

COASTAL CONSERVANCY

Staff Recommendation  
May 29, 2014

**INNER BAIR ISLAND WETLAND RESTORATION**

File No. 14-006-01  
Project Manager: Brenda Buxton

**RECOMMENDED ACTION:** Authorization to disburse up to \$518,785 from a U.S. Fish and Wildlife Service National Coastal Wetland Conservation (NCWC) grant to Ducks Unlimited, Inc. for the restoration of wetlands at Inner Bair Island.

**LOCATION:** Inner Bair Island, Redwood City, San Mateo County (see Exhibits 1-2)

**PROGRAM CATEGORY:** San Francisco Bay Area Conservancy

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**EXHIBITS**

- Exhibit 1: [Project Location Map](#)
  - Exhibit 2: [Project Map](#)
  - Exhibit 3: [Site Design](#)
  - Exhibit 4: [NCWC Project Letters](#)
  - Exhibit 5: [Environmental Impact Statement/Report for Bair Island Restoration and Management Plan](#) Don Edwards San Francisco Bay National Wildlife Refuge Bair Island Ecological Reserve Project (Certified January 22, 2008), and Mitigation Monitoring and Reporting Program (also available at [www.southbayrestoration.org](http://www.southbayrestoration.org))
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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160 *et seq.* of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of up to \$518,785 of funds from the U.S. Fish and Wildlife Service to Ducks Unlimited, Inc. for restoration of 188 acres of wetlands and enhancement of 20 acres of transitional wetland habitat at Inner Bair Island in Redwood City, San Mateo, subject to the following conditions:

1. Prior to the disbursement of funds, Ducks Unlimited, Inc. shall submit for Executive Officer review and approval a work program including budget and schedule, and the names of any contractors it intends to use to complete the project.
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2. Prior to the disbursement of funds, Ducks Unlimited, Inc. shall submit a sign plan for acknowledging Conservancy funding of the public access improvements.
3. In carrying out the project, Ducks Unlimited, Inc. shall:
  - a. Implement the project as described in the Bair Island Restoration and Management Plan Final Environmental Impact Statement/Report (EIS/R) certified by the California Department of Fish and Wildlife on January 22, 2008, and comply with all applicable mitigation and monitoring measures identified in the EIS/R.
  - b. Comply with all applicable terms and conditions that may be required by the US Fish and Wildlife Service (FWS) National Coastal Wetlands Conservation (NCWC) grant to the Conservancy or that may be necessary to enable the Conservancy to comply with terms and conditions of the grants.
  - c. Implement all feasible Best Management Practices to reduce the project's greenhouse gas emissions, and shall require all contractors to do the same.
4. Prior to commencing the project, Ducks Unlimited, Inc. shall enter into and record an agreement pursuant to Public Resources Code Section 31116(c) sufficient to protect the public interest.”

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 authorization is consistent with the purposes and objectives of the San Francisco Bay Area Conservancy Program, Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165.
2. The proposed project is consistent with the Project Selection Criteria and Guidelines, last updated by the Conservancy on November 10, 2011.
3. Ducks Unlimited 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.
4. The Conservancy has independently reviewed and considered the information contained in the Environmental Impact Statement/Report for the Bair Island Restoration and Management Plan certified by the California Department of Fish and Wildlife on January 22, 2008 pursuant to CEQA.
5. The EIS/R identifies potential significant effects from implementation of wetland restoration and public access projects at Inner, Middle and Outer Bair Island, in the areas of Cultural, Air Quality and Cumulative Impacts. With regard to these impacts, the Conservancy finds that the current proposed project, the wetland restoration of Inner Bair Island, as modified by incorporation of the mitigation measures identified in the EIS/R, avoids, reduces or mitigates all of the possible significant environmental effects of the project.”

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**PROJECT SUMMARY:** With this authorization, nearly two decades of effort to restore Bair Island will be successfully concluded. Bair Island is a complex of three islands (Outer, Middle

and Inner Bair Island). Due to different levels of degradation, subsidence, and constraints, each island's restoration has been implemented separately. Inner Bair is the last island to be completed. (See Exhibits 1 and 2 for project location maps and Exhibit 3 for Inner Bair Island site plan.)

Ducks Unlimited, Inc. (DU) has extensive experience working on San Francisco Bay wetland restoration projects and Bair Island in particular. DU was founded in 1937 and works to conserve, restore, and manage wetlands and associated habitats for North America's waterfowl, other wildlife, and people. In 2009, DU completed restoration construction to restore hydrology to Outer Bair. In 2013, DU completed the restoration of Middle Bair and the pedestrian/bicycle bridge connecting the mainland to trails on Inner Bair Island.

