

Chapter 5. Management Alternatives

INTRODUCTION

During the master planning process, four alternative management schemes were developed for the Bufferlands: A – Custodial Management, B – Current Management, C – Expanded Management, and D – Preferred Management. The four management alternatives represent varying commitments of staff time and resources. Each was designed to meet a specific management goal consistent with principal Bufferlands management objectives and with general and land use-specific management policies for the Bufferlands (described in Chapter 3 of this document).

This chapter provides an overview of the four management alternatives and presents the preferred management alternative in detail; Appendix G contains a complete text description of alternatives A, B, and C and estimates of staffing costs associated with implementing these alternatives. Table 5–1 gives a capsule summary of the preferred management alternative. Table 5–2 shows a cost comparison for alternatives A, B, C, and D.

Estimated cost and level of effort required to implement each management alternative were developed based on appropriate job classifications and salary rates for the tasks comprised under each alternative. In some cases, proposed staffing differs from the classifications of the employees currently performing these tasks. Furthermore, the range of experience, knowledge, and expertise required for these tasks suggests that it would be appropriate to subdivide the Natural Resource Management job classification into three steps: Natural Resource Supervisor, Senior Natural Resource Specialist, and Natural Resource Specialist I/II.

OVERVIEW OF THE MANAGEMENT ALTERNATIVES

Alternative A – Custodial Management

Alternative A, Custodial Management, represents a reduction in management activity from the current level. Under Alternative A, the level of management activity would be reduced as far as possible without adverse consequences to public safety and plant security. Habitat management would be limited to maintaining existing mitigation sites: no new habitat restoration programs

Table 5-1. Overview of Alternative D (Preferred Management)

Summary: Under Alternative D, current management activities for environmental education, lease management, and water quality management would be moderately expanded. All other management activities will continue at the current level.

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

Management Objective	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 "wet" zones for flood protection.</p> <ul style="list-style-type: none"> Conduct inspections to determine the need for clearing vegetation, debris, and other obstructions from drainage water control structures to improve floodflow conveyance. Clear water control structures regularly, as needed. Conduct inspections to determine the need for clearing debris and other obstructions from storm drains along the water control structures to improve floodflow conveyance. Clear obstructions regularly, as needed. 	<p>Maintain water quality in the ponds, lakes, and other water bodies on the Bufferlands.</p> <ul style="list-style-type: none"> Participate in the SWPPP update, water quality monitoring program. Conduct regular ongoing water quality monitoring at the Morrison and Ulmhouse Creeks and other surface waters on the Bufferlands. Implement the SWPPP Toxicity Response and Assessment Plan as needed. In coordination with local agencies, develop and implement an overall water quality management program along the water control structures to improve floodflow conveyance. Clear obstructions regularly, as needed. 	<p>Control or manage mosquito populations such that they do not exceed state levels in the ponds, lakes, and other water bodies on the Bufferlands.</p> <ul style="list-style-type: none"> Monitor populations of mosquitoes on the Bufferlands as defined by climate conditions. If evidence of increased breeding activity is observed, conduct control practices, or drain the wetland, immediately. Coordinate all control activities with the Sacramento-Yuba Mosquito and Vector Control Agency. 	<p>Maintain and enhance biological resources within 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 fire animals that may pose a risk to public safety or may adversely affect listed species or sensitive habitats. Coordinate removal activities with local natural control agency. Conduct annual vegetation surveys to monitor rates and extent of vegetation change and species removal, 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 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 inventories to assess the effectiveness of management activities. Install and maintain artificial nest structures to enhance habitat for desired wildlife species. Monitor 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 and species affected, and to assess the effectiveness of 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 maintain wildlife habitat values. 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 natural control agency. Develop and implement a cooperative agreement with the State 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"> Coordinate SWPPP and other construction activities to ensure that known cultural resources are properly identified and reported to the appropriate local authorities. 	<p>Maintain important aesthetic features on the Bufferlands and minimize the effects of plant 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 maintain and manage plantings 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 such as speaking engagements, tours, and school field trips. As needed, provide assistance to the SRCSO Public Information Office. Continue coordinating and participating in the annual "Walk on the Wild Side" environmental education event with the Stone Lakes National Wildlife Refuge. Implement programs to provide both supervised and unsupervised public access to the Bufferlands consistent with resource management objectives, public safety concerns, and other SWPPP and SRCSO policies. 	<p>Maintain existing opportunities for research and development.</p> <ul style="list-style-type: none"> Conduct research activities that may promote 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. 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, pest, and other management activities with the Elk Grove Fire Protection District.

