

COASTAL CONSERVANCY

Staff Recommendation
January 23, 2014

CLIMATE READY GRANTS

Project No. 13-041-01
Project Manager: Jessica Watson and Nadine Peterson

RECOMMENDED ACTION: Authorization to disburse up to \$3,078,623 to 20 nonprofit organizations and public agencies for Climate Ready projects that sequester greenhouse gases and/or address the effects of climate change on coastal resources.

LOCATION: Various locations along the coast of California and along the San Francisco Bay shoreline (Exhibit 1)

PROGRAM CATEGORIES: Climate Change, San Francisco Bay Area Conservancy, Integrated Coastal and Marine Resource Protection, Coastal Resource Enhancement

EXHIBITS

- Exhibit 1: [Project Locations](#)
- Exhibit 2: [Climate Ready Grant Announcement](#)
- Exhibit 3: [Project Letters](#)
- Exhibit 4: [Final Initial Study/Mitigated Negative Declaration for the Marin Coastal Watersheds Permit Coordination Program](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31000 *et seq.* of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of up to three million, seventy-eight thousand, six hundred twenty-three dollars (\$3,078,623) to 20 nonprofit organizations and public agencies for projects that sequester greenhouse gases or address the effects of climate change on resources along the coast and within the San Francisco Bay Area, specifically as follows, to the:

- City of Arcata: Eighty-six thousand dollars (\$86,000) to investigate and design a fringe salt marsh, or “living shoreline”, to protect City facilities vulnerable to sea level rise, quantify carbon sequestration potential of the fringe salt marsh and existing restored wetlands, and investigate the utility of “rolling easements” on private lands located

adjacent to City-owned resources lands that are available for wetland migration as sea level rise impacts Arcata Bay and lands within the City of Arcata.

- Gold Ridge Resource Conservation District: One hundred sixty-six thousand, seven hundred eight dollars (\$166,708) to complete engineering designs for large-scale rainwater catchment and storage systems for five agricultural operations in western Sonoma County that will enhance water security for agriculture by reducing extraction from streams or shallow wells and preserving over-summer aquatic habitats in critical coastal ecosystems.
- Marin Resource Conservation District: Two hundred thousand dollars (\$200,000) to develop and implement action plans and beneficial practices for carbon farms as well as select three demonstration carbon farms, which utilize aerobically composted agricultural waste to enhance rangeland and rancher resiliency to climate change while reducing greenhouse gas emissions and sequestering carbon.
- Sonoma County Regional Climate Protection Authority: One hundred thousand dollars (\$100,000) to conduct a user-directed vulnerability assessment of climate change parameters like temperature, hydrologic impacts (including evaporation, recharge, runoff and soil moisture conditions), and impacts of vegetation and fire stressors on specific geographic areas and resources of concern.
- Bay Area Ridge Trail Council: Sixty-three thousand dollars (\$63,000) to explore, test, and document best practices to leverage the potential of trails and transit to reduce greenhouse gases by evaluating trail and transit connections in the southern San Francisco Bay Area.
- City of Benicia: One hundred fifty thousand dollars (\$150,000) to conduct a local vulnerability assessment to determine how climate-related risks will affect shoreline and community assets including watersheds, shoreline parks and trails, the Port of Benicia, and the Benicia Industrial Park.
- East Bay Dischargers Authority: Two hundred thousand dollars (\$200,000) to identify feasible decentralized infrastructure and shoreline strategies and design options that could address projected sea level rise impacts, reduce greenhouse gases and increase carbon sequestration by enhancing Bayland ecosystems.
- San Francisco International Airport: Two hundred thousand dollars (\$200,000) to assess the vulnerability of San Francisco International Airport and its neighbors to flooding from sea level rise and storms along the Bay shoreline focusing on San Bruno Creek and Colma Creek and to prepare an adaptation/mitigation plan with alternative conceptual adaptation strategies including nature-based solutions, as feasible.
- San Francisquito Creek Joint Powers Authority: Two hundred thousand dollars (\$200,000) to evaluate, design, and provide environmental documentation to demonstrate shoreline resilience to sea level rise and to extend flood protection to a larger portion of State Highway 84 and facilitate opportunities for implementing the South Bay Salt Ponds Restoration Project.
- County of Santa Barbara: Two hundred thousand dollars (\$200,000) to model future coastal hazards and their potential impacts and identify new and enhance existing adaptation strategies to reduce these vulnerabilities.
- Resource Conservation District of Santa Cruz County: One hundred sixty-three thousand dollars (\$163,000) to develop tools to protect and improve water supply reliability in

response to climate change impacts by increasing groundwater recharge rates through stormwater capture for managed aquifer recharge.

