COASTAL CONSERVANCY

Staff Recommendation
November 6, 2008

BAHIA MARSH RESTORATION

File No. 08-112-01
Project Manager: Tom Gandesbery

RECOMMENDED ACTION: Authorization to disburse up to ninety-five thousand dollars ($95,000) of Conservancy funds, which will be reimbursed by the Wildlife Conservation Board, to the Marin Audubon Society to complete the restoration of seasonal and tidal wetlands located at the Bahia Lagoon.

LOCATION: City of Novato, Marin County

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: Detailed Project Map

Exhibit 3: Project Letters

Exhibit 4: Environmental Impact Report for the Bahia Wetland Restoration Project and Mitigation and Monitoring Plan

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RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160-31165 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of of ninety-five thousand dollars ($95,000) to Marin Audubon Society, to be re-paid from the Wildlife Conservation Board (WCB), for work in support of the restoration goals of the *San Francisco Baylands Ecosystem Habitat Goals Report* to complete the restoration of seasonal and tidal wetlands located at the Bahia Lagoon, Marin County, subject to the following conditions:

Prior to disbursement of any funds under this authorization:

1 There shall be in place a fully executed Memorandum of Understanding between the Conservancy and the Wildlife Conservation Board (WCB) authorizing the project as an "approved project" under WCB Agreement Number WC-3032BT.

2. Marin Audubon Society shall submit the following for the review and written approval of the Executive Officer of the Conservancy:

a. A detailed work plan for the project components, including a final budget and schedule.

b. The names and qualifications of any contractors to be retained to carry out the project components.

c. Evidence that all permits and approvals necessary to undertake the project have been obtained.

d. A signing plan acknowledging the Conservancy's funding of the project components.

e. All project work shall be undertaken in compliance with the requirements of all permits and approvals and Marin Audubon Society shall assure implementation of the Mitigation, Monitoring and Reporting Program for the project (attached to the accompanying staff recommendation as Exhibit 4F)."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1 The proposed project is consistent with the Project Selection Criteria and Guidelines, last updated by the Conservancy on September 20, 2007.

2 The proposed authorization is consistent with the purposes and objectives of Chapter 4.5 (Sections 31160-31165) of Division 21 of the Public Resources Code regarding the enhancement and restoration of wetlands in the San Francisco Bay Area.

3 The Conservancy has independently reviewed and considered the Environmental Impact Report certified by the California Department of Fish and Game on August 10, 2006 and the Mitigation and Monitoring Report attached as Exhibit 4F to the accompanying staff recommendation, and finds that the Bahia Marsh Restoration project, as mitigated, avoids, reduces or mitigates any potential significant environmental effects to a level of insignificance and that there is no substantial evidence that the project as mitigated will have a significant effect on the environment, as defined in 14 California Code of Regulations Section 15382.

4 Marin Audubon Society is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code."

PROJECT SUMMARY:

The Bahia Marsh Restoration project consists of a series of earth moving and other construction activities designed to restore maximum tidal marsh and transitional habitat on 480 acres of the Bahia Marsh Restoration site, on the Petaluma River in Marin County (Exhibits 1 and 2). The

restoration will be accomplished largely by lowering and breaching levees and removing soil fill that was placed more than 30 years ago.

In the western portion of the Bahia Marsh, the restoration will construct of starter channels, interior berms, and pilot channels; move and remove fill, place ditch blocks and re-grade the former RV lot. This work will result in the lowering and breaching of perimeter levees, the creation of transition habitat and vegetation bench, the enhancement of seasonal wetlands, and the re-vegetation of upland areas. Within the eastern Bahia wetlands, berms and high areas will be excavated and graded, seasonal wetlands will be enhanced in and marsh transition zones will be re-vegetated. The project also includes construction of public access ways from several public streets and a viewing area along the western boundary of the project (see Figure 2).

Portions of the project were carried out this year by Marin Audubon Society (MAS) under funding supplied by the State Wildlife Conservation Board, Cal-Fed, North American Waterfowl Assoc. and several other non-profit organizations (see Project Financing Section, below). The Conservancy has been asked to assist in funding work to complete the restoration project. Although the project was initially fully funded using a variety of federal and state grants, the MAS indicates that there is now a budget shortfall created by a one year delay in obtaining a permit from the Army Corps of Engineers and) significantly higher than anticipated bids for construction of all the project components.