Management Strategies

Management Objective	Mitigation Commitments Management	Lease Management
	<p>Maintain mitigation commitments and manage mitigation areas in a manner that is consistent with the requirements and conditions approved by SRCSO and regulatory agencies for lakes within the Bufferlands.</p> <ul style="list-style-type: none"> Maintain and monitor characteristics, riparian vegetation, and other consistency with regulatory requirements and conditions. Maintain and monitor trees planned 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 land uses that are compatible with plant operation or other Bufferlands management objectives.</p> <ul style="list-style-type: none"> Administer current lease agreements and determine to ensure that these commitments are consistent with other Bufferlands management objectives and with local, state, and federal regulatory requirements, and do not conflict with adjacent land uses or the needs of the best continuity. Work with lessees to address and resolve any issues or concerns. Coordinate lease documentation with the Sacramento County Real Estate Division. Work with agricultural lessees to: <ul style="list-style-type: none"> discourage crop production within the buffer zones established around sensitive species locations, riparian zones, water bodies, and sensitive cultural resource areas; discourage delayed harvesting (July to late August) and planting or falling ground seeding birds; and encourage delays in tillage harvest (to provide a food source for waterfowl), snags, and other wildlife species during the fall and winter (if spring sublimation is planned, tillage should be completed before the March nesting season); and Encourage commitments of fallwater return audits; other systems to manage and enhance the quality of agricultural drain water. Work with agricultural lessees to: <ul style="list-style-type: none"> develop annual grazing plans for all livestock leases; discourage grazing during nesting and raising of young to include riparian areas, and sensitive cultural resource areas; and use established grazing to foster effective management tools to reduce fire and manage vegetation for other resource needs. Develop and implement standard practice, best management practices, and other measures for incorporation into annual grazing plans to resolve conflicts between grazing and other uses of the Bufferlands.

Lease Management

Management Strategies

would be implemented, there would be no active management of the Upper Beach Lake Wildlife Area, and establishment and management of other habitat and aesthetic enhancement projects would be discontinued. Pest management would focus on activities required to protect public health and safety and to maintain existing mitigation sites. Public access and education activities would no longer be conducted.

Management Alternative	Pros	Cons	Hours	Cost
A (Custodial Mgmt)	<ul style="list-style-type: none"> · lowest cost of four alternatives · provides for public safety and plant security 	<ul style="list-style-type: none"> · discontinues wildlife management and public education/outreach activities; does not provide for R & D management · may lead to increased fuel loading and fire risk · does not effectively accommodate potential future changes in management or regulatory requirements · unsuccessful with regard to stakeholder needs and Bufferlands management goals and policies. 	2,675	\$87,314.25

Alternative B – Current Management

Alternative B, Current Management, represents continuation of the existing Bufferlands management plan. Under Alternative B, programs for wildlife management and habitat restoration initiated under the current plan would continue. Existing public use and public education opportunities would be formalized, but would not be expanded. No new wildlife management, habitat restoration, or research and development activities would be initiated under Alternative B.

Management Alternative	Pros	Cons	Hours	Cost
B (Current Mgmt)	<ul style="list-style-type: none"> · no additional staffing hours required · includes enhanced habitat and wildlife management plan · includes fuel management, which will decrease fire risk · R & D program will support adaptive management 	<ul style="list-style-type: none"> · may not successfully accommodate changing regulatory requirements · may not be flexible enough to meet changing needs as development increases around the plant · public use and education activities are limited 	8,675	\$277,080.85