- Sempervirens Fund: One hundred thousand dollars (\$100,000) to assess the feasibility of creating a carbon bank in the Santa Cruz mountains region as an incentive to conserve redwoods through aggregation of multiple small, privately-owned forest parcels.
- The Nature Conservancy: One hundred fifty thousand dollars (\$150,000) to incorporate the Coastal Conservancy-funded Monterey Bay sea level rise study into a cost-benefit analysis of adaptation strategies, improving its applicability to individual planning decisions.
- City of Hermosa Beach: One hundred thousand dollars (\$100,000) to assess infrastructure vulnerability to sea level rise and associated salinity intrusion into the shallow groundwater table, and develop and prioritize potential adaptation strategies.
- City of Imperial Beach: Three hundred thousand dollars (\$300,000) to assess the vulnerability of natural and built environments along the outer coast of Imperial Beach to sea level rise, storm surge, and erosion, and develop and prioritize feasible strategies to improve resilience.
- Heal the Bay: One hundred sixty-nine thousand dollars (\$169,000) to quantify the benefits of the “Living Streets” program, document the potential and value of “the program as a climate change adaptation strategy, and design two living street demonstration projects.
- North East Trees: One hundred sixty thousand six hundred dollars (\$160,600) to demonstrate and implement landscaping techniques that specifically reduce vulnerability in the Highland Park area of northeast Los Angeles from climate change impacts.
- San Diego Zoo Institute for Conservation Research (Operated by the Zoological Society of San Diego): One hundred fifty thousand five hundred dollars (\$150,500) to restore coastal sage scrub at Lake Hodges to resist climate-induced increases in fire frequency, increase resilience by preserving ecosystem functioning, and provide a wildlife corridor for species responding to climate change.
- Council for Watershed Health: One hundred fifty thousand dollars (\$150,000) to evaluate stormwater capture potential and identify feasible catchments for stormwater infiltration and recommend best management practices for groundwater recharge throughout the coastal watersheds in Los Angeles County.
- Los Angeles County Department of Beaches and Harbors: Sixty-nine thousand eight hundred fifteen dollars (\$69,815) to assess the vulnerability of Los Angeles County public beach facilities between Nicholas Canyon in Western Malibu to White Point/Royal Palms Beach in San Pedro and incorporate results into an adaptive management plan that is environmentally sensitive to beach ecology and economically sustainable.

The authorization is subject to the following conditions:

1. Prior to the disbursement of funds to each grantee, each grantee shall submit for the review and approval of the Conservancy’s Executive Officer a final work program, schedule, budget, names of any contractors, a plan for acknowledging Conservancy funding, and any other applicable agreements determined necessary for the project by the Conservancy’s Executive Officer.

2. Prior to implementing the Carbon Farms project, the Marin Resource Conservation District shall ensure the project receives permits under the Marin Coastal Watersheds Permit Coordination Program as well as any other permits required to implement the project.

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 Division 21 of the Public Resources Code sections 31000 *et seq.*, regarding climate change (Chapter 3), resource and recreational goals in the San Francisco Bay Area (Chapter 4.5), integrated coastal and marine resource protection (Chapter 5.5), and coastal resource enhancement (Chapter 6).
2. The proposed projects are consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The nonprofit organization grantees proposed under this authorization exist under section 501(c)(3) of the U.S. Internal Revenue Service Code, and their corporate purposes are consistent with Division 21 of the Public Resources Code.
4. The Coastal Conservancy has again independently reviewed and considered the information contained in the Initial Study/Mitigated Negative Declaration for the Marin Coastal Watersheds Permit Coordination Program, the checklist and the public comment ([Exhibit 4 to the staff recommendation](#)) for the Marin Resource Conservation District Carbon Farms project and finds that the project as designed and mitigated will not have a significant adverse effect on the environment.”

PROGRAM SUMMARY:

This authorization would provide up to \$3,078,623 to 20 different nonprofit organizations and public agencies for projects that address the effects of climate change on resources along the coast and within the San Francisco Bay Area. All of the organizations submitted applications for funding to the Conservancy’s Climate Ready program.

The Conservancy solicited applications from public agencies and nonprofit organizations for grants for projects that address climate change and maximize public benefits. The purpose of the Climate Ready program is to encourage local governments and non-governmental organizations to prepare for a changing climate by advancing planning and implementation of on-the-ground actions that reduce greenhouse gas (GHG) emissions and lessen the impacts of climate change on California’s coastal communities and natural resources. A wide range of activities are eligible for Climate Ready grants including vulnerability assessments, development and implementation of adaptation strategies, science-based scenario planning, and demonstration projects that help inform others about successful and cost-effective adaptation strategies.

