COASTAL CONSERVANCY

Staff Recommendation

NORTH SPIT DUNE RESILIENCE PROJECT

Project No. 22-019-02 Project Manager: Su Corbaley

RECOMMENDED ACTION: Authorization to disburse up to \$5,552,800 to Redwood Community Action Agency to restore 350 acres of coastal dune habitat along 4.5 miles of shoreline to increase sea-level rise resiliency on the north spit of Humboldt Bay in Humboldt County, and adoption of findings under the California Environmental Quality Act.

LOCATION: North Spit of Humboldt Bay, Humboldt County

EXHIBITS

Exhibit 1: Project Location Map

Exhibit 2: Maps of distribution of invasive plants

Exhibit 3: Photos

Exhibit 4: Project Letters

Exhibit 5: Initial Study/Mitigated Negative Declaration and Mitigation

Monitoring and Reporting Program

Exhibit 6: Addendum – Expanded Project Area

RESOLUTION AND FINDINGS

Staff recommends that the State Coastal Conservancy adopt the following resolution and findings.

Resolution:

The State Coastal Conservancy hereby authorizes a grant of five million five hundred fifty two thousand eight hundred dollars (\$5,552,800) to Redwood Community Action Agency (the "grantee") for the North Spit Dune Resilience Project, consisting of the restoration of approximately 350 acres of coastal dune habitat along 4.5 miles of shoreline to increase sealevel rise resiliency on the north spit of Humboldt Bay in Humboldt County (the "project").

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Conservancy (Executive Officer) the following:

- 1. A detailed work program, schedule, and budget.
- 2. Names and qualifications of any contractors to be retained in carrying out the project.
- 3. A plan for acknowledgement of Conservancy funding.
- 4. Evidence that all permits and approvals required to implement the project have been obtained.
- 5. Evidence that the grantee has entered into agreements sufficient to enable the grantee to implement, operate, and maintain the project.

Findings:

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

- 1. The proposed authorization is consistent with Chapter 3 of Division 21 of the Public Resources Code, regarding the Climate Ready Program.
- 2. The proposed project is consistent with the current Conservancy Project Selection Criteria.
- 3. The Redwood Community Action Agency is a nonprofit organization organized under section 501(c)(3) of the U.S. Internal Revenue Code.
- 4. Consistent with the California Environmental Quality Act, the Conservancy has considered the Initial Study/Mitigated Negative Declaration for the Friends of the Dunes Trail and Habitat Restoration Project adopted by the Humboldt County Planning Department on September 1, 2022, pursuant to the California Environmental Quality Act ("CEQA") and attached to the accompanying staff recommendation as Exhibit 5. The Conservancy finds that the proposed project to be undertaken on the Friends of the Dunes' Humboldt Coastal Nature Center property as designed and mitigated avoids, reduces, or mitigates the potentially significant environmental effects to a less-than-significant level, and that there is no substantial evidence based on the record as a whole that the project may have a significant effect on the environment, as defined in 14 Cal. Code Regulations Section 15382.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends the Conservancy authorize a \$5,552,800 grant to Redwood Community Action Agency (RCAA) to implement the North Spit Dune Resilience Project to restore approximately 350 acres of coastal dune habitat on the north spit of Humboldt Bay by removing invasive plants and replanting with native dune species to restore dune ecosystem function and increase dune resilience to climate change and impacts from sea level rise (the "project"). See Exhibit 1.

The project site is located at the northernmost end of more than 1,200 contiguous acres of protected coastal dune habitat. It encompasses the 300-acre Wadulh Unit of the U.S. Fish and Wildlife Service's (USFWS) Humboldt Bay National Wildlife Refuge (HBNWR) and 50 acres of foredunes that extend south from the Wadulh Unit including those of the USFWS-owned Lanphere and Ma-le'l North Units, the Bureau of Land Management (BLM)-owned Ma-le'l South, and the Friends of the Dunes' (FOD) Humboldt Coastal Nature Center (HCNC) (Exhibit 1, page 2). These dunes are part of the barrier dune system of the Eureka littoral cell that extends 32 miles from Trinidad to Centerville beach (Exhibit 1, page 3). It separates Humboldt Bay and the estuaries of the Mad, Little, and Eel Rivers from the Pacific Ocean and buffers these estuaries and surrounding communities and critical infrastructure from impacts of sea level rise and storm surges. This dune system provides habitat for threatened and endangered plant and animal species and contain important archaeological sites. They are also popular for hiking and nature walks and visited by thousands of people annually.