In February 2014, the Conservancy was selected to receive a grant of \$554,485 from the National Coastal Wetland Conservation Program of the US Fish and Wildlife Service. The proposal is to provide \$518,785 of the funds to DU to oversee construction and complete the last tasks needed to breach and enhance the habitat of Inner Bair Island (\$35,700 is for Conservancy staff administration). DU has secured \$660,000 in matching funds to complete the project.

Specific project actions at Inner Bair will include levee breaches along the historic channel alignment, armoring on the breaches to maintain channel and flow dimensions, levee improvements, revegetation with native plants, monitoring and construction oversight. Inner Bair Island was deeply subsided but has been filled (see "Project History") to bring the pond bottom close to wetland vegetation elevations, meaning that the site should evolve into a vegetated marsh plain relatively quickly, providing habitat for wildlife, including endangered and threatened species.

**Site Description:** The Bair Island complex is divided into three distinct areas separated by slough channels: Inner, Middle, and Outer Bair Islands. Nearly all of Bair Island is owned by the US Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (DFW). USFWS, however, manages and oversees the restoration project on DFW property pursuant to a Memorandum of Understanding signed in 1997 by DFW and USFWS. Inner Bair Island is entirely owned by the USFWS.

**Project History:** Historically, Bair Island was part of a large complex of tidal marsh and mudflats within the drainages of Redwood Creek and Steinberger Slough in San Francisco Bay. Bair Island was originally diked off for agricultural purposes and subsequently converted to salt ponds like much of the South Bay. Finally, after salt production was abandoned, various development schemes were proposed for Bair Island through the 1980s and 90s. After a well-publicized campaign by Bay Area environmental groups to prevent development and restore Bair Island to tidal marsh, several privately-owned sections of Bair Island were acquired by the Peninsula Open Space Trust and transferred to USFWS and DFW. In 1998, the Conservancy authorized \$100,000 towards an Enhancement Plan for Bair Island, which was the largest wetland restoration effort in the Bay at that time, and an additional \$127,000 for technical studies in 2001. After completion of the Enhancement Plan and EIS/R in 2008, other organizations have stepped in to fund wetland implementation. DU secured grants from Wildlife Conservation Board and North American Waterfowl Conservation Act (NAWCA) grant to complete restoration of Outer Bair Island by breaching levees and blocking interior ditches in January 2009. The Port of Redwood City, US Army Corps of Engineers, and a private dirt contractor helped speed the restoration of Inner Bair Island through the placement of dredged or upland-sourced material to raise the marsh plain and to reduce the potential for bird-strike hazards at the

adjacent San Carlos Airport and to protect the South Bayside System Authority sewer line. In May 2010, the Conservancy authorized \$1,000,000 to DU for public access improvements on Inner Bair Island. And finally, the Conservancy has provided \$214,000 in direct funding and \$1.5 million in grant funding for the restoration of wetlands at Middle Bair Island (May 19, 2011 and August 2, 2012). Middle Bair Island was completed in January 2013.

**PROJECT FINANCING:**

USFWS's NCWC Grant	\$518,785
Ducks Unlimited, Inc.	<u>\$660,000</u>
 Total Inner Bair Island Costs	 \$1,214,485

Ducks Unlimited has secured \$660,000 from the Peninsula Open Space Trust (POST) out of a total of \$1.19 million set aside for public access and wetland restoration work on Bair Island and from a California Parks Foundation grant. The \$518,785 from NCWC also includes an additional \$35,700 for Conservancy staff administration for a total grant of \$554,485.

**CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:**

This project would be undertaken pursuant to Chapter 4.5 of the Conservancy's enabling legislation, Public Resources Code Sections 31160-31165, to address resource goals in the San Francisco Bay Area.

Bair Island is within the nine-county Bay Area as required under Section 31162 of the Public Resources Code.

Under Section 31162(b), the Conservancy may act to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional significance. The restoration of Inner Bair Island will restore 188 acres of wetlands and enhance 20 acres of transitional wetland habitat, and, when considered as part of the Bair Island complex, is a habitat restoration project of national significance.

Under Section 31162(d), the Conservancy may act to promote, assist, and enhance projects that provide open space and natural areas that are accessible to urban populations for recreational and educational purposes. Inner Bair Island will feature a pedestrian and bicycle trail and provide an important open space resource for recreational purposes.