Table 5–2. Summary Cost Comparison for Management Alternatives A, B, C, and D

Mgmt Elements & Strategies	Alternative A	Alternative B	Alternative C	Alternative D
Hydrology Management	\$3,851.60	\$3,969.15	\$4,039.20	\$4,039.20
Water Quality Management	\$16,269.45	\$16,269.45	\$25,729.80	\$16,269.45
Mosquito Management	\$10,219.45	\$10,407.05	\$12,884.50	\$12,509.30
Habitat and Wildlife Management	\$15,309.70	\$150,266.45	\$166,315.65	\$158,019.55
Cultural Resource Management	\$562.80	\$562.80	\$938.00	\$938.00
Aesthetic Resource Management	\$3,734.40	\$29,965.75	\$34,046.45	\$34,952.95
Environmental Education	\$-	\$25,105.90	\$75,797.90	\$61,609.15
Research and Development	\$-	\$2,115.15	\$23,197.60	\$13,694.80
Infrastructure Management	\$20,195.35	\$19,789.80	\$22,266.05	\$20,892.05
Mitigation Commitments Management	\$9,896.60	\$11,366.95	\$11,366.95	\$11,366.95
Lease Management	\$7,274.90	\$7,262.40	\$12,845.35	\$12,845.35
Total Cost:	\$87,314.25	\$277,080.85	\$389,427.45	\$347,136.75

Alternative C – Expanded Management

Alternative C, Expanded Management, represents a substantial expansion of the existing management plan. In particular, implementation of Alternative C would entail significant increases in programs for environmental education, research and development, public outreach, and supervised and unsupervised public access. Under Alternative C, water quality monitoring, wildlife habitat management, infrastructure management, and lease management would also be moderately increased. Cultural resource management would be expanded to provide for restoration and maintenance of historic structures on the Bufferlands. Other activities (e.g., mosquito control, hydrology management) would be maintained at current levels under Alternative C.

Management Alternative	Pros	Cons	Hours	Cost
C (Expanded Mgmt)	<ul style="list-style-type: none"> · expanded program has flexibility to accommodate future regulatory, public safety, and lease management requirements as necessary · expanded R & D program will support adaptive management · public outreach programs will create an active role for SRCSD in the community and increase community awareness and support · enhanced wildlife management program will decrease potential for failed mitigation measures, prevent habitat loss, and help identify and alleviate potential problems before they arise 	<ul style="list-style-type: none"> · most expensive of the four alternatives · would likely require changes in staffing 	10,305	\$389,427.45

Alternative D – Preferred Management

Alternative D, Preferred Management, was designed to balance cost-effectiveness with proactive management. Incorporating the most important features of Alternative C – Expanded Management, it provides for moderate expansion of existing environmental education, lease management, and water-quality management activities. Other management activities, including hydrology management, mosquito management, wildlife habitat management, and cultural resource management would be maintained at current levels under Alternative D (Table 5–1).

Management Alternative	Pros	Cons	Hours	Cost
D (Preferred Mgmt)	<ul style="list-style-type: none"> · most cost-effective alternative · realizes Bufferlands goals and meets stakeholders needs · expanded program has flexibility to accommodate future regulatory, public safety, and lease management requirements as necessary · expanded R & D program will support adaptive management · public outreach programs will create an active role for SRCSD in the community and increase community awareness and support · enhanced wildlife management program will decrease potential for failed mitigation measures, prevent habitat loss, and help identify and alleviate potential problems before they arise 	<ul style="list-style-type: none"> · less adaptive than Alternative C – Expanded Management · improves but does not maximize preparedness for possible changes in regulatory and public safety needs · may require changes in staffing 	10,305	\$347,136.75

PREFERRED MANAGEMENT ALTERNATIVE

Development of the Preferred Management Alternative

The goal of the Bufferlands master planning process was to create a management direction that would:

- › comply with Bufferlands management goals and policies,
- › meet the needs and address the concerns of Bufferlands stakeholders, and
- › be cost-effective.

The proposed management alternatives A – Custodial Management, B – Current Management, and C – Expanded Management represent a spectrum of management styles, ranging from minimal management (the least costly approach) to very proactive management (the most costly approach) (Table 5–2). In order to evaluate the relative benefits of the proposed management alternatives, each alternative was assessed for compliance with the management goals and policies established for the Bufferlands, described in Chapter 4. Table 5–3 presents the results of this comparison. In addition, input on stakeholder concerns was solicited via the process outlined in the Sacramento Regional Wastewater Treatment Plant 2020 Master Plan (in preparation) and each management alternative was evaluated for its success in addressing stakeholder needs and concerns (Table 5–4, Table 5–5).