The result of the project funding shortfall is that several key elements of the nearly completed project remain unfinished. Conservancy funding is needed to implement two activities that need to be completed this year to ensure the success of the project: hydro-seeding and winterizing of newly graded slopes, and post-construction surveys. Hydro-seeding is needed to provide initial plant cover to control erosion on newly-graded slopes and to prevent invasion by exotic plants that would take over in the absence of other plants. About 22 acres of transition habitats and uplands will be hydro-seeded with the annual plant *Lolium perenne*. About five acres of seasonal wetland will also be hydro-seeded with locally-grown seed of native meadow barley. In order for hydro-seeding to be successful, it must be carried out in late November to early December, before the wet season. In addition to seeding native vegetation, monitoring is necessary to document the success or problems with the project. MAS intends to contract for post-construction surveys to ensure the project is constructed as designed and planned, and to serve as a base for ongoing project monitoring.

MAS has been involved in preserving and restoring wetlands since 1985. During the last 23 years MAS has implemented 20 projects and restored or enhanced close to 1,000 acres of marsh. In 2003, the Coastal Conservancy granted $5.75M to MAS for the acquisition of the larger Bahia Property (see History, below). Most recently, in 2007, MAS successfully completed the restoration construction of the Petaluma Marsh Expansion project. This 102-acre tidal wetland restoration project, for which the Conservancy was a major sponsor, was breached in December of 2006.

Site Description: The project site is situated in 480 acres of low elevation areas that were purchased by MAS in 2003 as part of a larger acquisition of oak woodlands and tidelands. The lower elevation areas consist of both tidal and diked, former tidal wetlands. Of the original 632-

acre acquisition, about 200 acres have been transferred from MAS to the Marin County Open Space District for inclusion in its Rush Creek Open Space Preserve (Exhibit 2). Of the low elevation areas, 217 acres of wetland were transferred from MAS to state Department of Fish and Game (DFG), with MAS retaining 58 acres and planning to maintain and enhance habitat. MAS is also carrying out restoration work on a portion of the marsh that was and still is controlled by the State Lands Commission. The hydro-seeding work described above involves earthwork in approximately 26 acres of a total of 55 acres of wetlands still owned by MAS; MAS has already completed enhancement work on the DFG-owned wetlands.

The Bahia Marsh properties support an impressive diversity of habitats including oak woodlands, fresh water pond, seasonal wetland, seasonal ponds and ruderal uplands. The wetland restoration project will expand and enhance the existing habitats by restoring 375 acres of tidal marsh, upland refugia ecotone and terrestrial habitats. The Bahia woodland area is dominated by blue oaks, the only known site where these species exist adjacent to salt marsh.

The value of the site is enhanced by its location adjacent to other protected habitats of Rush Creek Open Space Preserve, State Lands marshes along the Petaluma River and Black John Slough to the north. The site provides wildlife movement corridors between these habitats. More than 125 avian species have been observed using the site including endangered Salt marsh Harvest Mouse, special status species California Black Rail, San Pablo Song Sparrow, Northern Harrier, Snowy and Great Egret, Yellowlegs, various species of woodpecker and other woodland birds. The project will also expand the habitat for many species of fish. The tidal marshes adjacent to Bahia are habitat for the larges population of Endangered California Clapper Rails. The Bahia tidal marsh restoration will significantly increase tidal and refugia habitat for this species.

A public access trail extents several miles across the hills and connects with a two-mile trail on the Rush Creek Preserve.

Project History:

The Bahia project site is historic tidal marsh that was diked and filled more than thirty years ago to create land for residential development. The resulting home development is located on a lagoon that was originally constructed as a recreational boating feature (Exhibit 1 and 2). The lagoon, and the Bahia Home Owners Association that maintained the community's facilities, became mired in litigation after the lagoon and access channel silted in and became habitat for two endangered species: the California clapper rail and the salt marsh harvest mouse. After more than twenty years of opposing various development proposals at Bahia, MAS was able to purchase the Bahia property from the developer-owner in 2003. The Conservancy was a major contributor to the $15.8 million purchase, having contributed $5.75 million. Another major contributor was the CALFED-Bay Delta Program, which provided funding not only for the purchase but also for preparation of a restoration plan and for construction.