The Climate Ready grants solicitation was released on June 13, 2013 and was widely distributed (See Exhibit 2). Seventy-six project proposals were submitted by the August 28, 2013 submission deadline, requesting over \$13.3 million in Conservancy funding.

Of the 76 proposed projects submitted, 20 are recommended for funding under this grant round. In making its funding recommendation, staff considered each project's needs, its overall benefits, and the extent of competing demands for funds. Funding recommendation was made for a project that met one or more of the following Climate Ready Programmatic Priorities (adapted in part from climate-smart principles developed by the [National Wildlife Federation Climate Change Adaptation Principles, 2011](#), [Resource Legacy Fund, 2012](#) and [Climate Smart Practices by Point Blue, 2013](#)):

1. Safeguard people and wildlife by using nature-based solutions that provide co-benefits for people, wildlife, and the economy.
2. Prioritize projects that maximize public benefits and avoid maladaptation.
3. Promote collaboration among various stakeholders and multiple sectors. Establish and expand non-traditional alliances to accelerate effective problem-solving between and among public and private resource managers, scientists, and decision-makers.
4. Incorporate the best available science by utilizing peer-reviewed and well-documented climate science, climate adaptation strategies, and management practices.
5. Focus on future climatic and ecological conditions rather than the past.
6. Design actions from a landscape, ecosystem, and watershed perspective on a regional scale.
7. Account for a high degree of uncertainty by developing and implementing strategies that provide the greatest benefits across a range of possible future climate scenarios.
8. Minimize energy use and greenhouse gas emissions. Enhance the ability of natural systems to sequester greenhouse gases.
9. Address the needs of low-income and other underserved populations that will be highly impacted by climate change.
10. Promote on-the-ground demonstration projects that implement innovative approaches or enhance understanding of effective management strategies and will potentially lead to broader change to policies, regulations, or to duplicating the effort elsewhere;
11. Incorporates a project-appropriate outreach or educational component.

The Climate Ready grant recommendations were coordinated with the Local Coastal Program Sea Level Rise Adaptation Grant Program (LCP Grant Program) funded by the Ocean Protection Council (OPC). The LCP Grant Program is cooperatively managed by the Conservancy, the California Coastal Commission and the OPC. The purpose of the LCP Grant Program is to encourage and assist local governments and other entities responsible for planning under the Coastal Act to update their plans to account for impacts of sea level rise and related climate change impacts. The Climate Ready program addresses a broader array of grantees and projects than the LCP Grant Program.

The following is the list of the projects proposed for funding under the Climate Ready program, including the location of the proposed project; the name of the organization for the proposed project; the amount recommended for funding; and a brief proposed project description.

NORTH COAST

City of Arcata

\$86,000

The City of Arcata will develop tools and programs to prepare for rising sea levels that threaten city infrastructure and city-owned public-serving facilities, including the wastewater treatment plant and Klopp Lake and coastal access trails in and around the Arcata Marsh and Wildlife Sanctuary. The city will design approximately 22 acres of living shorelines to be installed adjacent to these facilities, and investigate the practicality of using “rolling easements” on appropriate private lands that could serve as buffers between a rising sea/Arcata Bay and the lands within the city of Arcata. The City will prepare technical designs and an estimated construction budget for the living shorelines to be installed adjacent to existing rock levees, and will develop outreach and educational materials, conduct public workshops and draft a “model” rolling easement template to use to develop easement projects with private landowners. The City will also evaluate the potential for carbon sequestration on the 22-acre future fringe salt marshes, and on 900 acres of existing wetlands which were restored in-part with Conservancy funding and include McDaniel Slough and Jacoby Creek/Wildlife Area. The City will use this information to update the Arcata Greenhouse Gas Reduction Plan and associated monitoring milestones.

Gold Ridge Resource Conservation District

\$166,708

The Gold Ridge Resource Conservation District will develop on-farm water conservation infrastructure to demonstrate its benefits to water security, agriculture and wildlife. The proposed project will complete engineering designs for large-scale rainwater catchment and storage systems for five agricultural operations in western Sonoma County. Project sites are located in the Estero Americano and Salmon Creek watersheds, where agriculture is a dominant feature of the landscape and local economy. At present, it is common in these watersheds for producers to truck in water for their animals during the dry summer months, and the region’s water deficits are expected to increase with time. Through this project, the Gold Ridge Resource Conservation District will work towards water conservation with the implementation of rainwater catchment and storage projects on private lands to benefit both the landowner and the local environment in the face of a changing climate.

