordinate SRWTP and lessee construction activities to ensure that known cultural resource sites are protected and that any newly discovered sites are identified and reported to the appropriate local authorities.

Aesthetic Resource Management

Management Objective. Limit the negative aesthetic effects of plant activities on the general public and the surrounding community.

Management Strategies.

- AR-1: Coordinate and/or conduct trash removal and control activities.

Infrastructure Management

Management Objective. Maintain and manage access and infrastructure to protect human life and property and provide for public safety.

Management Strategies.

- IM-1: Install and maintain fencing, signage, culverts, and other facilities to ensure public safety and plant security.
- IM-2: Coordinate security patrol activities to protect property and provide for public safety.

- IM-3: Establish and maintain firebreaks around the perimeter of the Bufferlands to protect property and provide for public safety.
- IM-4: Control vegetation on designated levees as required by the Corps.

Mitigation Commitments Management

Management Objective. Maintain mitigation commitments and manage mitigation areas in a manner that is consistent with requirements and conditions adopted by SRCSD and regulatory agencies for lands within the Bufferlands.

Management Strategies.

- MC-1: Maintain and monitor special-status species mitigation sites to ensure consistency with regulatory requirements and conditions.
- MC-2: Maintain and monitor trees planted as mitigation to ensure consistency with regulatory requirements and conditions.
- MC-3: Operate water control structures to manage vegetation in the Wetlands Preserve to ensure consistency with regulatory requirements and conditions.

Lease Management

Management Objective. Maintain existing land uses that do not create excessive management costs or conflict with plant operation or other Bufferlands management objectives.

Management Strategies.

- LM-1: Administer current lease agreements and easements to ensure that these entitlements are consistent with other Bufferlands management objectives and local, state, and federal regulatory requirements, and do not conflict with adjacent land uses.
- LM-2: Work with lessees to address and resolve any issues or concerns.
- LM-3: Coordinate lease documentation with the Sacramento County Real Estate Division.

Alternative B – Current Management

Management Goal: To allow continued plant operation and expansion while maintaining plant security, minimizing conflicts with the local community, protecting sensitive natural and cultural resources, maintaining leased areas, managing wildlife habitats, and providing limited public use and education opportunities on the Bufferlands.

Hydrology Management

Management Objective. Manage the hydrology of the Bufferlands' water bodies for flood protection.

Management Strategies.

- HM-1: Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from drainage ditches, creek channels, and around water control structures to improve flood conveyance. Manipulate water control structures to maximize flood protection. Vegetation and other obstructions will be cleared regularly, as determined by the inspections.
- HM-2: Conduct inspections to determine the need for clearing debris and other obstructions from storm drains located along the boundary of the Bufferlands to improve flood conveyance. Debris or other obstructions will be cleared regularly, as determined by the inspections.

Water Quality Management

Management Objective. Monitor water quality in the ponds, lakes, and other water bodies on the Bufferlands.

Management Strategies.

- WQ-1: Participate in the SRWTP onsite water quality monitoring program.
- WQ-2: Conduct regular, ongoing monitoring of water quality for Laguna, Morrison, and Unionhouse Creeks and other surface waters on the Bufferlands.
- WQ-3: Implement the SRWTP Toxicity Response and Assessment Plan as needed.

Mosquito Management

Management Objective. Control or manage mosquito populations such that they do not exceed safe levels in the ponds, lakes, and other water bodies on the Bufferlands.

Management Strategies.

MM-1: Monitor mosquito larvae populations on the Bufferlands as dictated by climatic conditions. If evidence of increased breeding is found, suitable control practices should be implemented immediately, or the wetland should be drained. All control activities should be coordinated with the Sacramento-Yolo Mosquito and Vector Control Agency.

Habitat and Wildlife Management

Management Objective. Maintain and enhance biological resource values on the Bufferlands through active management and integration with other resource management programs (e.g., water quality, hydrology, research and development, lease management).

Management Strategies.

WH-1: Conduct annual surveys to monitor listed species populations and sensitive habitats.

