

**Draft Detailed Objectives and Evaluation Criteria for
Review at 5-25-04 Work Group Meeting**

Table 1 – Detailed Objectives and Alternatives Evaluation Criteria

BIOLOGICAL HABITAT

Objective 1. Create, restore, or enhance habitats of sufficient size, function, and appropriate structure to:

| Objective 1A. Promote restoration of native special-status plants and animals that depend on South San Francisco Bay habitat for all or part of their life cycles. | |
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| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Contribute to the recovery of the south bay subspecies of the salt marsh harvest mouse | <ul style="list-style-type: none"> • Area of complete salt marshes, with broad marshplain (<i>i.e.</i>, pickleweed) habitat and broad upland/peripheral halophyte transitional zones • Connectivity of such existing and restored marshes |
| 2. Contribute to the recovery of the California Clapper Rail | <ul style="list-style-type: none"> • Area of broad tidal marshes with suitable channel densities and appropriate vegetation structure. Connectivity of such existing and restored marshes |
| 3. Re-establish populations of special-status plants | <ul style="list-style-type: none"> • Area of high marsh/upland transitional zones |
| 4. Contribute to the recovery of the Western Snowy Plovers and California Least Terns | <ul style="list-style-type: none"> • Area of suitable breeding habitat (salt pan islands, undisturbed levees) , assuming appropriate foraging habitat is available. |
| 5. Enhance habitat for anadromous special-status fish. (Salmon and steelhead) | <ul style="list-style-type: none"> • Length of tidal channel habitat within marshes connected to creek and river systems that support or could support these species |

| Objective 1B. Maintain current migratory bird species that utilize existing salt ponds and associated structures such as levees. | |
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| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Maintain current populations of birds breeding at the salt ponds | <ul style="list-style-type: none"> • Area of managed ponds with associated breeding islands |
| 2. Maintain habitat for salt pond specialized birds (<i>e.g.</i> , Wilson’s Phalaropes) | <ul style="list-style-type: none"> • Area of managed pond habitat with somewhat elevated salinities (100-140 ppt), and appropriate depths |
| 3. Maintain current population levels for foraging shorebirds | <ul style="list-style-type: none"> • Estimate of foraging habitat area, including mudflat exterior to salt ponds, ponds and pans in tidal marshes and suitable foraging areas in managed ponds. |

Table 1 – Detailed Objectives and Alternatives Evaluation Criteria (cont.)

| Objective 1C. Support increased abundance and diversity of native species in various South San Francisco Bay aquatic and terrestrial ecosystem components, including plants, invertebrates, fish, mammals, birds, reptiles and amphibians. | |
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| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Maintain or enhance the populations of shorebirds currently using intertidal mudflat habitat | <ul style="list-style-type: none"> • Area of mudflat habitat available in the South Bay through the life of the project |
| 2. Enhance South Bay fish populations | <ul style="list-style-type: none"> • Area of tidal marsh and tidal channel habitat within marshes, in combination with bay and mudflat habitat |
| 3. Enhance habitat for intertidal invertebrate populations by contributing to the grazing and detrital food webs | <ul style="list-style-type: none"> • Area of intertidal habitat, including tidal marshes and mudflats |
| 4. Maintain or enhance the populations of near-shore birds including waterfowl, currently using the Bay | <ul style="list-style-type: none"> • Length of edge habitat (water or mudflat bordering on salt marsh) • Area of mudflat and shallow waters inundated at high tide, and area of shallow water ponds |
| 5. Enhance harbor seal habitat for foraging and isolated haul-out areas | <ul style="list-style-type: none"> • Area of new isolated, large/deep tidal channels adjacent to marsh plain |
| 6. Enhance moist grassland habitats | <ul style="list-style-type: none"> • Areas where moist grasslands could grade into transitional habitats • Length of edge where transitional habitats could grade into moist grasslands |

FLOOD MANAGEMENT

| Objective 2. Maintain or improve existing levels of flood protection in the South Bay area. | |
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| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Maintain existing levels of flood protection in the South Bay area | <ul style="list-style-type: none"> • Must not increase the frequency of occurrence of flood inducing water levels^{1, 2, *} |
| 2. Improve levels of flood protection in the South Bay area | <ul style="list-style-type: none"> • Decrease in frequency of occurrence of flood inducing water levels^{1, 2} |
| 3. Remove FEMA identified areas of flood risk from the floodplain | <ul style="list-style-type: none"> • Area removed from the FEMA floodplain¹ |
| 4. Provide flood protection to Corps standards | <ul style="list-style-type: none"> • Area afforded adequate flood protection |

¹ in areas where flooding is not desirable based on land use

² include consideration of sediment deposition and erosion effects on water levels

* EXCLUSION CRITERION, i.e. must be met by alternative to carry forward and receive further consideration

Table 1 – Detailed Objectives and Alternatives Evaluation Criteria (cont.)

| PUBLIC ACCESS & RECREATION | |
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| Objective 3. Provide public access and recreational opportunities compatible with wildlife and habitat goals. | |
| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Improve public access and recreation in the project area | <ul style="list-style-type: none"> • Number of compatible public access and recreation opportunities consistent with DFG and USFWS missions and regulatory requirements. • Number of opportunities for multi-agency/stakeholder partnering to plan, implement and manage public access and recreation |
| 2. Provide access and recreation that promotes wildlife-oriented public use | <ul style="list-style-type: none"> • Number of opportunities for USFWS “priority uses” (e.g. wildlife observation, wildlife photography, environmental interpretation, environmental education, hunting, and fishing) • Number of user experiences provided (e.g. access to the water, educational and interpretive opportunities, ability to experience a diversity of habitats) |
| 3. Provide recreation for a variety of uses and user types | <ul style="list-style-type: none"> • Number of user groups and individuals that can be accommodated • Number of access points and staging areas with amenities required for a variety of different uses • Range and diversity of active and passive uses provided |
| 4. Enhance opportunities for linking the project areas to existing public open spaces and adjacent communities. | <ul style="list-style-type: none"> • Number of links provided • Number of Bay Trail spine gaps closed and spur and connector trails provided • Number of links to public transit • Number of opportunities for non-motorized, multi-modal access to and from the project area |
| 5. Enhance opportunity for aesthetic experiences | <ul style="list-style-type: none"> • Number of opportunities for multi-sensory experiences. (e.g. open water and marsh views, smells of the bay, listen to wildlife and others) • Number of popular viewing areas/viewpoints/ scenic overlooks • Number of access points and trails that are close to the open bay |