Shortly after purchasing the property, MAS transferred title for most of the property to the Marin County Open Space District and the DFG. MAS transferred 212 acres of oak wooded hills to the County, and 355 acres of diked baylands to DFG. In 2003, MAS obtained funding from CALFED to complete a design plan, and Environmental Impact Report (EIR). At about the same time, MAS embarked on a fundraising initiative for the restoration project that resulted in grants

from ten organizations totaling over two million dollars (see Project Financing, below). While the funding was sufficient to cover the estimated budget for the project, in the end construction bids were much higher than expected and the funding proved insufficient to complete the project.

PROJECT FINANCING:

WCB	835,800
CalFed	768,850
US Private Stewardship Program	100,000
Fish and Wildlife Foundation	100,000
San Francisco Foundation	20,000
Forrest Lattner Foundation	36,000
Mead Foundation	20,000
Total other sources	*1,880,650*
Coastal Conservancy	$95,000
Total Project Cost	**1,975,650**

The Conservancy's contribution of $95,000, is expected to come from funding provided to the Conservancy through an existing agreement between the WCB and Conservancy. The WCB-Conservancy interagency agreement specifies that the Conservancy may use these funds for projects that restore wetland habitat within the nine-county San Francisco Bay Area, implement the restoration goals of the *San Francisco Baylands Ecosystem Habitat Goals Report*, meet the priorities of the Conservancy as described in Section 31162 of the Public Resources Code, and are "high priority" (identified in the agreement or designated by WCB as a priority project in the required under agreement between WCB and the Conservancy).

The WCB funds are derived from an appropriation from the Water Security, Clean Drinking Water, Coastal Beach Protection Fund of 2002 (Proposition 50) under a specific authorization found in Section 79572(c) of the Water Code. These funds may be used generally for acquisition, protection and restoration of coastal wetlands and adjacent upland areas, and specifically for projects in the San Francisco Bay Area that accomplish the objectives of the Conservancy as specified in Section 31162 of the Public Resources Code to protect, restore, and enhance natural habitats.,

The proposed project will result in restoration of wetlands and adjacent upland areas in the San Francisco Bay Area. Also the project is consistent with §31163(d) in that the project is consistent with the County's general plan and the *San Francisco Baylands Ecosystem Habitat Goals Report* (1999).

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project is undertaken pursuant to Chapter 4.5 of the Conservancy's enabling legislation, Public Resources Code Sections 31160-31165, which directs the Conservancy to address the resource and recreational needs of the San Francisco Bay Area in a coordinated, comprehensive,

and effective way. The proposed authorization would further the restoration efforts initiated by MAS. Under §31162, the Conservancy may undertake projects that will help to achieve specified goals for the San Francisco Bay Area Conservancy Program. Consistent with Section 31162(b), the project will help to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance Section 31163(c) further directs the Conservancy to participate in and support interagency actions and public/private partnerships in the San Francisco Bay area for these purposes. Consistent with §31163(c), the project is: 1) supported by the County's General Plan and the *San Francisco Baylands Ecosystem Habitat Goals Report* (1999), (2) serves a regional constituency, (3) will assist in the timely implementation of the restoration project, (4) will provide benefits that could be lost if the project is not quickly implemented, and (5) includes matching funds from other sources of funding as outlined in the Project Fiancing Section.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 10, Objective C** of the Conservancy's 2007 Strategic Plan, the proposed project will restore 26 acres of transitional/upland habitat and seasonal wetlands as part of a larger restoration project to enhance hydrologic and biotic functions to over 200 acres of wetlands.

Consistent with Goal 2 Objective B: the project will enhance waterfront or watershed parks, including but not limited to parks along regional trails, multi-benefit pocket parks by providing additional access and view areas for the Bahia Marsh area.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on September 20, 2007, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The project has broad public support. The acquisition of Bahia was strongly supported by the citizens of Novato as evidenced by a successful referendum placed on the ballot that denied the previous owner the rights to develop the hillside lands. The referendum was approved by a more than 65% majority of the citizens of Novato thereby defeating a massive housing development that had been approved by the City. In addition, almost $1 million was contributed by individual members of the public toward the purchase of Bahia.