Much of the dunes within the project area are currently vegetated by dense European beach grass, yellow bush lupine, and other native and nonnative invasive plants that do not normally occur in the dune mat plant community that inhabited the area prior to anthropogenic influences that altered the landscape. Dune mat is a rare community of low growing perennial plants and grasses and is threatened by invasive species such as yellow bush lupine and European beachgrass (Exhibit 2). Beachgrass and lupine were introduced to the site in the 1940s and 1950s and have completely displaced the dune mat community. The beachgrass and lupine create dense vegetation across the dunes that crowd out and shade out natives. Beachgrass has stabilized the foredunes, effectively halting sand transport and the ability for the dunes to migrate landward as sea levels rise. Lupine fixes nitrogen in the soil making it inhospitable for native dune mat. As a result, the dunes on the project site are maladapted to sea level rise and increased storm events leaving human, cultural, and natural resources vulnerable to harm. The current monotypic communities of invasive species do not support the diverse plant and wildlife found at nearby restored dunes systems.

The behavior of a coastal barrier dune system determines the resiliency of its shorelines to respond to a changing climate. Normally, with long-term sea level rise, dunes will move inland and upward to keep pace with climate change. Recent research funded in part by the Conservancy and carried out by USFWS on the Lanphere Dunes Unit concluded that removal of over-stabilizing vegetation from coastal dunes results in increased climate resiliency. Specifically, restoration of the foredune resulted in faster recovery from extreme events, increased dune volume and height, and caused renewed transport of sediment from the beach into the foredune and backdune. Restoration of the backdune allows for migration of the dunes in response to sea level rise while maintaining the integrity of geomorphic features that provide resilience during migration. Together these adaptations prevent the foredune from eroding/breaching/overtopping during high water events and from shoreline loss and deterioration of dunes into mobile sand sheets with little resilience. A resilient coastline is imperative to protect cultural resources and infrastructure located on or adjacent to the properties, and to provide protection of the Humboldt Bay estuary. Restoring and revegetating

350 acres of dune along 4.5 miles of shoreline on the North Coast with native Foredune Grassland, Dune Mat, Dune Swale, and Coniferous Dune Forest will increase climate resiliency through the return of underlying geomorphic processes.

The project will remove non-native species and replace them with native plants. It employs an Integrated Pest Management (IPM) approach to the eradication of invasive species, followed by planting of native species. IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, and modification of cultural practices. Pesticides are used only after monitoring indicates they are needed, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment. The methods used in this project have been developed over several decades on local dunes. Methods include manual removal of beachgrass and lupine, flaming of annual grasses, manual duff removal in affected soils, heavy equipment to bury degraded soils and expose clean sand, and the use of herbicide only on dense stands of beachgrass. The project will be carried out over four years, followed by monitoring.

Site Description: As discussed in the project summary, the proposed project will occur on lands owned by the USFWS, BLM, and FOD. The Wadulh Unit (USFWS) and HCNC (FOD) are dominated by dense European beachgrass, dense lupine scrub, and many plant species of non-native origin and native species that do not normally grow in the native dune mat community, such as coyote brush and California polypody (a coastal fern). On the Wadluh unit and HCNC locations, the project will employ IPM to remove invasive species and replace them with native plants. The 4.6-acre foredune reach on Lanphere (USFWS), Ma-le'l North (USFWS) and South (BLM), which lies between the Wadluh Unit and HCNC locations, has already been cleared of the invasive European beachgrass and is awaiting revegetation with native American beachgrass.