Marin Resource Conservation District

\$200,000

The Marin Resource Conservation District (MRCD) will work to implement a program for selection of candidate carbon farms (existing rangeland farms which have the potential to sequester carbon through enhanced grassland management techniques). The program will include distribution of a solicitation notice, preliminary site assessments, and the selection of three partner farms to implement grassland sequestration techniques. The MRCD will complete Carbon Farm Action Plans for the three chosen demonstration farms, collect baseline ecological data, implement carbon beneficial practices on the partner farms, conduct carbon workshops to promote adoption of carbon practices on other farms, and work with partners to submit for review and approval a protocol for compost application on grazed rangelands under the Global Warming Solutions Act of 2006 (AB 32).

Sonoma County Regional Climate Protection Authority

\$100,000

The Sonoma County Regional Climate Protection Authority will conduct a vulnerability assessment yielding user-defined reports on specific geographic areas and resources of concern. Primary parameters of the assessment will include temperature, hydrologic balance terms (including evaporation, recharge, runoff and soil moisture conditions), and secondary impacts in terms of vegetation and fire stressors. The project will include direct collaboration with natural resource agencies and local jurisdiction staff in four counties to inform their planning efforts with the outputs and adaptation recommendations of the vulnerability assessment.

SAN FRANCISCO BAY AREA

Bay Area Ridge Trail Council **\$63,000**

The Bay Area Ridge Trail Council and the San Francisco Bay Trail Project will lead a collaborative demonstration project focused on the relationship of trails and transit in reducing GHG emissions. Specifically, this project will test and document best practices to leverage the potential of trails (and trails and transit) to reduce GHG. This project will work with employers and the local business council on transportation demand management programs (TDM) to encourage and track trail/transit mode shift and study behavior and choices. This project will also work with the City of San José and climate action experts on using trail count data to track and measure GHG, and explore a range of promising applications such as “trip planning” and other GHG “calculator” functions.

City of Benicia **\$150,000**

The City of Benicia will conduct a local vulnerability assessment to determine how climate related risks will affect shoreline and community assets including watersheds, shoreline parks and trails, the Port of Benicia, and the Benicia Industrial Park. The vulnerability and risk assessment will incorporate work already underway for the waterfront to evaluate existing conditions by creating an asset inventory that outlines vulnerabilities and risks based on best available science and information combined with best professional judgment and expert input. Based on this assessment, the City will create an adaptation plan to mitigate those risks, including proposed adaptation responses based on the asset inventory and implementation options to help prepare for the impacts identified throughout the planning process.

East Bay Dischargers Authority **\$200,000**

The East Bay Dischargers Authority (EBDA) will identify feasible decentralized wastewater infrastructure and shoreline strategies by leveraging the existing work on vulnerability and adaptation on the Hayward shoreline to design options that can lead to design efforts to address projected sea level rise impacts, reduce GHGs and increase carbon sequestration by enhancing Bay and Baylands ecosystems. By working with regional stakeholders, EBDA will develop and vet wastewater project concepts that best integrate multi-objective adaptation strategies. It will identify next steps in allowing EBDA and other agencies to make informed decisions that incorporate shoreline resilience benefits into major infrastructure investments.

San Francisco International Airport **\$200,000**

The San Francisco International Airport, in collaboration with San Mateo County, will assess the vulnerability of San Francisco International Airport and its neighbors to flooding from sea level rise and storms along the Bay shoreline directly northwest of the airport where the San Bruno

Creek and Colma Creek meet the Bay. This project will prepare an adaptation/mitigation plan with alternative conceptual adaptation strategies for the project area. These strategies may include: improvements to the San Bruno Creek and Colma Creek; tidal land restoration; habitat enhancement; the development of parks, recreation areas and trails; and levee construction. The project area contains approximately 3.5 miles of Bay Trail and proposes that this grant will assist in the design and planning of an additional 4.5 miles.

San Francisquito Creek Joint Powers Authority **\$200,000**

The San Francisquito Creek Joint Powers Authority will evaluate, design, and provide environmental documentation to demonstrate shoreline resilience and extend flood protection to a larger portion of State Highway 84 and provide for greater ecosystem improvements in concert with the South Bay Salt Pond Restoration Project. This project will serve as a pilot project for design of coastal flood protection that incorporates tidal marsh uplands transition zone and uplands ecotone habitat enhancement in the San Francisco Bay region. This project will also serve to close a gap in the existing Bay Trail alignment.