WH-2: Identify feral animals that may pose a risk to public safety or may adversely affect listed species populations or sensitive habitats. Coordinate removal activities with the local animal control agency.

WH-3: Conduct animal vegetation surveys to monitor rates of vegetation change, species affected, and extent of changes and to assess the effectiveness of management activities.

WH-4: Implement cultural (e.g., fire or grazing), mechanical, and/or chemical measures for the control or eradication of noxious weeds and invasive plants in or near important wildlife areas, corridors, or other sensitive habitats.

WH-5: Manage wetland vegetation in appropriate areas to enhance the productivity of vegetation for waterfowl species.

WH-6: Conduct waterfowl and other wildlife inventories to assess the effectiveness of management activities.

- WH-7: Conduct chemical, cultural (e.g., fire or grazing), and/or mechanical vegetation control and enhancement measures to promote the establishment and survival of native grasses.
- WH-8: Install and maintain artificial nest structures to enhance habitat for desired wildlife species.
- WH-9: Manage wetland water levels
- WH-10: Monitor beaver populations and coordinate with DFG to determine the need for implementing control measures.
- WH-11: Conduct bi-annual fish surveys. Prepare reports that document findings (i.e., rates of change, the species affected, and the extent of changes) and assess the effectiveness of management activities.
- WH-12: Maintain existing riparian restoration plantings.
- WH-13: Enhance aquatic habitat for fish species.
- WH-14: Further enhance existing restoration sites with additional plantings to promote the establishment of complete ecosystems.

Cultural Resource Management

Management Goal. Protect important cultural resources on the Bufferlands.

Management Strategies.

- CR-1: Coordinate SRWTP and lessee construction activities to ensure that known cultural resource sites are protected and that any newly discovered sites are identified and reported to the appropriate local authorities.

Aesthetic Resource Management

Management Objective. Maintain important aesthetic features on the Bufferlands and limit the negative aesthetic effects of plant activities on the general public and the surrounding community.

Management Strategies.

- AR-1: Coordinate and/or conduct trash removal and control activities.
- AR-2: Conduct the maintenance work (e.g., irrigation, weed control, pest control) required within the Trail of Trees Project area to ensure continued survival and viability of plantings.

Environmental Education

Management Objective. Maintain existing opportunities for environmental education and public outreach.

Management Strategies.

- EE-1: Respond to requests from community groups for public education and outreach activities (e.g., speaking engagements, tours, school field trips).
- EE-2: Provide assistance, as needed, for the SRCSD Public Information Office.
- EE-3: Continue coordinating and participating in the annual “Walk on the Wild Side” environmental education event with the Stone Lakes National Wildlife Refuge.

Research and Development Management

Management Objective. Maintain existing opportunities for research and development.

Management Strategies.

- RD-1: Promote research activities that may support improved management of the Bufferlands.

Infrastructure Management

Management Objective. Maintain and manage access and infrastructure to protect human life and property, protect sensitive resources, and provide for public safety.

Management Strategies.

- IM-1: Install and maintain fencing, signage, culverts, and other facilities to ensure public safety and plant security.

IM-2: Coordinate security patrol activities to protect property and provide for public safety.

IM-3: Establish and maintain firebreaks around the perimeter of the Bufferlands to protect property and provide for public safety.

IM-4: Control vegetation on designated levees as required by the Corps.

IM-5: Coordinate fire protection and fuels management activities with the Elk Grove Fire Protection District.

Mitigation Commitments Management

Management Objective. Maintain mitigation commitments and manage mitigation areas in a manner that is consistent with the requirements and conditions adopted by SRCSD and regulatory agencies for lands within the Bufferlands.

Management Strategies.

MC-1: Maintain and monitor special-status species mitigation sites to ensure consistency with regulatory requirements and conditions.

MC-2: Maintain and monitor trees planted as mitigation to ensure consistency with regulatory requirements and conditions.

MC-3: Manage and maintain wetlands mitigation areas to ensure consistency with regulatory requirements and conditions.

Lease Management

Management Objective. Maintain land uses that do not create excessive management costs or conflict with plant operation or other Bufferlands management objectives.

Management Strategies.