Consistent with Section 31163(c), restoration of Inner Bair Island meets the following criteria: (1) is supported by adopted regional plans (San Francisco Bay Plan, San Francisco Baylands Ecosystem Habitat Goals Report (1999), p. 127, and the San Francisco Basin (Region 2) Water Quality Control Plan (June 29, 2013) pp. 2-2 and 4-92), (2) serves a regional constituency (the restoration project is of national significance and will provide a regional recreational resource), (3) can be implemented in a timely way, (4) provides opportunities for habitat and public access benefits that could be lost if the project is not quickly implemented, and (5) includes matching funds.

The project is also consistent with Sections 31163(a) and (b), directing the Conservancy to participate in and support interagency actions and public/private partnerships in the San Francisco Bay Area to implement long-term resources and outdoor recreational goals.

Under Section 31104, the Conservancy may apply for and receive financial support from public and private sources.

**CONSISTENCY WITH CONSERVANCY'S 2013-2018 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

The proposed authorization is consistent with the Conservancy's 2013-2018 Strategic Plan Goal 11, Objective D to enhance tidal wetlands, managed wetlands, seasonal wetlands, upland habitat, and subtidal habitat. This authorization will enable the restoration of 188 acres and enhancement of 20 acres of wetland habitat.

**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 November 10, 2011 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 restoration of Bair Island has been a public campaign for many decades. Letters of support collected by DU as part of the grant application process are attached in Exhibit 4.
4. **Location:** Bair Island is located in the nine-county San Francisco Bay Area consistent with Section 31162 of the Public Resources Code.
5. **Need:** Approximately 85 percent of the tidal marsh in San Francisco Bay has been lost since the Gold Rush, leading to dramatic losses of fish and wildlife, decreased water quality and increased turbidity in the Bay, and changes to physical processes as the size of the Estuary shrank, increasing the need for dredging and the local hazards of flooding. The need for restoration of tidal marsh in San Francisco Bay in order to aid in the recovery of at-risk species, and improve water quality and the physical health of the Bay, is well recognized among scientists and resource managers.
6. **Greater-than-local interest:** Bair Island is one of the largest wetland restoration efforts in San Francisco Bay and has been the subject of a multi-decade public campaign to restore the degraded habitat. Restoration of Bair Island will recover the Bay's tidal wetlands aid in the recovery of several threatened or endangered species, including the California clapper rail and salt marsh harvest mouse.
7. **Sea level rise vulnerability:** Due to their location, all tidal wetland restoration projects can be vulnerable to sea-level rise impacts. However, once the marsh plain of a restored wetland

is colonized by vegetation, marshes become efficient sediment traps. Hydrological modeling done as part of Bair Island restoration planning and the geomorphological analysis completed as part of the South Bay Salt Ponds Restoration Project indicates that Bair Island and the south Bay's wetlands are likely to keep up with an accelerated pace of sea-level rise. If sea-level rise rates are higher than predicted, it could take longer for marsh vegetation to develop or, in more extreme scenarios, may mean that the restoration sites do not evolve past the intertidal mudflat or shallow open water stage. However, Inner Bair Island is likely to withstand the impacts from sea-level rise during this century for several reasons. It is located in the sediment-rich South Bay and will have an improved connection with the Bay through Corkscrew, Steinberger, and Smith Sloughs which will enhance sedimentation. Furthermore, Inner Bair Island was filled to raise the pond bottom to close to marsh elevations. Inner Bair is expected to vegetate in a matter of years (vs. decades as is typical with deeply subsided former wetlands). Once vegetated, the site will be more resilient to impacts of sea-level rise.

### **Additional Criteria**

13. **Cooperation:** DU is working closely with USFWS and DFW, the landowners, to complete construction on this project. The funding of the improvements at Bair Islands has been a cooperative effort between POST, a nonprofit organization, and many government agencies including the Conservancy, Wildlife Conservation Board, California Department of Water Resources, the National Oceanic and Atmospheric Administration, the US Army Corps of Engineers, San Francisco Public Utilities Commission, and the City of Redwood City.
14. **Realization of prior Conservancy goals:** see extensive Conservancy investment in wetland restoration and public access improvements at Bair Island in "Project History" section.
18. **Minimization of greenhouse gas emissions:** As part of both the wetland restoration and public access projects at Bair Island, Duck Unlimited has incorporated the following Best Management Practices (BMPs) into the construction project: BMP 2.2 – Give preference to contractors using equipment less than 10 years old; BMP 2.4 – Reduce unnecessary idling; BMP 2.5 – Require good maintenance of equipment and properly trained staff using equipment; and BMO 2.6 – Encourage engine electrification.

### **CONSISTENCY WITH THE SAN FRANCISCO BAY PLAN:**

The Bair Island complex is within the permit jurisdiction of the San Francisco Bay Conservation and Development Commission ("BCDC").