CENTRAL COAST

County of Santa Barbara **\$200,000**

The County of Santa Barbara will evaluate future coastal hazard impacts related to sea level rise and identify new and enhance existing coastal hazard adaptation strategies using improved information from modeling of these hazards and vulnerabilities. To bolster Santa Barbara County's understanding of sea level rise and climate change impacts, this project will use multiple coastal inundation scenarios to model and project future changes to the shoreline and beaches, bluff erosion and coastal flooding. The county will be able to identify vulnerabilities and potential hazards and create adaptation strategies to address these vulnerabilities.

Resource Conservation District of Santa Cruz County **\$163,000**

The Resource Conservation District of Santa Cruz County will identify opportunities to sustain and improve groundwater supplies by linking stormwater capture to managed aquifer recharge (MAR). The project will assess stormwater runoff based on past, current, and projected future climate and land use conditions to determine potential for capture and subsurface storage. This work will provide practical tools for regional water managers, environmental stewards, and other stakeholders to assist in locating sites for stormwater capture and MAR projects and potentially mitigate against the hydrologic impacts of ongoing and future climate change.

Sempervirens Fund **\$100,000**

The Sempervirens Fund will conduct a feasibility study to determine if a carbon bank can and should be set up for the Santa Cruz mountains region. The Santa Cruz Mountain bioregion is comprised of nearly 80% redwood forest, but has been subdivided into many small properties. This project will investigate the viability of aggregating many small properties together into one project that achieves an economy of scale for the management and monitoring of a carbon bank. Creation of a forest carbon bank in the Santa Cruz Mountains would provide an incentive to landowners to protect the redwoods on their lands rather than choosing to log or develop their land.

The Nature Conservancy

\$150,000

The Nature Conservancy (TNC) will incorporate the Coastal Conservancy-funded Monterey Bay sea level rise study into a cost-benefit analysis of adaptation strategies. The goal of the project is to improve the resolution of economic analyses to allow planners to assess the economic impacts of specific planning and policy decisions. TNC will engage local stakeholders to develop appropriate deliverables and decision-support tools for integration into Local Coastal Programs and Local Hazard Mitigation Plans in Monterey.

SOUTH COAST

City of Hermosa Beach

\$100,000

The City of Hermosa Beach will conduct an assessment of infrastructure vulnerability due to sea level rise and associated salinity intrusion into the shallow groundwater table, and develop and prioritize potential adaptation strategies. Specifically, the City will collect subsurface hydrologic data (via two new and one existing shallow groundwater monitoring wells located from the beach to approximately two blocks inland), combine it with future surface water elevation projections, and apply that information to existing infrastructure plans to forecast potential risks and vulnerabilities. The analysis will focus on three main infrastructure elements: (1) the existing sewer collection and conveyance system; (2) storm drain outfalls that could be inundated at high tide and cause localized flooding; and (3) existing and planned infrastructure necessary to meet stormwater quality standards, such as infiltration trenches. The project scope will be expanded to include the municipal pier and the potential effects of increased salinity if additional funds can be found. Resulting recommendations will underpin planning (e.g., Hazard Mitigation Plans, General Plans and Local Coastal Programs) and capital improvements.

City of Imperial Beach

\$300,000

The City of Imperial Beach will assess the vulnerability of natural and built environments along its outer coast to sea level rise impacts, storm surge, and erosion, and develop and prioritize feasible strategies to improve resilience. The City is bounded on three sides by water, and has been active in regional adaptation planning efforts for San Diego Bay/Otay River to the north, and for the Tijuana River and estuary to the south. This authorization would help the City address its remaining western, Pacific Ocean coastline. Specifically, the City will engage stakeholders, conduct coastal storm modeling, assess vulnerabilities to natural and built resources, and develop adaptation strategies. Results may also be used to inform an update to the City's Local Coastal Program and contribute to the regional coastal storm modeling effort for the south coast being developed by the Conservancy, USGS, and the USC Sea Grant Program.

Heal the Bay

\$169,000

Heal the Bay, in collaboration with Green LA Coalition, will compile the most recent research on the benefits, costs and feasibility of the *Living Streets* components, which are *Complete Streets* (ensuring mobility of bicycles, pedestrians, and public transit riders), *Green Infrastructure* (infrastructure that maximizes use of nature's services) and *Cool Streets* (replacing traditional asphalt by embedding reflective materials). This project will develop a *Living Streets* policy and performance metrics and recommendations to enable the City of Los Angeles to quantify the possible financial benefits of *Living Streets*. The project will document the cost efficiencies of coordinating traditional street repair with other improvements such as

green infrastructure, sewer pipe repair, and utility infrastructure, and pedestrian, bicycle and transit infrastructure. Lastly, this project will identify and plan two living streets demonstration projects and incorporate complementary efforts such as “Streets for the Future Coalition”, “Active Streets LA”, the “Boyle Heights Living Streets Prototypes”, and Climate Resolve’s “Cool Streets” Study.