4. **Location:** Bahia Marsh lies in the nine-county San Francisco Bay Area, consistent with Section 31162 of the Public Resources Code.
5. **Need:** If Conservancy funding is not approved, the project will be at risk because the ground would be barren and open to colonization with invasive species. Hydro-seeding will protect the newly graded lands from erosion and protect them from being overtaken by invasive/non-native species. Post-construction surveys are necessary to ensure the project is constructed as designed and to provide a base for post-construction monitoring. If post-construction surveys do not take place there will be no record of the elevations of the marsh plain, breaches and other project features, jeopardizing the success of the project. No other source of funding for this work is available.
6. **Greater-than-local interest:** The project has greater than local interest because it will significantly expand tidal marsh habitat for Endangered California Clapper Rail and Salt Marsh Harvest Mouse habitat, four special status species, and many other migratory and resident species. In addition, it will restore terrestrial ecotone between tidal marsh and Blue Oak wooded hills, a natural feature that is not known to exist anywhere else in California.

Additional Criteria

7. **Urgency: I**f hydro-seeding does not take place the barren soils will be invaded by non-native plants including *Lepidium* and broom thereby severely hampering the goal of restoring native vegetation to the site. Post-construction surveys are essential to ensure there are no significant discrepancies between the designed and the constructed project that could adversely impact the success of the restoration. Surveys are also a permit requirement of the project.
8. **Resolution of more than one issue:** The proposed project provides a remedy for a water quality problem that arose out of poor circulation (odor complaints in fall of 2007), as well as enhancing circulation in other parts of the wetland. In addition to ecological benefits, the project will provide designated public access trails leading from several public roadways.
9. **Leverage:** See the "Project Financing" section above.
12. **Readiness:** MAS is currently finishing site work and funding is needed to complete the project before the wet season.
13. **Realization of Conservancy Goals:** See "Project History" section above. This project will restore wetland habitat to lands that were purchased by MAS in 2003 and co-funded by the Conservancy.

CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

The proposed project is consistent with the applicable policies contained in Part of the San Francisco Bay Plan, adopted by BCDC in January 2006, and the policies of BCDC in that existing wetlands will be managed for fish and wildlife benefit, that no fill will be placed in the wetlands and that the restoration project has been well planned and designed. Specifically, MAS will maintain and enhance habitats in a historic bayland, consistent with Policy 6 of the Bay Plan. BCDC issued a permit for this project on December 13, 2007.

COMPLIANCE WITH CEQA:

Conservancy staff has independently reviewed the Environmental Impact Report (EIR) prepared for MAS and certified the California Department of Fish and Game on August 10, 2007 (See Exhibit 4). The EIR describes the project's potential significant impacts and offers mitigation to reduce the potential impacts to a level of insignificance as described below. A Mitigation Monitoring and Reporting Program (MMRP) was completed by the Department of Fish and Game and is included herein (Exhibit 4F). Staff as reviewed the potentially significant impacts of the project as outlined below:

Water Impact-1. Short-term construction impacts to water quality (elevation of suspended sediment and turbidity levels or hazardous materials).

Localized temporary elevation of suspended sediment and turbidity levels of hazardous materials is expected to result form the levee breaching and construction activities planned for the project. However, these elevated levels will be temporary. Disturbances will be timed and the project will be designed to conserve sediment for use in elevating the subsided interior portions of the levees and wetlands. This will further minimize discharges of turbid wager to waters draining to the Petaluma River and San Pablo Bay. Construction management practices that reduced turbidity and suspended sediment will be used (Best Management Practices [BMPs]).

Mitigation Measure for Water Impact-1: The following mitigation measures will be implemented as appropriate:

Siltation Controls: Install silt fences, localized silt barriers or other erosion control measures during construction in the wetland and aquatic habitat located in creeks and sloughs. No sediment controls will be applied when runoff is directed toward pond interiors unless sensitive wildlife resources are identified.

Maintain siltation controls in properly functioning condition in accordance with the manufacturer's specifications and good engineering practices. Controls will be removed after construction. Should sediment escape the construction site, accumulations of sediment will be removed and placed in a location where it cannot impact water quality.

Hazardous Materials: All wastes created during construction (e.g. trash, excess construction material, etc.) would be removed form the construction area and disposed of in an approved disposal site. No trash or other solid waste will be buried within the construction area or discharged into waters of the United States. The project will comply with all applicable State or local waste disposal regulations.

Generation of fugitive dust would be minimized by accepted practices. If precipitation occurs during construction, vehicular traffic along the construction corridor will be minimized to reduce potential for erosion. Generation of fugitive dust would be minimized by accepted practices.

