

Appendix G

Management Plan For The _____ Mitigation Bank

Prepared by: _____

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I Introduction

A Purpose of Establishment

The _____ (“Bank”) was established to preserve _____ seasonal wetlands, and to allow the creation of up to _____ acres of seasonal wetlands on a site _____ acres in size. The Bank Enabling Instrument (BEI) permitted the sale of wetland “credits” as mitigation for wetland impacts in the service area and preservation credits based on _____ on the Bank site. The BEI Signatory Agencies are the State of California, Department of Fish and Game, the San Francisco District of the U.S. Army Corps of Engineers, Region 9 of the U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service. Any subsequent grading, discing or alteration of the site’s hydrology must be approved by the BEI Signatory Agencies and a Section 404 permit must be obtained if necessary.

B Purpose of this Management Plan

The purpose of the Management Plan (“Plan”) is to establish goals, priorities and tasks to monitor, manage, and report regarding seasonal wetlands, _____ populations, and associated habitats on the Bank. The purpose is to implement actions designed to maintain the target resources identified by the BEI and the Bank Development Plan. This Plan is a binding and enforceable instrument, implemented based on the Conservation Easement covering the Bank property.

C Land Manager

The initial Land Manager is the Property Owner and is the same as the Sponsor in the BEI. The Land Manager of the Bank is _____. The Land Manager is responsible for implementation of the tasks identified in this Plan.

II Property Description

A Setting and Location

The Bank is located _____, Sonoma County. As such, the Bank occurs in the _____ of the Santa Rosa Plain (SRP). The Bank site is _____ acres and is situated _____.

The land in this general area in 2005 is _____. In 2005, the Bank site is owned by _____.

B History and Land Use

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(Description of history and land use of bank site)

C Geology, Soils, Climate, and Hydrology

(Description of geology, soils, climate and hydrology of the bank site.)

III Habitat and Species Descriptions

A Plant Communities, Habitats, and Species

(Description of plant communities, habitats, and species that occur on the bank site.)

B Wildlife

(Description of wildlife that may occur on the bank site.)

C Sensitive Species

(Description of threatened/endangered species that may occur on the banks site.)

IV Management and Monitoring

The overall goal of long term management is to foster the long term viability of the Bank site's wetlands and associated habitats. There will be routine monitoring and minor maintenance tasks needed to assure the long term functionality of the preserve.

The approach to the long term management is to conduct annual site examinations and monitoring of selected characteristics to determine stability and ongoing trends in the created and preserved habitats. Annual monitoring will assess the wetland condition, the status of sensitive species populations, and degree of erosion, weed invasion, and/or other aspects that may warrant management actions. While it is not anticipated that major management actions will be needed, a major objective of the long term management plan is to conduct adequate monitoring to identify any issues that arise over the short or long term, and using principles of adaptive management determine what actions might be appropriate.

A Biological Resources

The primary goal of the Bank as per the Bank Development Plan is to create and preserve wetlands and preserve populations of _____. Bank wetlands and preserved populations of _____ will be monitored annually to assess general conditions and trends. The primary aspects that will be monitored and may need management actions are erosion, invasion by exotic or deleterious (e.g., thatch-producing) species, water quality, vegetation management, and fire hazard.

Toward the long term protection of the Bank's biological resources, the following are specific measures to be implemented:

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Element A.1 Seasonal wetlands

Goal: Monitor, conserve and maintain the Bank site's seasonal wetlands. Limit any impacts to wetlands from vehicular travel or other adverse impacts.

Task: At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, erosion, will be noted, evaluated and mapped during a site examination in the spring. Notes to be made will include observations of species encountered, water quality, general extent of wetlands, and any occurrences of erosion, and weed invasion.

Task: Establish reference sites for photographs and prepare a site map showing the reference sites for the Bank file. Alternatively, utilize photographic reference sites, if any, developed during interim bank management period. Reference photographs will be taken of the overall wetland mosaic at least every five years, with selected reference photos taken on the ground more frequently.

Element A.2 Riparian habitats (if applicable)

Goal: Monitor, conserve and maintain the Bank site's riparian habitats.

Task: As part of the annual site walk-through, the riparian corridors will be examined for any erosion issues and generally noted as to conditions and any pending needs. Any necessary tasks will be identified, prioritized and implemented as funding is available.

Task: Annually assess the presence of invasive plant species and identify control needs if any. Species of particular concern are tamarisk, Arundo, and pepperweed.

Task: Annually assess the condition of fencing, if present to exclude livestock from riparian areas. Identify repair needed to maintain exclusionary fencing.

Element A.3 Threatened/Endangered Plant Species Monitoring (if applicable)

[NOTE: This methodology is currently specific to Limnanthes vinculans and may vary for other plant species as determined in consultation with the appropriate agencies. A management target for the species should be identified against which change in population status can be evaluated (i.e. population at time of preserve establishment), and which would trigger management actions to reverse or respond to a declining trend.]