North East Trees

\$160,600

North East Trees will create a demonstration project in the Highland Park area of northeast Los Angeles that will transform a derelict parcel of land located adjacent to the Arroyo Seco and the 110 freeway into a community park and green space with several Low Impact Development (LID) features. The primary goal of this project is to create awareness of, and to educate the public about, current landscaping practices that contribute to climate change, the likely impacts that climate change will have, and alternatives that are functional and esthetically pleasing. Specifically, this demonstration project will create a vegetated swale with river rocks, boulders, and native grasses that will trap particulate pollutants (suspended solids, trace metals), promote infiltration, and reduce flow velocity and volume from stormwater runoff. The demonstration site will contain a rain garden planted with native drought tolerant plants, 100 native trees and hundreds of shrubs and other plants to enhance the beauty of the park and provide habitat while demonstrating how they improve air quality, help control stormwater runoff, help reduce soil erosion, and reduce greenhouse gases.

San Diego Zoo Institute for Conservation Research

\$150,500

The San Diego Zoo Institute for Conservation Research will restore approximately 25 acres of Coastal Sage Scrub habitat, one of the most endangered habitats in the continental United States, surrounding Lake Hodges. Lake Hodges is the most westerly large tract of preserved land along a corridor in the San Dieguito watershed that connects urban, coastal Del Mar to less-developed mountains 55 miles to the east. This area provides habitat for endangered wildlife, natural recreational areas for Southern Californians, and protection for landowners fearing increased fire. This project will restore habitat to resist climate-induced increases in fire frequency, increase the area’s resilience by preserving ecosystem functioning, and provide a corridor for species responding to climate change by migrating to more favorable climatic environments.

Council for Watershed Health

\$150,000

The Council for Watershed Health will provide water supply agencies with information necessary to assess the feasibility of using stormwater recharge to increase local water supplies and create local resilience. This project will identify feasible catchments for stormwater infiltration based on the permeability of the soils and recommend best management practices for groundwater recharge throughout the coastal draining watersheds. With public support behind the management of stormwater as a useable resource, this analysis has the potential to help move the Los Angeles region toward water independence by recognizing groundwater recharge as a significant climate change adaptation strategy in the face of threats to the region’s water availability.

Los Angeles County Department of Beaches and Harbors

\$69,815

The Los Angeles County Department of Beaches and Harbors will review and assess the vulnerability of the Los Angeles County public beach facilities between Nicholas Canyon in

Western Malibu to White Point/Royal Palms Beach in San Pedro to sea level rise and storm surge. The projects will also inaugurate planning for the future preservation of these areas. This project will complete an assessment of sea level rise impacts to the County's public beach facilities over decades and estimate the extent of probable loss, identify vulnerabilities, and explore feasible strategies for how best to preserve those beaches and continue to provide for increasing recreational needs. The ultimate goal of this project is to formulate an adaptive management plan that is technically feasible, environmentally sensitive, economically sustainable, and politically realistic.

SITE DESCRIPTION: All of the projects serve a coastal region of the state and/or are within one or more of the nine counties under the jurisdiction of the San Francisco Bay Area Conservancy Program. See Exhibit 1 for regional maps depicting the location of the projects.

PROJECT HISTORY:

Since the passage of the Global Warming Solutions Act (AB32) in 2006, the State of California has led the nation in greenhouse gas (GHG) emissions reductions. While the state is well on the way to meeting the AB 32 emissions reduction goals for 2020 ([Climate Change Scoping Plan Update, 2013](#)), emissions worldwide continue to rise dramatically. Impacts from a changing climate are already being documented. In recent decades, California has experienced the impacts of a changing climate with higher winter and spring temperatures and an earlier melting snowpack. Along the state's coastline the sea level has been rising. At the Golden Gate Bridge sea level has risen by at least 7 inches over the past century. Ocean currents have shifted and resulted in altered food chains, and warmer temperatures have caused shifts in the distribution of plants and animals to higher elevations and to cooler northward slopes and ranges.

Over the next century the California coastal region will experience more severe impacts from the combined effects of higher air and water temperatures, altered precipitation patterns, sea-level rise, salinity changes, ocean acidification, more severe El Niño climate events, increased storm frequency and intensity, higher coastal erosion rates, saltwater intrusion, and greater fire intensity and frequency. These impacts will in turn increase vulnerabilities of our coastal infrastructure, public health and safety, and our natural resources which support our economy and a vast number of other services.