LM-1: Administer current lease agreements and easements to ensure that these entitlements are consistent with other Bufferlands management objectives and local, state, and federal regulatory requirements, and do not conflict with adjacent land uses or the local community.

LM-2: Work with lessees to address and resolve any issues or concerns.

LM-3: Coordinate lease documentation with the Sacramento County Real Estate Division.

Alternative C – Expanded Management

Management Goal: To allow continued plant operation and expansion while maintaining plant security, minimizing conflicts with the local community, protecting sensitive natural and cultural resources, maintaining leased areas, and enhancing wildlife habitats, while providing expanded public use, education, and research and development opportunities.

Hydrology Management

Management Objective. Manage the hydrology of the Bufferlands' water bodies for flood protection.

Management Strategies.

- HM-1: Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from drainage ditches, creek channels, and around water control structures to improve flood conveyance. Manipulate water control structures to maximize flood protection. Vegetation and other obstructions will be cleared regularly, as determined by the inspections.
- HM-2: Conduct inspections to determine the need for clearing debris and other obstructions from storm drains located along the boundary of the Bufferlands to improve flood conveyance. Debris or other obstructions will be cleared regularly, as determined by the inspections.

Water Quality Management

Management Objective. Enhance water quality in the ponds, lakes, and other water bodies on the Bufferlands.

Management Strategies.

- WQ-1: Participate in the SRWTP onsite water quality monitoring program.
- WQ-2: Conduct regular, ongoing monitoring of water quality for Laguna, Morrison, and Unionhouse Creeks and other surface waters on the Bufferlands.
- WQ-3: Implement the SRWTP Toxicity Response and Assessment Plan as needed.

- WQ-4: Develop and implement an expanded water quality monitoring program to compare water quality constituents in the ponds, lakes, and drainage ditches with relevant water quality standards to identify sources of contaminants and develop appropriate pollution control measures.
- WQ-5: Implement methods for controlling sources of contaminants identified by the water quality monitoring program. Investigate the feasibility of implementing traditional (i.e., physical and chemical) controls and nontraditional methods of control (e.g., establishing wetland vegetation).
- WQ-6: Develop and implement best management practices (BMPs) to reduce soil erosion, sedimentation, and nutrient impacts throughout the Bufferlands. Standards and BMPs should be adhered to by all staff, contractors, researchers, visitors, lessees, and others performing construction, maintenance, or other activities within the Bufferlands.

Mosquito Management

Management Objective. Control or manage mosquito populations such that they do not exceed safe levels in the ponds, lakes, and other water bodies on the Bufferlands.

Management Strategies.

- MM-1: Monitor mosquito larvae populations on the Bufferlands as dictated by climatic conditions. If evidence of increased breeding is found, suitable control practices should be implemented immediately, or the wetland should be drained. All control activities should be coordinated with the Sacramento-Yolo Mosquito and Vector Control Agency.
- MM-2: Coordinate monitoring, mitigation, and restoration and enhancement projects with the Sacramento-Yolo Mosquito and Vector Control District to prevent the creation of mosquito breeding sites and the need for more vector control.
- MM-3: Coordinate all summer irrigation activities on the Bufferlands with the Sacramento-Yolo Mosquito and Vector Control District.

Habitat and Wildlife Management

Management Objective. Maintain and enhance biological resource values on the Bufferlands through active management and integration with other resource management programs (i.e., water quality, hydrology, research and development, lease management).

Management Strategies.