Goal: Monitor population status and trends.

Goal: Manage to maintain habitat for _____.

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Task: Monitor status every year by conducting population assessment surveys. The annual survey dates will be selected during the appropriate blooming period and will generally occur from late March through April depending on the timing of the blooming period each year. Pools with _____ will be mapped and numbered to allow repeatable data collection over subsequent survey years. Abundance will be assessed semi-quantitatively using broad abundance categories, i.e., 0, 1 - 100, 101 - 500, 501 - 1,000, and >1,000 plants.

Task: Visually observe pools for changes to _____ habitat, such as changed hydrology or vegetation composition. Record any observed changes.

Task: Implement other tasks that enhance or monitor habitat characteristics for _____.

Element A.4 Threatened/Endangered Animal Species Monitoring (if applicable)

[NOTE: Species-specific goals and tasks will need to be developed in consultation with the appropriate agencies. A management target for the species should be identified against which change in population status can be evaluated (i.e. population at time of preserve establishment), and which would trigger management actions to reverse or respond to a declining trend.]

Goal: Monitor population status and trends.

Goal: Manage to maintain habitat for _____.

Task: Monitor status every year by conducting population assessment surveys. The annual survey dates will be selected during the appropriate period each year.

Task: Implement other tasks that enhance or monitor habitat characteristics for _____.

Element A.5 Invasive Species

Goal: Monitor and maintain control over major noxious weeds and/or other strongly invasive plants or wildlife that diminish site quality.

Task: Each year's annual walk-through survey (or a supplemental survey) will include a qualitative assessment of potential or observed weed invasions, primarily in or around the wetlands. Particularly aggressive species such as Harding grass (*Phalaris*), cocklebur (*Xanthium*), pampas grass (*Cortaderia*), pepperweed (*Lepidium*) or other dense thatch-producing species will be noted and addressed through either hand removal or highly selective approved herbicide applications. Common naturalized wetland species such as ryegrass (*Lolium*),

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pennyroyal (*Mentha*), umbrella sedge (*Cyperus*), rabbitfoot grass (*Polypogon*), prickly grass (*Crypsis*), knotweed (*Polygonum aviculare*), and others (e.g., *Rumex*, *Hordeum*, *Chenopodium*, *Amaranthus*) will generally be allowed to grow in small amounts, and will be addressed as needed if especially large or domineering stands are encountered and deemed to be deleterious. Additional actions to control invasive species will be evaluated and prioritized. Actions will be implemented as funding allows.

Element A.6 Vegetation Management

Goal: Increase knowledge of effects of mowing and grazing on habitat quality on the Santa Rosa Plain. If determined appropriate, develop and implement specific mowing and/or grazing actions in coordination with management at other Santa Rosa Plain conservation sites to maintain habitat quality.

Goal: Adaptively manage grazing based on site conditions and data acquired on CTS, rare plant, and seasonal wetlands to maintain biological values.

Task: Review and explore potential vegetation management regimes as proposals and/or opportunities and funding arise. If determined to potentially maintain site quality, develop specific grazing practices, amend this Management Plan with BEI Signatory Agencies' approval to reflect those practices, and implement grazing actions as funding allows.

Task: Implement vegetation management techniques, if determined beneficial and as funding allows, to maintain vegetation height and composition similar to baseline conditions or as determined likely to maintain seasonal wetland function or *threatened/endangered plant species* habitat. Implementation of vegetation management techniques must be approved by BEI Signatory Agencies.

B Security, Safety, and Public Involvement

The Bank will have no general public access, nor any regular public or private use. Research and/or other educational programs or efforts will be allowed on the Bank site as deemed appropriate by the BEI Signatory Agencies, but are not specifically funded or a part of this Management Plan.

Potential mosquito issues will be addressed through the provision of access to the Mosquito and Vector Control District staff and through management of the wetlands for minimal mosquito production. Potential wildfire fuel (dry grass) will be reduced as needed by mowing in areas where appropriate.

Element B.1 – Trash and trespass

Goal: Monitor sources of trash and trespass.

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Goal: Collect and remove trash, repair vandalized structures, and rectify trespass impacts.

Task: During each site visit, record occurrences of trash and/or trespass. Record type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and/or trespass impact.

Task: At least once yearly collect and remove as much trash and repair and rectify as much vandalism and trespass impacts as funding allows. Prioritize significant dumping and unfunded site impacts and maintain a priority list, updated at least annually based on: 1) best use of available funds; 2) impacts to biological resources on site; and 3) other related issues.

Element B.2 – Fire control

Goal: Maintain site as required for fire control but limiting impacts on site biological values.