Table 5–3. Compliance of Proposed Management Alternatives with Bufferlands Management Goals and Policies

a exceeds Bufferlands management goals J meets Bufferlands management goals – does not meet Bufferlands management goals	A Custodial Mgmt	B Current Mgmt	C Expanded Mgmt	D Preferred Mgmt
General Management Policies				
General Land Use	J	J	J	J
Public Safety and Security	J	J	J	J
Public Use	–	J	a	a
Environmental Education	–	J	a	a
Research and Development	–	–	a	J
Cultural Resources	J	J	J	J
Aesthetic Resources	–	J	a	a
Water Quality	J	J	a	a
Land Use-Specific Management Policies				
Managed Wildlife Habitat Areas	–	–	J	J
Open Space Areas	–	J	a	a
Leased Areas	–	–	J	J
Horticultural Area	J	J	J	J
Plant Process Facilities	J	J	J	J

Table 5-4. Extent to which the Bufferlands Management Alternatives Provide Benefits to Various Stakeholder Groups

Stakeholder Benefits	Alternative A: Custodial Management	Alternative B: Current Management	Alternative C: Expanded Management	Alternative D: Preferred Management
Sacramento Regional County Sanitation District				
Ensures safety to District personnel and surrounding public	2	2	2	2
Protects plant property	2	2	2	2
Allows continued plant expansion	2	2	2	2
Provides enhanced quality of work life for SRWTP personnel	1	2	3	3
Promotes good relations and minimizes conflicts with the local community	1	2	3	3
Promotes good relations and minimizes conflicts with the general public	1	2	3	3
Promotes good relations with local, state, and federal resource and regulatory agencies	1	2	3	3
Provides opportunities for cooperative watershed-level community involvement	0	2	3	3
Provides opportunities for water reuse	0	0	3	3
Provides opportunities for mitigation of environmental impacts associated with SRCSO activities	1	2	2	0
Maintains existing mitigation commitments	2	2	2	2
State and Federal Resource and Regulatory Agencies				
Provides habitat for special-status species	1	2	3	3
Preserves sensitive habitats	1	2	3	3
Protects onsite water quality	1	1	2	3
Provides flood protection	1	1	1	1
Enhances offsite water quality	0	1	2	2
Provides opportunities for cooperative management of SRCSO and refuge properties	0	0	2	2
Local Agencies				
Provides opportunities for mitigation of environmental impacts associated with SRCSO activities	1	2	2	2
Preserves open space	1	2	2	2
Protects public health and safety	1	2	2	2
Provides educational/recreational opportunities for local residents	1	1	3	2
Provides flood protection	1	1	1	1
Community Groups				
Preserves open space	0	2	2	2
Provides educational/recreational opportunities for local residents	0	1	3	2
Provides opportunities to mitigate aesthetic impacts of plant activities	0	2	2	2
Environmental Organizations				
Provides habitat for special-status species	1	2	3	3
Preserves sensitive habitats	1	2	3	3
Protects onsite water quality	1	1	2	2
Preserves open space	1	2	2	2
Provides educational/recreational opportunities for local residents	1	1	1	1
Agricultural Interests				
Preserves agricultural lands	2	2	2	2
Preserves local agricultural history	1	1	1	1
Provides opportunities for agricultural activities that benefit wildlife	1	1	3	3

Table 5-5. Comparison of Stakeholder Benefits and Estimated Costs for the Bufferlands Management Alternatives				
Management Alternative	Stakeholder Benefits	Estimated Costs	Stakeholder Benefit/\$10,000	
Alternative A – Custodial Management	35	\$87,314.25	4	
Alternative B – Current Management	62	\$277,080.85	2	
Alternative C – Expanded Management	89	\$389,427.45	2	
Alternative D – Preferred Management	87	\$347,136.75	3	

Alternative A – Custodial Management was shown to be a low-cost alternative but was judged to be unsuccessful with regard to both stakeholder needs and Bufferlands management goals and policies.

To a lesser extent, the same was true of Alternative B – Current Management. Alternative C – Expanded Management was found to be less cost-effective for increased benefit levels (see Table 5–2, Table 5–5, Appendix G). Thus, in order to create a cost-effective management plan that would both realize Bufferlands management goals and meet stakeholder needs, the most successful elements of proposed management alternatives A, B, and C were fused into Alternative D – Preferred Management. Table 5–6 presents a breakdown of staffing costs associated with Alternative D.