The project is consistent with the following policies of BCDC's San Francisco Bay Plan (Reprinted March 2012):

Part III: The Bay as a Resource

#### Fish, Other Aquatic Organisms and Wildlife (p. 16)

- To assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored and increased.

#### Water Quality (p.19)

- The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved

and, whenever possible, restored and increased to protect and improve water quality.

Water Surface Area and Volume (p. 20)

- Water circulation in the Bay should be maintained, and improved as much as possible.

Tidal Marshes and Mudflats (p. 23-24)

- Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.
- Where feasible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands or should be managed to provide important Bay habitat functions, such as resting, foraging and breeding habitat for fish, other aquatic organisms and wildlife.
- Any ecosystem restoration project should include clear and specific long-term and short-term biological and physical goals, and success criteria, and a monitoring program to assess the sustainability of the project.

Part IV: Development of the Bay and Shoreline

Public Access (pp. 67-68)

In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, wildlife area, or other use, except in cases where public access would be clearly inconsistent with the project because of public safety considerations or significant use conflicts, including unavoidable, significant adverse effects on Bay natural resources. In these cases, in lieu access at another location preferably near the project should be provided.

Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife is sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.

**COMPLIANCE WITH CEQA:**

In order to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), DFG and USFWS prepared a joint EIS/R to evaluate the potential environmental impacts of the Bair Island Restoration and Management Plan (the Plan). The EIS/R (Exhibit 5) was certified by DFG on January 22, 2008 pursuant to CEQA.

The EIS/R evaluated a No Action and four restoration alternatives: Alternative A: Tidal Marsh Restoration and Intermediate Public Access, Alternative B: Tidal Marsh Restoration and Restricted Public Access, Alternative C: Tidal and Managed Marsh Restoration and Moderate Public Access, and Alternative D: Tidal and Managed Marsh Restoration and Restricted Public Access. Alternative A: Tidal Marsh Restoration and Intermediate Public Access was selected as the Preferred Alternative and includes the subject of this authorization: tidal wetland restoration of Inner Bair Island.

In connection with approval of the Plan, DFG adopted a CEQA “Findings” document which concluded that the Bair Island Restoration and Management Plan’s Preferred Alternative would not result in any significant unavoidable impacts on the environment with the incorporation of appropriate mitigation measures. The project mitigation measures are described in the attached Mitigation, Monitoring, and Reporting Program (Exhibit 5).

As described in the EIR/S, the careful design of the Preferred Alternative avoids many potentially significant project impacts to air and water quality, biological resources, vessel traffic, noise, and cultural, historic, and archaeological resources. For example, in order to avoid increasing the sedimentation rates in Redwood Creek Shipping Channel and increasing the current velocities at Pete’s Outer Harbor (a nearby small boat harbor), Smith Slough will be returned to its historic meander through Inner Bair Island and a flow restrictor will be installed in Corkscrew Slough to the east of the Middle Bair Island breaches to reduce the tidal flow velocities (EIS/R p. 30). Other potential impacts were considered less-than-significant because the impact was small and localized and would result in a much larger benefit to the environment. For example, the Preferred Alternative will cause the loss of five acres of existing pickleweed marsh and Salt Marsh Harvest Mouse habitat by breaching levees and allowing the natural scouring of tidal channels. However, the breaching will create approximately 1400 acres of high-quality tidal marsh which will ultimately be much more beneficial to these species (see Alternative A (the preferred alternative) discussion in Section 3.2.3.2. of EIS/R).

Those impacts in the area of Cultural Resources, Air Quality, and Cumulative Impacts that require mitigation measures to reduce the impacts to a less than significant level are identified in the Mitigation and Monitoring and Reporting Program as follows:

*Cultural Resources*

Any of the restoration project alternatives could have potential significant impacts on buried cultural resources. To reduce this potential impact to a less-than-significant level, construction contractors will be required to stop work and appropriately assess the resources if any cultural deposits are encountered during construction.

*Air Quality*

The construction activities could increase dust downwind of construction activities. This impact would mostly be associated with the placement of dredge material on Inner Bair Island which is not part of this authorization. However, this could be an impact for any earthmoving activities, particularly if working during the dry summer months. The Bay Area Air Quality Management District (BAAQMD) has a list of construction dust control measures (sweeping, watering, etc.) that the project has adopted for all construction phases in order to reduce these impacts to a less-than-significant level.