Recent study findings show that the climate-related choices we make today and in coming years can have a profound impact on future conditions ([California Energy Commission Reports on the Third Assessment](#)). Over the next decade, decisions made about where new development is located and where open space is preserved will affect our ability to protect buildings and humans from increased fire and flood hazards. Similarly, land use planning and acquisition now will determine whether or not there will be open space that supports migration corridors for plant and animal range shifts. Coastal marshes that are restored today will be more resilient as sea level rises, thereby maintaining the flood protection and ecological benefits they provide. Studies also indicate that building in early adaptation measures can result in overall lower cost ([The Bay Institute, 2013](#)). It is therefore urgent that we act now to protect our coastal communities and economy as well as our natural resources, public health, agricultural resources, and recreational amenities.

In recognition of the urgent need to help local governments, ports and non-governmental organizations to prepare for a changing climate, SB 1066 (Lieu) was signed into law in 2012, giving the Conservancy explicit authority to assist others in addressing the impacts and potential impacts of climate change on resources within the Conservancy's jurisdiction. This legislation enables the Conservancy to award grants for projects that reduce GHG emissions or address extreme weather events, sea level rise, storm surge, beach and bluff erosion, salt water intrusion, flooding, and other hazards that threaten ports, harbors, coastal communities, infrastructure and natural resources. The Conservancy established its Climate Ready program and initiated this first grant round to address the climate change impacts stated in SB 1066 and give priority to climate change projects that maximize public benefits.

The Conservancy released and widely-advertised the Climate Ready call for proposals starting June 13, 2013. Proposals were due August 28, 2013 and the 76 proposals received were evaluated by the Conservancy staff. Twenty projects are being recommended for funding at this time. Over \$13.3 million in Conservancy funds were requested, indicating a significant need for funding for climate change focused projects. This recommendation is to fund the proposed projects at approximately \$3 million, as evaluated by staff based on funding availability and prioritization of projects using the Climate Ready criteria.

PROGRAM FINANCING

Coastal Conservancy	\$3,078,623
Other sources	<u>\$2,657,201</u>
Total Climate Ready Program Cost	\$5,735,824

The proposed source of Conservancy funds for this authorization is an appropriation to the Conservancy from Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. These funds are allocated to the Conservancy for development, restoration and protection of land and water resources, and promotion of access to and enjoyment of coastal resources. See Public Resources Code Section 75060. All of the Climate Ready projects recommended for funding are consistent with these purposes. Furthermore, Proposition 84 funds may be expended by the Conservancy for any purpose consistent with its enabling legislation (see Public Resources Code Sections 75060(b) and 75074). For that explanation, see the following section, Consistency with Conservancy's Enabling Legislation.

Proposition 84 requires that, for potential projects that include restoration for the purpose of natural resources protection, the Conservancy give priority to potential projects that meet one or more of the criteria specified in Section 75071. The San Diego Zoo Institute for Conservation Research project is a restoration based project located at Lake Hodges. The study area at Lake Hodges is the most westerly large tract of preserved land along a corridor that connects urban coastal Del Mar to less-developed mountains. The corridor is critical to climate change adaptation because it will allow species to respond to climate change by migrating to locations with a more suitable climate therefore satisfying section 75071(a) regarding properties that link to, or contribute to linking, existing protected areas with other large blocks of protected habitat. This project will also work to restore coastal sage scrub at Lake Hodges which is one of the most

endangered ecosystems in the continental United States and therefore the project satisfies section 75071(c) regarding properties that support relatively large areas of under-protected major habitat type.

The additional cash contributions noted above consists of matching grant funds for 16 of the proposed projects from approximately 36 outside funders. In addition to the cash contributions, there is estimated to be over \$684,321 worth of in-kind contributions towards the Climate Ready suite of projects. This includes volunteer time and donated equipment, materials, and services.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

Nearly every type of project that the Conservancy supports will be affected by a changing climate. Many of the Conservancy's projects result in the reduction of greenhouse gas emissions by protecting natural lands that capture carbon, and restoring wetlands which increases carbon sequestration. Therefore, due to the multi-objective nature of the Climate Ready grant, projects seeking approval for funding under this grant round are often consistent with both Section 31113 and other parts of Division 21.