- WH-1: Conduct annual surveys to monitor listed species populations and sensitive habitats.
- WH-2: Conduct animal vegetation surveys to monitor rates of vegetation change, species affected, and extent of changes and to assess the effectiveness of management activities.
- WH-3: Implement cultural (e.g., fire or grazing), mechanical, and/or chemical measures for the control or eradication of noxious weeds and invasive plants in or near important wildlife areas, corridors, or other sensitive habitats.
- WH-4: Manage wetland vegetation in appropriate areas to enhance the productivity of vegetation for waterfowl species.
- WH-5: Conduct waterfowl and other wildlife inventories to assess the effectiveness of management activities.
- WH-6: Conduct chemical, cultural (e.g., fire or grazing), and/or mechanical vegetation control and enhancement measures to promote the establishment and survival of native grasses.
- WH-7: Install and maintain artificial nest structures to enhance habitat for desired wildlife species.
- WH-8: Manage wetland water levels.
- WH-9: Monitor beaver populations and coordinate with DFG to determine the need for implementing control measures.
- WH-10: Conduct bi-annual fish surveys. Prepare reports that document findings (i.e., rates of change, the species affected, and the extent of changes) and assess the effectiveness of management activities.
- WH-11: Maintain existing riparian restoration plantings.
- WH-12: Enhance aquatic habitat for fish species.

- WH-13: Further enhance existing restoration sites with additional plantings to promote the establishment of complete ecosystems.
- WH-14: Manage wetland water level, to the extent feasible, to maximize wildlife habitat values.
- WH-15: Implement trapping or other control methods to capture feral animals that may adversely affect native wildlife populations or pose a risk to public safety. Coordinate removal activities with the local animal control agency.
- WH-16: Develop and implement a cooperative agreement with the Stone Lakes National Wildlife Refuge to promote information and resource sharing.

Cultural Resource Management

Management Goal. Protect important cultural resources on the Bufferlands.

Management Strategies.

- CR-1: Coordinate SRWTP and lessee construction activities to ensure that known cultural resource sites are protected and that any newly discovered sites are identified and reported to the appropriate local authorities.
- CR-2: Restore and maintain existing historic structures (e.g., historic barns).

Aesthetic Resource Management

Management Objective. Maintain important aesthetic features on the Bufferlands and limit the negative aesthetic effects of plant activities on the general public and the surrounding community.

Management Strategies.

- AR-1: Coordinate and/or conduct trash removal and control activities.
- AR-2: Conduct the maintenance work (e.g., irrigation, weed control, pest control) required within the Trail of Trees Project area to ensure continued survival and viability of plantings.

Environmental Education

Management Objective. Provide increased opportunities for environmental education, public outreach, and public access.

Management Strategies

- EE-1: Respond to requests from community groups for public education and outreach activities (e.g., speaking engagements, tours, school field trips).
- EE-2: Provide assistance, as needed, for the SRCSD Public Information Office.
- EE-3: Continue coordinating and participating in the annual “Walk on the Wild Side” environmental education event with the Stone Lakes National Wildlife Refuge.
- EE-4: Implement a program to provide unsupervised public access to designated areas within the Bufferlands consistent with resource management objectives, public safety concerns, and other SRWTP and SRCSD policies. The program will be subject to the following conditions:
- a. the Bufferlands manager will have the authority to set and change policies for unsupervised access at any time,
 - b. the program must provide for safety of both Bufferlands personnel and the public, and
 - c. the access policy will be posted in such a way as to allow legal enforcement of policies and prosecution of violators.
- EE-5: Implement a program to provide supervised public access to designated areas within the Bufferlands consistent with resource management objectives, public safety concerns, and other SRWTP and SRCSD policies. The program will be subject to the following conditions:
- a. the Bufferlands manager will have authority to set and change policies for supervised access at any time;
 - b. requests for supervised public access will be submitted in writing to the Bufferlands staff;
 - c. requests for supervised public access will be evaluated and approved at the discretion of the Bufferlands manager, depending on staff availability; and
 - d. requests will be educational in nature and from not-for-profit groups.
- EE-6: Promote use of the Bufferlands for public education activities (e.g., field trips, lectures, classes) by public organizations.

- EE-7: Develop and conduct a public outreach program. Elements of the outreach program may include visits by Bufferlands staff to adjacent communities or local classrooms, or placement of public information displays in these same areas.
- EE-8: Develop and distribute public information materials on management issues (e.g., special-status species, water quality) and activities (e.g., resource protection and management, habitat restoration, wildlife habitat enhancement) on the Bufferlands.
- EE-9: Prepare and make available a multimedia lecture on the Bufferlands that provides an overview of the area's resources, functions, and values and emphasizes the potential for educational opportunities.
- EE-10: Develop and conduct an environmental education program that allows community participation in Bufferlands management activities (e.g., bird counts, habitat restoration).