The USFWS- and BLM-owned dunes (Lanphere and Ma-le'l Dunes) have been designated a National Natural Landmark by the Department of the Interior in recognition of their outstanding value. The USFWS and BLM properties are managed for open space, protection of natural resources, and regulated access. The FOD property is managed for open space, protection of natural resources, and for public access on designated trails. The Wadulh Unit is not currently open to public use and access but will be, following restoration.

Grant Applicant Qualifications: RCAA has received more than a dozen Conservancy grants and has demonstrated its ability to administer public funds efficiently. RCAA also has experience managing several hundred small or medium scale projects that focus on invasive plant species removal, fisheries enhancement, water quality improvement, riparian and wetland restoration.

Long term maintenance will be carried out by the landowners USFWS, BLM, and FOD via monitoring and maintenance protocols developed by and specific to their properties.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on September 23, 2021, in the following respects:

Selection Criteria

1. Extent to which the project helps the Conservancy accomplish the objectives in the Strategic Plan.

See the "Consistency with Conservancy's Strategic Plan" section below.

2. Project is a good investment of state resources.

This project is a good investment of state resources on several levels. First, it builds on significant state investment in the 7-year pilot project that validated the proposed approach to landscape-scale dune restoration, which will stand as a model for other dunes systems in California. Second, it removes environmentally damaging invasive and non-native plants to provide space for native dune species to thrive and increase species diversity in the dunes. Third, it restores the dune sand transport system resulting in resilient dunes that protect the inner Humboldt Bay system from the impacts of increased storm surge and climate change.

3. Project includes a serious effort to engage tribes. Examples of tribal engagement include good faith, documented efforts to work with tribes traditionally and culturally affiliated to the project area.

The project lies within the ancestral territory of the Wiyot Tribe and includes the Wiyot Tribe, the Blue Lake Rancheria, and the Bear River Band of the Rohnerville Rancheria. The name of the Wadulh Unit means "dune" in Soulatluk, the Wiyot language.

USFWS consulted with the Wiyot Tribe when the project design was being developed and during its impact review under the National Environmental Policy Act (NEPA), from August to October 2020 when representatives of the Tribe toured the project site. A cultural resources survey was carried out in coordination with the Tribal Historic Preservation Officers (THPO) representing the three local tribes. Based on Tribal input, protocols for cultural resources protection will be established and field crews will be trained in the protocols. A Tribal monitor will be present when work occurs in sensitive sites. The Wadulh site will be available for use by the Tribe once restoration is complete, including for collection of culturally significant plant species. Prior to the recent acquisition of this site by USFWS, the area was under private ownership and not accessible to the Tribe. Volunteer days will be held for Tribal youth to carry out restoration tasks as part of the project (one per year), in cooperation with the Tribe's environmental resources branch.

FOD consulted with the THPOs of the Wiyot Tribe, Blue Lake Rancheria, and Bear River Band of the Rohnerville Rancheria when they updated the restoration and management plan for its Humboldt Coastal Nature Center property in late 2021. This consultation led to the creation and inclusion of the inadvertent archeological resources discovery plan and several other meaningful edits to the restoration plan to ensure the protection of cultural resources.

4. Project benefits will be sustainable or resilient over the project lifespan.

The proposed project will contribute to climate resiliency by reestablishing geomorphic processes that, over the long term, will contribute to the gradual migration of the dunefield. With increasing sea level rise, the dune system will migrate inland and increase in elevation. The proposed restoration will allow the foredune to remain intact as the dunes migrate, decreasing the chance of foredune blowouts (failure of the foredune). Any resprouts or recruits of invasive plants will be removed during the project. After project completion, removal of additional sprouts or recruits can be carried out through the volunteer efforts including, particularly for lupine, the annual volunteer Lupine Bash, a longstanding tradition in the dunes.

5. Project delivers multiple benefits and significant positive impact.

The proposed project will provide benefits to biodiversity as well as climate resilience. It adds to previous successful restoration projects, particularly on the restored adjacent 600-acre Lanphere and Ma-le'l Units of the USFWS Humboldt Bay National Wildlife Refuge and the 40-acre BLM Ma-le'l South. As seen from prior work, dune mat, once restored, increases diversity of plants, invertebrates, and vertebrates, and promotes ecosystem function.