Gasoline, diesel fuels, lubricants and other potential pollutants would be stored in containers that would prevent their accidental release. Any unused lubricants or used engine oil will be removed from the site and disposed of at an approved facility.

Additional steps to prevent the accidental discharge of potential pollutants will be described in a project-specific spill prevention plan.

Overnight or out-of-use equipment will be limited to fueling and lubricating equipment. No major cleaning or major equipment repairs would be conducted at the construction site.

Prior to construction, an environmental inspector will verify the limits of authorized construction work areas and identify any additional stabilization or special construction management needed to protect sensitive wildlife. During construction, if conditions are identified that would impair water quality or harm wildlife, the construction activity will be stopped and rescheduled or the construction design will be changed to prevent reoccurrence.

Mitigation Measure B for Water Impact-1: The project manager will submit a copy of the Regional Water Quality Control Board (RWQCB) Water Quality Certification to the Bay Conservation and Development Commission (BCDC).

Post-mitigation Significance: Less than significant.

GEOLOGY AND SOILS

Geologic Imapct-1. Substantial removal, filling, grading, or disturbance of soils. The site has been and will be disturbed by the construction of levees and the placement of large quantities of fill to create the peninsulas at East Bahia. The purpose of the project is to restore the site to pre-disturbance conditions to the maximum extent feasible. This will require fill removal, grading, and the disturbance of soils.

Mitigation for Geologic Impact 1: Use Best Management Practices (BMPs) to protect soil during and immediately after construction.

The following BMPs would be implemented, as appropriate:

Siltation Controls: Install silt fences, localized silt barriers or other erosion control measures during construction in the wetland and aquatic habitat located in creeks and sloughs. No sediment controls will be applied when runoff is directed toward pond interiors unless sensitive wildlife resources are identified.

Maintain siltation controls in properly functioning condition in accordance with the manufacturer's specifications and good engineering practices. Controls will be removed after construction. Should sediment escape the construction site, accumulations of sediment will be removed and placed in a location where it cannot impact water quality.

Hazardous Materials: All wastes created during construction (e.g. trash, excess construction material, etc.) would be removed from the construction area and disposed of in an approved disposal site. No trash or other solid wastes will be buried within the construction area or discharged into waters of the United States. The project will comply with all applicable State or local waste disposal regulations.

Generation of fugitive dust would be minimized by accepted practices. If precipitation occurs during construction, vehicular traffic along construction corridor will be minimized to reduce the potential for erosion.

Gasoline, diesel fuels, lubricants and other potential pollutants would be stored in containers that would prevent their accidental release. Any unused lubricants or used engine oil will be removed from the site and disposed of at an approved facility. Additional steps to prevent the accidental discharge of potential pollutants will be described in a project-specific spill prevention plan.

Overnight or out-of-use equipment will be parked on impervious mats/tarps to capture leaking oils and lubricants. .

Routine maintenance of equipment will be limited to fueling and lubricating equipment. No major cleaning or major equipment repairs would be conducted at the construction site.

Prior to construction, an environmental inspector will verify the limits of authorized construction work areas and identify any additional stabilization or special construction management needed to protect sensitive wildlife. During construction, if conditions are identified that would impair water quality or harm wildlife, the construction activity will be stopped and rescheduled or the construction design will be changed to prevent reoccurrence.

Post-mitigation Significance: Less than significant.

BIOLOGICAL RESOURCES

Bio Impact-3. Direct impacts to existing wildlife from construction activities. The primary purpose of the project is to restore tidal marsh to provide benefits to special-status species including the California clapper rail and SMHM. The project has been designed to maximize the habitat restoration potential. Proposed ground disturbance activities and associated noise could disturb existing wildlife at the project site. Heavy equipment would be used for placement of fill material, levee breaches, and starter channels. Some of this activity would occur in existing special status species habitat.

Noise impacts resulting from construction activities could disrupt reproductive success if conducted during the breeding season and nesting seasons of the California clapper rail, California black rail, northern harrier, salt marsh common yellowthroat, and San Pablo song sparrow.

Mitigation Measure A for Bio Impact-3. In general, DFG and MAS will attempt to avoid construction operations during the breeding season. If this is not possible and construction is to occur during the breeding season, then DFG and MAS will conduct USFWS-approved surveys during the breeding season prior to construction to determine the presence of special status species in the project area. If breeding surveys detect special status bird species' breeding territories in the vicinity of the proposed construction areas, the USFWS shall be consulted to determine if the distance of the territory from the activity is a suitable buffer requiring no further action. If breeding territories are found to be potentially impacted by construction, all activities shall be prohibited between February 1 and August 31, (according to the USFWS survey protocol); this time period covers the breeding seasonal of the potential special status species at the site).