Task: Mow, graze, disk, or otherwise clear vegetation in areas required by Authority Agency(ies) for fire control. Implement any methods that are allowed and cost effective that have the least impacts to site biological resources. Preferred methods would be grazing and/or mowing. Less preferred methods would include the use of chemicals or motorized equipment that disks or similarly disrupts the soil structure. If disking for fire control is necessary the area shall be limited to reduce impacts to wetlands and populations of threatened/endangered species.

C Infrastructure and Facilities

Fence and gate maintenance and repair frequency will be dependent on trespass and access control issues, as well as whether grazing is utilized as a vegetation management technique and to what extent.

Element C.1 Fences and Gates

Goal: Monitor condition of fences and gates.

Goal: Maintain fences and gates to prevent casual trespass, allow necessary access, and facilitate grazing regime and management.

Task: During each site visit, record condition of fences and gates. Record location, type, and recommendations to implement fence and/or gate repair or replacement.

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Task: Maintain fences and gates as necessary by replacing posts, wire, and/or gates. Replace fences and/or gates, as necessary, and when funding allows.

D Reporting and Administration

Element D.1 – Annual Report

Goal: Provide annual report on activities conducted and general site conditions to BEI Signatory Agencies and other parties.

Task: Prepare annual report utilizing standardized Management and Monitoring Reporting Forms and any other additional documentation. Include a summary. Complete and circulate to BEI Signatory Agencies and other parties by July 31 of each year.

Task: Make recommendations with regard to (1) any habitat enhancement measures deemed to be warranted, (2) any problems that need near term attention (e.g., weed removal, fence repair, erosion control), and/or (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date.

V Transfer, Replacement, Amendments, and Notices

A Transfer

Any subsequent transfer of responsibilities under this Plan to a different Land Manager shall require approval by the BEI Signatory Agencies, in writing and shall be incorporated into this Plan by amendment. Any subsequent Property Owner assumes Land Manager responsibilities described in this Plan and as required in the Conservation Easement, unless otherwise amended in writing by the BEI Signatory Agencies.

B Replacement

If the Land Manager fails to implement the tasks described in this Plan and is notified of such failure in writing by any of the BEI Signatory Agencies, Land Manager shall have 90 days to cure such failure. If failure is not cured within 90 days, Land Manager may request a meeting with the BEI Signatory Agencies to resolve the failure. Such meeting shall occur within 30 days or a longer period if approved by the BEI Signatory Agencies. Based on the outcome of the meeting, or if no meeting is requested, the BEI Signatory Agencies may designate a replacement Land Manager in writing by amendment of this Plan. If Land Manager fails to designate a replacement Land Manager, then such public or private land or resource management organization acceptable to and as directed by the BEI Signatory Agencies may enter onto the Bank property in order to fulfill the purposes of this Plan.

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C Amendments

The Land Manager and the BEI Signatory Agencies may meet and confer from time to time, upon the request of any one of them, to revise the Plan to better meet management goals and preserve the habitat and conservation values of the Bank property. Any proposed changes to the Plan shall be discussed with the BEI Signatory Agencies and the Land Manager. Any proposed changes will be designed with input of all Parties. Amendments to the Plan approved by the BEI Signatory Agencies in writing shall be required management components and shall be implemented by the Land Manager. Any amendments to the Plan shall be implemented without any additional cost to Land Manager, unless the Land Manager agrees in writing to implement management at additional costs above the expected costs provided for by the endowment. If the CDFG or USFWS determine, in writing, that continued implementation of the Plan would jeopardize the continued existence of a State or federally listed species, any written amendment to this Plan, determined by either the CDFG or USFWS as necessary to avoid jeopardy, shall be a required management component and shall be implemented by the Land Manager.

D Notices

Any notices regarding this Plan shall be directed as follows:

Land Manager:(name and address)

Telephone: _____ Fax: _____

BEI Signatory Agencies:

U.S. Army Corps of Engineers
San Francisco District
Attn: Chief, Regulatory Branch, Rm. 813
333 Market Street
San Francisco, CA 94105

Telephone: (415) 977-8439 Fax: (415) 977-8343

California Department of Fish and Game, Region 3
Attn: Regional Manager
P.O. Box 47
Yountville, CA 94599

Telephone: 707-944-5500 Fax: (707) 944-5563

California Department of Fish and Game
Habitat Conservation Planning Branch, Banking Coordinator
1416 Ninth Street, 12th Floor

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Sacramento, CA 95814

Telephone: 916-651-7785 Fax: (916) 653-2588

U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
Attn: Field Supervisor
2800 Cottage Way, W-2605
Sacramento, CA 95825

Telephone: (916) 414-6600 Fax: (916) 414-6713

U.S. Environmental Protection Agency, Region 9
Attn: Director, Water Division
75 Hawthorne Street
San Francisco, CA 94105

Telephone: (415) 972-3572 Fax: (415) 947-3537

VI Funding and Task Prioritization

A Funding

Table 1 summarizes the anticipated costs of long term management for the Bank. These include estimates of time and funding needed to conduct the basic monitoring site visits and reporting, weed mowing, trash removal, fence repair, and a prorated calculation of funding needed to fully replace the fences. The total annual funding anticipated is approximately \$_____, therefore, with an annual estimated capitalization rate of 2.2 percent, the total endowment amount required will be \$_____.