Detailed Description of the Preferred Management Alternative

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

Preferred 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 more easily convey floodflows. 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 more easily convey floodflows. Debris or other obstructions will be cleared regularly, as determined by the inspections.

Preferred Water Quality Management

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

Table 5-4. Continued

Educational Organizations	0	1	2	3
Provides educational opportunities for local schools	0	1	3	2
Provides research opportunities for state universities	0	1	1	2
Provides opportunities for cooperative information sharing	0	2	2	3
Sporting/Recreational Interests				
Provides wintering habitat for migratory waterfowl	1	2	3	3
Protects sensitive habitats	1	2	3	3
Provides opportunities for passive recreation	0	0	2	1
Tribal Interests				
Protects sensitive cultural resources	2	2	2	2
Provides cultural history awareness for the general public	0	0	1	0
Total Benefits	35	62	89	87

0 = no benefits
 1 = some benefits
 2 = substantial benefits
 3 = very substantial benefits

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 water areas on the Bufferlands.
- WQ-3: Implement the SRWTP Toxicity Response and Assessment Plan as needed.
- WQ-4: In coordination with the appropriate agencies (e.g., County Water Resources, City of Sacramento), develop and implement an expanded water-quality monitoring program to compare water quality in the ponds, lakes, and drainage ditches with relevant water quality standards, in order to identify sources of contaminants and develop appropriate pollution control measures.

Preferred 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.

Preferred 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 annual 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 (i.e., 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.
- WH-15: Manage wetland water level, to the extent feasible, to maximize wildlife habitat values.
- WH-16: 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-17: Develop and implement a cooperative agreement with the Stone Lakes National Wildlife Refuge to promote information and resource sharing.

WH-18: Actively pursue funding to develop habitat enhancement and restoration projects.

Preferred 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.

Preferred 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.

Preferred Environmental Education Management

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.

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:

7. the Bufferlands manager will have authority to set and change policies for supervised access at any time;
8. requests for supervised public access will be submitted in writing to the Bufferlands staff;
9. requests for supervised public access will be evaluated and approved at the discretion of the Bufferlands manager, depending on staff availability; and
10. requests will be educational in nature and from not-for-profit groups.

Preferred 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.

Preferred 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.

Preferred 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.

Preferred Lease Management

Management Objective. Encourage land uses that are compatible with plant operation and other Bufferlands management objectives.

Management Strategies.

- LM-1: Administer current lease agreements and easements in a manner that ensures that these 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 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.

LM-4: Work with agricultural lessees to:

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

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:

1. 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.
2. 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 it would be fully compatible with the management priorities for each area.
3. 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 for incorporation into annual grazing plans to resolve conflicts between grazing and other resource uses, such as,

1. erosion on susceptible sites;
2. discharge of nutrients, pathogens, sediments, or other contaminants into lakes, ponds, and other water bodies;
3. damage or destruction of sensitive plant species and communities; and

4. excessive removal of wildlife cover.

STAFF RESPONSIBILITIES NOT ADDRESSED IN THE PREFERRED MANAGEMENT ALTERNATIVE

The Bufferlands management staff has a number of duties that are not directly related to management of the Bufferlands property. These include:

- > · providing environmental support for SRCSD projects,
- > · conducting process area weed abatement activities,
- > · supervising and coordinating landscape installation and maintenance activities,
- > · updating facilities and infrastructure maps, and
- > · participating in required safety and skills training programs.

Table 5–7 summarizes these duties and associated staffing costs.

Table 5–7. Staff Hours and Costs Associated with Duties Not Related to Management of the Bufferlands

Tasks	Staff Hours					Total Cost
	NRSUP	SR NRS	NRSI/II	PMWII	PMWI	
Environmental Support	250	900	350	0	0	
Weed Abatement	15	30	0	185	30	
Landscape	135	50	0	475	350	
Property	80	145	40	0	5	
Facility	20	90	160	140	180	
Training	100	330	200	60	60	
Other	660	1000	430	140	130	
	1260	2545	1180	1000	755	
Billing Rate	\$54.07	\$37.52	\$27.04	\$35.90	\$26.54	
Subtotal	\$68,128.20	\$95,488.40	\$31,907.20	\$35,900.00	\$20,037.70	
Total						\$251,461.50