Post-mitigation Significance: Less than significant.

Bio Impact-5: Disturbance of existing vegetation could promote the spread of invasive weeds. Breaching the site levees and excavating fill material from the East Bahia peninsulas would disturb existing plant communities, opening up areas of the site and creating low salinity tidal conditions that would be potentially favorable to the establishment of invasive cordgrass species and their hybrids. In the San Francisco Bay, invasive species of cordgrass including an Atlantic species of invasive cordgrass (*Spartina alterniflora*, or smooth cordgrass) tend to colonize low marsh and middle marsh zones. During project implementation, invasive cordgrass could be spread through either the opening of newly disturbed habitat, or the movement by construction equipment, of propagules from the existing stands of *S. alterniflora* into previously inaccessible sites. As noted previously, *S. alterniflora* has not been detected as far north as the project site. However, *S. densiflora* has been found in Marin County, as close to the project site as Gallinas Creek. This and other invasives, such as pepperweed, may invade areas disturbed by project implementation.

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> **Mitigation Measure A for Bio Impact-5**: MAS will coordinate with San Francisco Estuary Invasive Spartina Project to determine where the nearest populations of invasive cordgrass are located and to ensure that invasive cordgrass is not intr4oduced to the Project Site during or prior to project implementation.
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> **Mitigation Measure B for Bio Impact-5:** Gain control of new, establishing populations of invasive cordgrass using protocols suggested by the San Francisco Estuary Invasive Spartina Project.
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> **Mitigation Measure C for Bio Imapct-5:** Conduct post-implementation monitoring for new, establishing populations of invasive cordgrass. If populations of invasive cordgrass are detected implement Mitigation Measure B.
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> **Mitigation Measure D for Bio Impact-5**: Conduct post-implementation monitoring for new, establishing populations of pepperweed. If new populations are detected, appropriate control measures will be implemented.

Post-mitigation significance: Less then Significant.

TRAFFIC AND TRANSPORTATION IMPACTS AND MITIGATIONS

Traffic Impact-1: **Increased traffic on Bolero Court and Topaz Drive during construction**. A total of 1,150 round trips are estimated**,** based on a figure of 23,000 cy, of material to be hauled from East to West Bahia and a capacity of 20 cy per truckload. Assuming the transport of this material is completed within four 40-hours (160 hours total), hauling this amount of material would result in approximately 7 truck round trips per hour (1,150 round trips divided by 160 hours total), or 14 one-way trips per hour. During peak commute hours (7:30 to 9 am) and 4:30 to 6 pm), this could cause some traffic congestion at the Topaz/Albatross intersection, where there is a four-way stop sign, with LOS possibly degrading to a "C" at that intersection, (Note

that an LOS of "C", while a significant degradation from existing conditions, still represents stable operations and acceptable delays at impacted intersections.)

Mitigation for Traffic Impact-1: Restrict truck traffic to the hours between 9 am and 4:30 pm.

Post-mitigation Significance: **Less than significant** (this mitigation would be sufficient to avoid degradation in the LOS of the Topaz/Albatross intersection.)

Traffic Impact-2: Increased safety risks to pedestrians, bicyclists, and motorists on Bolero Court and Top\ax Drive during construction. The proposed project would generate approximately 7 round-trips, or 14 one-way trips per hour (see calculations under Traffic Impact 1 above). Averaged out this would equates to one truck every 4.5 minutes approximately.

Mitigation A for Traffic Impact-2: Reduce Speed limit for project trucks to 10 mph. At this speed, the ability of truck drivers to see around the tight serpentine bends of Topaz Drive and their ability to stop quickly if need be, would be greatly improved.

Mitigation B for Traffic Impact-2: Restrict street parking along Topaz Drive and Bolero Court during construction/truck hauling hours. Residents who normally park their cars on Topaz and Bolero, would be asked to park in the garages, driveway or on side streets during the hours of construction (9am to 4:30pm) this would reduce safety risks by improving visibility.

Mitigation C for Traffic Impact-2: Notify the Bahia community immediately prior to the beginning of excavations at East Bahia. This notification should alert Bahia residents to the project and the safety precautions that will be taken.