Table 1 – Detailed Objectives and Alternatives Evaluation Criteria (cont.)

| WATER & SEDIMENT QUALITY | |
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| Objective 4. Protect or improve existing levels of water and sediment quality in the South Bay, and take into account ecological risks caused by restoration. | |
| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Maintain existing levels of water quality (surface and ground water) | <ul style="list-style-type: none"> • Within the range of background concentrations of key indicator constituents (e.g., mercury, metals, nutrients, algae)* |
| 2. Improve levels of water quality (surface and ground water) | <ul style="list-style-type: none"> • Below the range of background concentrations of key indicator constituents (e.g., mercury, metals, nutrients, algae) |
| 3. Limit ecological risk associated with mercury methylation and bioaccumulation | <ul style="list-style-type: none"> • No net increase in mercury or methylmercury loads to the bay • Minimization of methylmercury production and biological uptake |
| 4. Limit mobilization of existing contaminants present in sediments | <ul style="list-style-type: none"> • Higher concentration sediments stabilized and protected from erosion or transport |

* EXCLUSION CRITERION, i.e. must be met by alternative to carry forward and receive further consideration

Table 1 – Detailed Objectives and Alternatives Evaluation Criteria (cont.)

| NUISANCE SPECIES MANAGEMENT | |
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| Objective 5. Implement design and management measures to maintain or improve current levels of vector management, control predation on special status species, and manage the spread of non-native invasive species. | |
| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Minimize colonization of mudflats and marshplain by non-native <i>Spartina</i> and its hybrids | <ul style="list-style-type: none"> • Area of potentially colonizable mudflat (assuming that no control measures are found to be feasible) |
| 2. Maintain or improve the current levels of vector management | <ul style="list-style-type: none"> • Increased area of potential mosquito habitat |
| 3. Improve protection from predators and reduce need for Predator Management | <ul style="list-style-type: none"> • Area of predator-accessible tidal marshes |

| INFRASTRUCTURE | |
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| Objective 6. Protect the services provided by existing infrastructure (e.g. power lines, railroads, wastewater treatment plants). | |
| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Maintain the services provided by existing infrastructure | <ul style="list-style-type: none"> • Must not increase risk of failure or service degradation due to physical changes* |
| 2. Maintain maintenance access for existing infrastructure | <ul style="list-style-type: none"> • Does not eliminate maintenance access due to physical changes or limitations resulting from habitat improvements. |

* EXCLUSION CRITERION, i.e. must be met by alternative to carry forward and receive further consideration

| COST EFFECTIVENESS | |
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| Objective 7. Consider costs of implementation, management, and monitoring so that planned activities can be effectively executed with available funding. Form partnerships and alliances to develop and institute a long-term viable funding strategy. | |
| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Manage construction costs to achieve project goals and objectives with available funding | <ul style="list-style-type: none"> • Dollars |
| 2. Manage long-term operations and maintenance costs | <ul style="list-style-type: none"> • Dollars, 50-year time frame |
| 3. Manage monitoring costs to support project goals and objectives | <ul style="list-style-type: none"> • Dollars, 10-year time frame |
| 4. Institute a long-term viable funding strategy | <ul style="list-style-type: none"> • Assessment of institutional complexity and achievability |
| 5. Increase partnerships and alliances to institute a long-term funding strategy | <ul style="list-style-type: none"> • Participation by multiple entities (e.g., Corps, SCVWD, and others) in long-term funding |
| 6. Achieve a favorable benefit/cost ratio. | <ul style="list-style-type: none"> • Calculation of benefit to cost (b/c) ratio, using Corps procedures |
| 7. Limit costs of delay | <ul style="list-style-type: none"> • Assessment of institutional and legal complexity/controversy |

Table 1 – Detailed Objectives and Alternatives Evaluation Criteria (cont.)

| ENVIRONMENTAL IMPACT | |
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| Objective 8. Promote environmental benefit and reduce impact in topics other than biology. | |
| Detailed Objectives | Alternatives Evaluation Criteria |
| 1. Preserve cultural resources, including important archaeological and historical sites | <ul style="list-style-type: none"> • Number of cultural resource sites impacted • Number of opportunities for interpretation and education |
| 2. Provide public services to accommodate projected demand | <ul style="list-style-type: none"> • Number of law enforcement patrols needed • Response times for fire, police and ambulance services |
| 3. Promote compatibility with surrounding land plans and uses | <ul style="list-style-type: none"> • Level of land use compatibility |
| 4. Provide safe, convenient access to the project area while managing congestion on nearby streets | <ul style="list-style-type: none"> • Number of vehicle trips • Number of parking spaces • Number of bicycle lanes • Level of service on nearby roads |
| 5. Enhance air quality for proposed and surrounding uses | <ul style="list-style-type: none"> • Air pollutant levels • Potential for creation of objectionable odors |
| 6. Manage noise levels for proposed and surrounding uses | <ul style="list-style-type: none"> • Decibel levels • Number of noise-generating activities • Distance between noise-generating activities and nearby sensitive receptors |