6. Project planned with meaningful community engagement and broad community support.

This project builds on a demonstration project that was completed under the Dunes Climate Ready Project and the Humboldt Coastal Resilience Project, both of which included funding from the Conservancy. Both projects had extensive outreach. The former held public informational meetings, and the latter held stakeholder meetings in which input was gathered. The proposed project builds off that input. Two moderated public meetings will be held to gauge community perceptions of the project and whether those perceptions change over the life of the project as a result of education and outreach activities. Public walks will be offered at appropriate intervals and the project will be featured on the FOD website and in its newsletter. Updates to the public will be made annually via the Humboldt Dunes Cooperative. Volunteer days will be held during the planting phase of the project. A restoration guide will be developed and disseminated to the restoration community to facilitate future restoration projects.

The project is supported by California Senator Mike McGuire, Assemblymember Jim Wood, Humboldt County Supervisor Mike Wilson; Humboldt County Public Works, California Department of Fish and Wildlife, Caltrans District 1, the Bureau of Land Management Arcata Field Office, and the Wiyot Tribe. Letters are included in Exhibit 3.

PROJECT FINANCING

Coastal Conservancy	\$5,552,800
National Fish and Wildlife Foundation	\$1,999,300
Wildlife Conservation Board (pending Nov '23)	\$6,224,000
Total Authorization	\$13,776,100

Prior Conservancy Authorization and leverage funds

Coastal Conservancy (grant to Friends of the Dunes)	\$350,000
California Department of Fish and Wildlife	\$229,517
U.S. Fish and Wildlife Service	\$181,800
Project Total	\$14,555,700

Conservancy funding is anticipated to come from a Fiscal Year 2022/23 appropriation from the Greenhouse Gas Reduction Fund (GGRF) to the Conservancy for the Climate Ready program for purposes of nature-based projects that address sea level rise (Budget Act of 2022, as amended by AB 178, Chapter 45, Statutes of 2022). The Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act (Health and Safety Code (HSC) Sections 39710 – 39723) requires that GGRF funds be used to (1) facilitate the achievement of reductions of GHG emissions consistent with the Global Warming Solutions Act of 2006 (HSC Sections 38500 *et seq*), and (2) to the extent feasible, achieve other co-benefits, such as maximizing economic, environmental and public health benefits and directing investment to disadvantaged communities (HSC 39712(b)). The Global Warming Solutions Act of 2006 sets forth (among other things) certain GGRF funding priorities (HSC Section 38590.1). The California Legislature has also appropriated GGRF funds to the Conservancy to protect communities and natural resources from sea level rise (The Budget Act of 2022, as amended by AB 179, Chapter 249, Statutes of 2022).

The California Air Resources Board ("CARB") has adopted guidelines that establish program goals that agencies must achieve with their GGRF funds. Consistent with the CARB 2018 Funding Guidelines, the proposed project will help the Conservancy meet its GGRF program goals because the project will:

- Benefit Priority Populations (disadvantaged communities, low-income communities, or low-income households).
- Maximize economic, environmental, and public health co-benefits to the State.
- Leverage funds to provide multiple benefits and to maximize benefits.

The proposed project will meet these objectives by restoring the function of a dune barrier function that will protect the adjacent low income community(s) on the north spit of Humboldt Bay and provide transitional habitat for endangered plant and animal species. Transitional habitats ensure sea level rise resiliency, which is an environmental benefit to the State. The project will also create multiple benefits and contribute to public health by safeguarding the existing protected open space currently used for recreational hiking and wildlife viewing. Conservancy funding is leveraged by significant funds to maximize project breadth and scope. The proposed project is also consistent with this funding source because it will protect communities and natural resources from sea level rise.

The National Fish and Wildlife Foundation has awarded FOD a grant of \$1,999,300 from the National Coastal Resiliency Fund to support restoration on FOD's HCNC property and the USFWS' Wadulh Unit. By invitation from the Wildlife Conservation Board staff, the USFWS has

applied to the Wildlife Conservation Board for the remaining funds to complete restoration project.