CDFG shall hold the endowment principal and interest monies as required by existing law in the Special Deposit Fund, which consists of monies that are paid into it in trust pursuant to law, and is appropriated to fulfill the purposes for which payments into it are made. CDFG shall manage these monies as required by Fish and Game Code section 13014 and Section 16370 of the Government Code, depositing monies in the Fish and Game Mitigation and Protection Endowment Principal Account of the Special Deposit Fund and using interest monies to fund long-term management, enhancement, monitoring, and enforcement activities on habitat lands in a manner consistent with this Plan.

Land Manager's management activities shall be funded from the Endowment Fund. Land Manager shall consult with CDFG on a year to year basis to determine the amount of funding available for management and monitoring activities. Following annual management activities, Land Manager may invoice CDFG for management activities following the invoicing instructions provided by CDFG.

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B Task Prioritization

Prioritization of tasks may be necessary if insufficient funding is available to accomplish all tasks. The Land Manager and the BEI Signatory Agencies shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) required by a local, state, or federal agency, 2) tasks necessary to maintain or remediate habitat quality, 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined by the BEI Signatory Agencies in writing.

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Table 1. Bank Management and Monitoring Activities, Level of Effort, Frequency and Cost. *All numbers are estimates/revise as appropriate.*

General Bank Management & Monitoring Activities	Description	Level of Effort	Cost per Unit	Cost	Frequency	Schedule	Annual Cost
Element A.1 Seasonal Wetlands							
Monitor seasonal wetlands	Walking survey; notes, photos	9 hr	\$80/hr	\$720	2-3 surveys per year	winter, spring	\$720
Reference photography	Compile and present	4 hr	\$80/hr	\$320+ 100 exps.	annual	winter, spring	\$320
Element A.2 Riparian habitats, if applicable							
Monitor riparian habitats	Walking survey; notes, photos	5 hr	\$80/hr	\$160	once per year	any time	\$400
Element A.3 Threatened/Endangered plant species monitoring, if applicable							
Monitor species	Map; assess abundance/health	8 hr	\$80/hr	\$640	every year	April (May)	\$320
Element A.4 Threatened/Endangered animal species monitoring, if applicable							
Monitor species	Map; assess abundance/health	8 hr	\$80/hr	\$640	every year	As appropriate	\$320
Element A.5 Invasive Species							
Assess weed growth, extent	Walking survey, map; research	2 hr	\$80/hr	\$160	1-2 times per year	spring, summer	\$160
Weed removal	Hand labor	10 hr	\$50/hr	\$500	as needed	late spring, summer	\$500
Element A.6 Vegetation Management							
Mowing	Contract mowing	6 hr	\$60/hr	\$360	once per year	early summer	\$360
Grazing research and management	Research and coordination	20 hr	\$80/hr	\$800	as appropriate	as needed	\$1,600
Element B.1 Trash and Trespass							
Trash & trespass monitoring	Walking surveys	3 hr	\$60/hr	\$180	3 times per year	as appropriate	\$180
Trash removal & cleanup	Hand labor	4 hr	\$50/hr	\$200	as needed	as needed	\$200
Element B.2 Fire Control							
Fire hazard assess. & contracting	Survey, contract, supervise	2 hr	\$60/hr	\$120	as needed; once per year	late spring	\$120
Element C.1 Fences and Gates							
Survey & assess fences	Walk; document conditions	2 hr	\$50/hr	\$100	1-2 times per year	as needed	\$100
Repair fencing	Hand labor	4 hr	\$50/hr	\$200	as needed	as needed	\$200
Replace fencing	Materials and labor	5600 feet	\$5/ foot	\$28,000	replace all every 35 yr	ongoing	\$800
Gate replacement	Materials and labor	1 gate	1800	\$1800	replace every 12 yr	as needed	\$150
Element D.1 Annual Report							
Annual report	Analyze & report; maps, photos	10 hr	\$80/hr	\$480	once per year	due in summer	\$800
Account administration		2 hr	\$50/hr	\$100	as needed	annually	\$100
Vehicles and supplies				\$300			\$300
DFG CE monitoring		4 hr	\$50/hr	\$200		annually	\$200
Totals							\$xxx0.00
Annual capitalization rate							2.2 %
TOTAL ENDOWMENT							\$ _____

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