*Cumulative Impacts*

All of the alternatives (including No Action Alternative), along with other tidal restoration projects, could contribute to the spread of non-native *Spartina* species. All of the Alternatives including the No Action include controls for non-native *Spartina* species within the Bair Island restoration site and follow many of the suggestions and methods contained within the Conservancy’s Invasive *Spartina* Program (ISP). If necessary, the control methods in the

Bair Island Restoration and Management Plan would include close coordination between the ISP project and the USFWS and controlling any patches of invasive *Spartina* found outside of the project site before breaching.

#### Global Climate Change

In March 2010, CEQA regulations went into effect requiring an analysis of a project's potential to generate greenhouse gases (which contribute to climate change). See Guideline 15064.4. The Bair Island EIR/S does not address greenhouse gas emissions (GHGs) because the EIR/S was completed in 2008, prior to this requirement. In 2011, in order to fulfill the Conservancy's duties as a responsible agency when considering funding for the Middle Bair Island project, Conservancy staff conducted an analysis of the GHGs estimated to be generated by the Middle Bair Island wetland restoration. At that time, Conservancy staff determined that the Middle Bair Island wetland restoration project would not have a significant GHG impact because that project would not have any ongoing direct emissions and would not allow public access (therefore would not induce vehicle-miles-traveled), and therefore the potential effects on greenhouse gas emissions were limited to (1) temporary emissions due to construction and (2) sequestration due to land use change. Staff determined that approximately 856 metric tons of carbon dioxide (CO<sub>2</sub>) generated over the approximately six months of construction would be completely offset after less than 2.5 years by the potential of the 571 acres of newly restored wetlands and 307 acres of enhanced, existing wetlands (878 total acres) to sequester carbon.

The construction activities proposed in the Inner Bair Island Wetland Restoration Project will be similar to those at Middle Bair Island but will cover a much smaller project foot print --208 acres proposed verses 878 acres at Middle Bair. In addition, the Inner Bair project will be of shorter duration – approximately 3 months total vs. 5 months total spent at Middle Bair. This alone will result in fewer emissions. Furthermore, emissions at Inner Bair Island will be less because the project requires only two major levee breaches, as opposed to the five perimeter levee breaches, 4 internal levee breaches/connector channels, and 5 ditch blocks that were part of the Middle Bair Island project. The overall quantity of earthwork at Inner Bair Island is significantly less; specifically, Inner Bair will require 3,000 cy excavation for levee breaches, 2,080 cy rock fill, and 9,350 linear feet of levee improvements, in contrast with the 17,330 cy excavation for levee breaches, 14,710 cy fill for ditch blocks and flow constrictors, and 2,100 tons cobble that was required to complete the Middle Bair project.. Using the analysis of the impacts of the Middle Bair Island project as a guidepost, staff has determined that the much smaller proposed construction activities at Inner Bair also do not have the potential to generate direct or cumulative significant impacts related to GHGs.

The Inner Bair Island project does include public access, although no public access funding is included in this authorization. (The Conservancy authorized public access funding on May 27, 2010 as part of Bay Trail grant round.) Section 3.4.3 of the EIS/R states that “the Action Alternatives may result in slight increases in traffic to and from the Bair Island parking lot once the public improvements (i.e. restrooms, improved trails, and observation decks) have been completed”. Since the land uses would remain the same and existing parking is adequate to serve the site, Alternative A is “not anticipated to generate trips that would result in substantial long-term air quality impacts.” For this reason, the public access improvements at Inner Bair Island would not generate sufficient direct or cumulative GHG impacts to rise to the level of significance.

In addition to quantitative methods, CEQA allows for GHG impact analysis to be based on

performance standards. The Bay Area Air Quality Management District recommends the use of best management practices as a performance standard against which construction emissions can be measured. See Bay Area Air Quality Management District CEQA Guidelines June 2010 Section 8.2. As a condition of the Conservancy's grant, in order to further reduce the generation of GHGs during construction the project will incorporate all feasible Best Management Practices (BMPs) created as part of the Conservancy's Guidance for Addressing Climate Change in California Coastal Conservancy Projects. For example, it is anticipated that the grantee will incorporate to the maximum extent feasible the following BMPs into the project's construction plans and specifications: BMP 2.2 -- Give preference to contractors using equipment less than 10 years old; BMP 2.4 -- Reduce unnecessary idling; BMP 2.5 -- Require good maintenance of equipment and properly trained staff using equipment; and BMP 2.6 -- Encourage engine electrification.

Based on the above, Conservancy staff concludes that the Conservancy's project poses no potential for significant environmental impacts. Accordingly, staff recommends that the Conservancy find that there is no substantial evidence that the Conservancy project, as mitigated, may have a significant effect on the environment. Staff will file a Notice of Determination upon the Conservancy's approval of the project.