As shown in the funding table above, in December 2022, the Coastal Conservancy authorized \$350,000 to FOD to restore 80-acres of lupine-infested dunes within the 300-acre Wadulh. Conservancy funds were leveraged by \$181,800 in federal funds from the USFWS invasive plants management program, and \$229,500 from the California Department of Fish and Wildlife Office of Spill Prevention and Response.

Unless specifically identified as "Required Match," the other sources of funding and in-kind contributions described above are estimates. The Conservancy does not typically require matching funds or in-kind services, nor does it require documentation of expenditures from other funders or of in-kind services. Typical grant conditions require grantees to provide any funds needed to complete a project.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project would be undertaken pursuant to Section 31113 of Chapter 3 of Division 21 of the Public Resources Code, which authorizes the Conservancy to undertake projects to address the impacts and potential impacts of climate change on resources within the Conservancy's jurisdiction.

Pursuant to Section 31113(b), the Conservancy is authorized to award grants to nonprofit organizations and public agencies to undertake projects, including those that reduce greenhouse gas emissions or address extreme weather events, sea level rise, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources.

Pursuant to Section 31113(c), the Conservancy must prioritize grants for projects that maximize public benefits and have one of several purposes, including enhancing coastal natural lands.

Consistent with these provisions, the proposed authorization would award a grant to RCAA, a nonprofit organization, to restore dune habitat and increase the resilience of Humboldt Bay's natural resources to sea-level rise, increased storm surge, and other impacts associated with climate change. The proposed project would also enhance coastal dune habitat by replacing invasive plants with native dune mat and dune forest species.

The proposed project addresses resources within the Conservancy's jurisdiction by restoring coastal resources that have suffered a loss of natural value due to the introduction of invasive species and other human-induced events (Chapter 6 of Division 21 of the Public Resources Code).

CONSISTENCY WITH CONSERVANCY'S 2023-2027 STRATEGIC PLAN:

Consistent with **Goal 1.3 Support Meaningful Community Engagement by Systemically Excluded Communities**, the proposed project supports meaningful engagement by the Wiyot area Tribes who are engaged with project design and implementation, and will act as cultural monitors.

Consistent with **Goal 1.2 Return Power to Tribes**, the proposed project will provide access to Tribal members including collection of culturally significant species once the area is opened.

Consistent with **Goal 3.2 Restore or Enhance Habitats,** the proposed project will restore 350 acres/4.5 miles of shoreline to foredune grassland, dune mat, dune swale, and dune forest communities.

Consistent with **Goal 4.1 Sea Level Rise Adaptation**, the proposed project will implement a sea level rise project to restore dune function to recover more quickly from extreme events.

CEQA COMPLIANCE:

Wadulh Unit

USFWS completed an Environmental Assessment for the 300-acre Wadulh Unit and adopted a Finding of No Significant Impact pursuant to NEPA. On December 1, 2022, the Conservancy adopted the USFWS's "Environmental Assessment and Finding of No Significant Impact for the Restoration of the Northern Dune Additions to Humboldt Bay National Wildlife Refuge" when it authorized funding for restoration of 80-acres within the Wadulh Unit. The Conservancy found that the Environmental Assessment and Finding of No Significant Impact complied with the California Environmental Quality Act Guidelines. The Conservancy filed a Notice of Determination with the State Clearinghouse on December 6, 2022. Except as described below, the project remains substantially unchanged from its description in the USFWS Environmental Assessment, and no new environmental information or change in circumstances require a reevaluation of the potential environmental effects of the project (14 Cal Code. Regs. Section 15162(b)).