Post-mitigation significance: Less then Significant.

AIR QUALITY

Air Quality Impact-1: Operation of construction equipment and vehicles (worker commute trips and truck transport of fill material) during project construction would generate air emissions. Impacts are expected to be minor and of short duration. A qualitative analysis of construction-related air quality impacts was performed by comparing this project to the type of construction projects likely to produce emissions that could exceed federal and state ambient air quality standards.

Ozone Precursor Emissions- Internal combustion engineer used in construction emits ozone precursors. The BBQMD has established significance thresholds for emissions of ozone precursor pollutants (ROG and NOx; See section 7.2). According to the CEQA Guidelines established by BAAQMD (http://baaqmd.gov/dst/regulations/rg0100), examples of projects that generate sufficient traffic to exceed the established thresholds for ozone precursors include subdivisions development of 320 homes, shopping centers of 44,000 square feet, or office parks of 210,000 square feet. The Proposed Project would generate significantly less traffic than these types of projects and would therefore not exceed the BAAQMD thresholds for ozone precursor pollutants.

Carbon Monoxide Emissions-Internal combustion engines used in construction are also a source of CO emissions. The BAAQMD CEQA Guidelines indicate that exceedences of the CO air

quality standard are not anticipated from projects that generate less than 550 pounds per day of CO, do not cause congestion at intersections, and do not increase traffic substantially (by 10 percent or more) at congested intersections. Since the proposed project is not expected to cause significant congestion or increases in traffic, it can be concluded that the project would not lead to exceedences of the CO air quality standards.

Air Quality Impact-2: Project construction would generate fugitive dust. Dust contains PM10 for which the BAAQMD has established a significance threshold (see section 7.2). Excavation of fill from East Bahia and gravel on unpaved access roads and levees has the potential to generate dust and therefore PM10. In addition, project construction may require some stockpiling of dirt, either from excavations or for use in construction. If stockpiles are allowe3d to dry out, they may become a source of b lowing dust and PM10

As noted above, construction activities would take place over a period of approximately 4 weeks, therefore, impacts would be short in duration. The majority of the work would be done in noise or wet mud, thereby minimizing the likelihood of dust generation, which is not expected to exceed the BAAQMD significance threshold. Stockpiled dirt from the project is unlikely to generate much dust since excavated soils will be wet and are not likely to dry out during the short construction period. Furthermore, dust generation from the project is expected to be localized and would be unlikely to affect off-site receptors. Construction operations at East Bahia could cause minor impacts to off-site receptors in the Bahia community Construction Central and West Bahia is too far away to impact off-site receptors. Overall, this impact is expected to be potentially significant, but short in duration.

Mitigation for Air Quality Imapct-2: Basic Control Measures – The following controls recommended by the BAAQMD will be used at the Bahia Restoration construction site (as needed):

- Water all active construction areas at least twice daily (as needed if soils dry out)
- Cover all trucks hauling dry soil or other loose materials or require all trucks to maintain at least two feet of freeboard. Moist soils will be evaluated for air quality impacts.
- Apply water three times daily on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets
- Enclose, cover, and water twice daily all exposed dry stockpiles (dirt, sand, etc.). Moist soils will be evaluated for air quality impacts.
- Limit traffic speeds on unpaved road to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways. Replant vegetation in disturbed areas as quickly as possible.

Post-mitigation significance: Less then Significant.

NOISE

Noise Impact-1: Construction related tr4uck traffic noise on Albatross Drive and Topaz Drive during construction. A total of 1,150 round trips are estimated to occur within four 40-hour. This truck traffic could cause an exceedance of the CALFED and City of Novato noise standards at residences along Albatross and Topaz of adjacent to these streets. In addition, noise could be generated by truck engine braking ("jake braking") on the return trip downhill from West Bahia along Topaz Drive.

Mitigation A for Noise Imapct-1: Restrict truck traffic to the hours between 9am and 6PM. This mitigation would lower the led by confining construction related truck traffic to daytime work hours.

Post mitigation significance: Less than significant

Mitigation B for Noise Impact-1: Instruct the drivers not to use engine breaking on Topaz Drive.

Post-mitigation significance: Less than significant.

Noise Impact-2 Construction-related noise from operation of heavy equipment. Noise would be generated by the use of extraction shovels, dredges, and oth4er associated earth removal equipment.