Research and Development Management

Management Objective. Maintain existing opportunities for research and development.

Management Strategies.

- RD-1: Conduct research activities that may promote improved management of the Bufferlands.
- RD-2: Actively pursue funds for focused research projects relating to the management and restoration of the Bufferlands.
- RD-3: Dedicate staff time for applied research activities and coordination of activities of other researchers.

Infrastructure Management

Management Objective. Maintain and manage access and infrastructure to protect human life and property, protect sensitive resources, and provide for public safety.

Management Strategies.

- IM-1: Install and maintain fencing, signage, culverts, and other facilities to ensure public safety and plant security.

- IM-2: Coordinate security patrol activities to protect property and provide for public safety.
- IM-3: Establish and maintain firebreaks around the perimeter of the Bufferlands to protect property and provide for public safety.
- IM-4: Control vegetation on designated levees as required by the Corps.
- IM-5: Coordinate fire protection and fuels management activities with the Elk Grove Fire Protection District.

Mitigation Commitments Management

Management Objective. Maintain mitigation commitments and manage mitigation areas in a manner that is consistent with the requirements and conditions adopted by SRCSD and regulatory agencies for lands within the Bufferlands.

Management Strategies.

- MC-1: Maintain and monitor special-status species mitigation sites to ensure consistency with regulatory requirements and conditions.
- MC-2: Maintain and monitor trees planted as mitigation to ensure consistency with regulatory requirements and conditions.
- MC-3: Manage and maintain wetlands mitigation areas to ensure consistency with regulatory requirements and conditions.

Lease Management

Management Objective. Encourage new land uses, particularly agricultural activities that are compatible and/or beneficial to wildlife, while ensuring that leases do not create excessive management costs or conflict with plant operation, historical land uses, or other Bufferlands management objectives.

Management Strategies.

- LM-1: Administer current lease agreements and easements to ensure that these entitlements are consistent with other Bufferlands management objectives and local, state, and federal regulatory requirements, and do not conflict with adjacent land uses.

LM-2: Work with lessees to address and resolve any issues or concerns.

LM-3: Coordinate lease documentation with the Sacramento County Real Estate Division.

LM-4: Work with agricultural lessees to:

- a. discourage crop production within buffer zones established around sensitive species locations, riparian zones, water bodies, and sensitive cultural resource areas;
- b. encourage the production of crops (e.g., hay, grains) that would provide benefits for wildlife habitat; and
- c. encourage delayed harvesting (July 1) to avoid destroying nests and displacing or killing ground-nesting birds, and encourage delays in tilling harvested fields to provide a food source for waterfowl, song birds, and other wildlife species during the fall and winter. If spring cultivation is planned, tilling should be completed before the nesting season (March).
- d. develop a required annual crop/farm plan that outlines cultivation, irrigation, pesticide application, pesticide reporting, and harvesting intentions.

LM-5: Encourage construction of tailwater return and/or other systems to manage and enhance the quality of agricultural drain water.

LM-6: Work with agricultural lessees to:

- a. Develop annual grazing plans for all livestock leases to ensure that land will be grazed in a manner that is consistent with other resource management program objectives. The grazing plans should specify annual stocking rates, required management actions, and monitoring to ensure adherence to lease conditions.
- b. Establish grazing units to exclude use within buffer zones established around sensitive species locations, riparian zones, and sensitive cultural resource areas. Grazing should occur in these areas only when fully compatible with management priorities for each area.
- c. Utilize controlled grazing as a cost-effective management tool to reduce fuels and manage vegetation for other resource needs.

LM-7: Develop and implement standard practices, best management practices, and other measures in annual grazing plans to resolve grazing conflicts with other resources, such as

- a. erosion on susceptible sites;
- b. discharge of nutrients, pathogens, sediments, or other contaminants into lakes, ponds, and other water bodies;
- c. damage or destruction of sensitive plant species and communities; and
- d. excessive removal of wildlife cover.