Following FOD securing funds from NFWF to restore the 350-acres, the project area was expanded to include the 4.6-acre narrow strip of foredune located between the Wadulh Unit and HCNC, encompassing the Lanphere and Ma-le'l North Units owned by USFWS and Ma-le'l South owned by BLM (Exhibit 1, page 2). Project activities on this strip of foredune are limited to planting American beachgrass and to future monitoring (visual) for planting success. The type of plant and planting activities are the same as those analyzed in the MND. This minor change to the project was made after the Conservancy approved the MND for the Wadulh Unit, but no new MND is required because the change causes no new significant impacts. An Addendum to the Environmental Assessment/Finding of No Significant Impact for the Restoration of the USFWS Wadulh Unit considering the additional work on the 4.6-acre narrow strip of foredune is attached to this staff recommendation (Exhibit 6). The addendum explains that the minor expansion of the project area by 4.6 acres with activities limited to revegetation and monitoring will not result in any new significant effects or increase in severity of previously identified effects analyzed in the Environmental Assessment and Finding of No Significant Impact. Accordingly, the proposed authorization remains consistent with the CEQA findings adopted by the Conservancy in connection with the December 1, 2022 authorization.

Humboldt Coastal Nature Center

The Humboldt County Planning Department completed an Initial Study for the FOD's HCNC and adopted a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program pursuant to CEQA.

Proposed activities to take place on the HCNC are covered under a Coastal Development Permit and Conditional Use Permit (CDP) issued by the Humboldt County Planning Department on September 1, 2022 (Exhibit 5 to this staff recommendation). The CDP authorizes certain development on the property described in the Restoration and Management Plan (RMP), revised October 2021, which is included in the CDP as Attachment 2. The CDP analyzes the environmental effects of the RMP in the Initial Study/Mitigated Negative Declaration for the Friends of the Dunes Trail and Habitat Restoration Project (IS/MND), which is Attachment 3 to the CDP, and outlines the Mitigation Monitoring and Reporting Program for the IS/MND, which is Attachment 1b to the CDP. The IS/MND evaluated activities authorized under the CDP/CUP and found that there is the potential for significant impacts to Biological and Cultural Resources.

Under Biological Resources there is the potential for impact to plant species, riparian habitat/sensitive natural communities, and state or federally protected wetlands. Special plant species potentially affected include Pink sand verbena, Dark-eyed gilia, Beach layia, and Humboldt Bay wallflower. Sensitive natural communities present include Beach pine forest and woodland, Coastal dune willow thickets, and Dune-mat. Mitigation measures are identified for those activities which will reduce the potential impacts to less than significant. In the long term, restoration activities would benefit dune-adapted special status species by directly addressing two of the principal threats to their recovery: habitat loss and competition with nonnative, invasive plant species.

Advance surveying for and flagging of occurrences of special status species and sensitive biological resources, avoiding these known occurrences, restricting treatment/removal of invasive plants within occurrence areas until the period following seed dispersal, plant identification training, and delineating wetlands (as defined by CA State Water Resources Control Board) will minimize to less-than significant the effects on special status plants, communities and wetlands (IS/MND pages 86-88 and 99-104).

Under Cultural Resources there is the potential for impact to historical and archaeological resources, and to human remains. Mitigation measures are identified for those activities which will reduce the potential impact to less than significant. Per the MND, the Wiyot Tribe states that because restoration work would create a minimum of ground disturbance and would not disturb any known cultural resources the project could be conditioned with only an inadvertent discovery protocol, which states: if cultural resources are encountered during construction activities, the contractor onsite will cease all work in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist and the appropriate THPOs will be contacted to evaluate the discovery and, in consultation with the applicant and the lead agency, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. If human remains are

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found, California Health and Safety Code Section 7050.5 requires that the County Coroner be contacted immediately. If the Coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) will then be contacted by the coroner to determine appropriate treatment of the remains pursuant to Public Resources Code (PRC) Section 5097.98. Violators will be prosecuted in accordance with PRC Section 5097.99. (IS/MND page 105).

Staff has independently evaluated the IS/MND and concurs that there is no substantial evidence that the proposed project will have a significant effect on the environment. Staff recommends that the Conservancy find that the project as mitigated avoids, reduces, or mitigates the possible significant environmental effects to a level of less-than-significant and that there is no substantial evidence that the project will have a significant effect on the environment as that term is defined by 14 Cal. Code Regs. § 15382.

Upon approval of the project, Conservancy staff will file Notices of Determination.