Mitigation A for Noise Impact 6-2: Locate staging and stockpile areas, and supply and construction vehicle routes as far away from sensitive receptors as possible.

Mitigation B for Noise Impact-2: Establish and enforce construction site and haul road speed limits.

Mitigation C for Noise Impact -2: Restrict the use of bells, whistles, alarms, and burns to safety warning purposes.

Mitigation D for Noise Imapct-2: Equip all construction vehicles and equipment with appropriate mufflers and air inlet silencers**.**

Mitigation E for Noise Imapct-2: restrict hours of construction to daylight hours.

Mitigation F for Noise Impact-2: Locate equipment as far from sensitive receptors as possible**.**

Post-mitigation significance: Less than significant

RECREATION

Recreation Impact-1: Truck Traffic along Topaz Drive will create a safety hazard for the users of Topaz and Santana Parks. The increased truck traffic during construction along Topaz Drive will create a pedestrian safety hazard along the street boundaries of Topaz and Santana Parks.

> **Mitigation for Recreation Impact-1**: Post construction barriers (two level tapes) along the street boundary of the parks during the time of construction and pre-co0nstruciotn notification of the neighborhood.

Post–mitigation Significance: Less than significant (this mitigation would be sufficient to avoid provide a safe environment for the two parks along Topaz Drive).

CULTURAL RESOURCES

Cultural Resource Impact-1: Potential impact to unrecorded and unknown archaeological sites from ground disturbance and operations of heavy vehicles and machinery.

> **Mitigation A for Cultural Resources Imapct-1:** Contractors and construction personnel involved in ground-disturbing activities will be advised of the possibility of encountering cultural resources (including, but not limited to, chipped or ground stone, historic debris, building foundations, and non-human bone), during construction work. If such resources are encountered or suspected, work within 100 feet of the discovery will be halted immediately and DFG will be notified. A qualified professional archaeologist will be consulted, who will assess any discoveries and develop appropriate management recommendations for treatment of the resource.
>
> **Mitigation B for Cultural Resources Impact-1:** There is low probability that historic archaeological materials (including, but not limited to, structural remains, privies, or refuse deposits containing metal, glass, and ceramic items) may be encountered. If this occurs, however, work within 100 feet of the discovery will be halted immediately and DFG will be notified. A qualified professional archaeologist will be consulted, who will assess any discoveries and develop appropriate management recommendations for treatment of the resource.
>
> **Mitigation for Cultural Resource Impact-1:** DFG will pursue a strategy of avoiding impacts to cultural resource, where feasible. If avoidance of potentially significant resources is determined to be infeasible, DFG will conduct a controlled archaeological test excavation to determine archaeological site significance. If a resource that cannot be avoided is determined to be significant, DFG and SHPO will consult to develop a plan for data recovery excavation. Data recovery excavation will then be completed by a qualified professional archaeologist in accordance with the plan.

Post-mitigation Significance: Less than significant.

Cultural Resource Imapct-2: Potential impact to unrecorded and undiscovered human remains from ground disturbance and operation of heavy vehicles and machinery. (Note that according to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (section 10) and disturbance of Native American cemeteries is a felony (Section 7052).

Mitigation for Cultural Resources Impact-2: If bone is encountered and appears to be human, California law (PRC Section 7050.5) requires that potentially destructive construction work in the vicinity of the find and in nearby areas reasonably suspected to overlie adjacent human remains is halted and the County Coroner is contacted. After contacting the coroner, steps will be taken to contact the appropriate Native American individual or tribe and to determine the appropriate disposition of finds.

Post-mitigation Significance: Less than significant.

Based on the foregoing review of the Environmental Impact Report, public comment and the Mitigation and Monitoring Report, Conservancy staff concludes that the subject project as proposed and mitigated, and as additionally tracked as required in the MMRP, poses no potential for significant environmental impacts. Accordingly, staff recommends that the Conservancy find that the Conservancy has independently reviewed the DFG EIR for the Bahia Restoration Project and the Mitigation and Monitoring Report, attached as Exhibit 4 to this staff recommendation; that the project, as mitigated, avoids, reduces or mitigates any potential significant environmental effects to a level of insignificance and that there is no substantial evidence that the project, as mitigated, may have a significant effect on the environment as defined in 14 California Code of Regulations Section 15382.

Staff will file a Notice of Determination upon the Conservancy's approval of the project.