Chapter 3: Establishment and Functions (includes Climate Change)

All of the projects recommended for Climate Ready funding would be undertaken pursuant to Section 31113 of Chapter 3 of Division 21 of the Public Resources Code, regarding the impacts and potential impacts of climate change on resources within the Conservancy's jurisdiction. Pursuant to Section 31113 (a), the Conservancy is authorized to award grants to nonprofit organizations and public agencies to undertake projects that reduce greenhouse gas emissions, address extreme weather events, sea level rise, storm surge, beach and bluff erosion, salt water intrusion, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources. Consistent with this section, the proposed authorization would award grants to nonprofit organizations and public agencies to undertake the projects described in the "Project Summary" section.

Chapter 4.5: San Francisco Bay Area Conservancy Program

The projects listed below would also be undertaken pursuant to Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, regarding recreational and resource goals in the San Francisco Bay Area.

- Bay Area Ridge Trail Council: Sections 31162(a), 31162(d), 31163(c), and 31165
- City of Benicia: Sections 31162(a), 31163(c), and 31165
- East Bay Dischargers Authority: Sections 31162(b), 31163(c), and 31165
- Gold Ridge Resource Conservation District: Sections 31162(a), 31163(c), and 31165
- Marin Resource Conservation District: Section 31165
- San Francisco International Airport: Sections 31162(a), 31163(c), and 31165
- San Francisquito Creek Joint Powers Authority: Sections 31162(b), 31162(d), and 31165

Pursuant to Section 31162, the Conservancy is authorized to award grants to projects located in the nine-county San Francisco Bay Area which will help achieve the following goals: a) to improve public access to, within, and around the bay, coast, ridge tops and urban open spaces through completion and operation of regional bay, coast, water and ridge trail systems, and local trails connecting to population centers and public facilities; b) to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance; c) to assist in the implementation of policies and programs of the California Coastal Act, the San Francisco Bay Plan, and the adopted plans of local governments and special districts; and d) to promote, assist, and enhance projects that provide open space and natural areas that are accessible to urban populations for recreational and educational purposes.

In addition, the seven projects listed above would satisfy all of the criteria for determining project priorities under Section 31163(c) in that:

1. The projects are consistent with the approved plans including: The Bay Conservation and Development Commission *San Francisco Bay Plan (amended October 2011)*; The Association of Bay Area Governments *The Bay Trail Plan*; The San Francisco *General Plan*; The *San Mateo County General Plan*; and The *Marin Countywide Plan*;
2. The projects serve a regional constituency by helping to enhance public space along the San Francisco Bay shoreline as well as improve the San Francisco Bay Trail;
3. The projects can be implemented in a timely way and are prepared to begin work upon project approval;
4. The improvement of shoreline resilience to climate change that the projects provide, along with associated public access to San Francisco Bay and the San Francisco Bay Trail, provides opportunities for benefits that could be lost if the projects are not quickly implemented; and
5. The projects include significant matching funds from the applicants.

Pursuant to Section 31165, the Conservancy is authorized to award grants for activities that are compatible with the preservation, restoration, or enhancement of ocean, coastal, bay, or watershed resources, or that facilitate environmental education related to these resources.

The proposed authorization would award grants for the projects listed above as further described in the “Project Summary” section, all of which are consistent with Sections 31162, 31163 and/or 31165.

Chapter 5.5: Integrated Coastal and Marine Resource Protection

The projects listed below would also be undertaken pursuant to Chapter 5.5 of Division 21 of the Public Resources Code, Section 31220, regarding grants for coastal watershed and coastal and marine habitat water quality, sediment management, and living marine resources protection and restoration projects. As required by Section 31220 staff has notified the State Water Resources Control Boards of the nature of these projects and provided the opportunity for comment, input and review.

- Resource Conservation District of Santa Cruz County: Section 31220(b)(7)

- City of Arcata: Sections 31220(b)(3) and 31220(b)(7)
- Gold Ridge Resource Conservation District: Sections 31220(b)(3) and 31220(b)(7)
- Heal the Bay: Section 31220(b)(1)
- North East Trees: Section 31220(b)(1)
- Council for Watershed Health: Section 31220(b)(1)

Pursuant to Section 31220(b)(1), the Conservancy is authorized to undertake a project or award a grant for a project that reduces contamination of waters within the coastal zone or marine waters.

Pursuant to Section 31220(b)(2), the Conservancy is authorized to undertake a project or award a grant for a project that protects or restores fish and wildlife habitat within coastal and marine waters and coastal watersheds, including, but not limited to, permit coordination projects for watershed restoration.

Pursuant to Section 31220(b)(3), the Conservancy is authorized to undertake a project or award a grant for a project that reduces threats to coastal and marine fish and wildlife.

Pursuant to Section 31220(b)(6), the Conservancy is authorized to undertake a project or award a grant for a project that acquires, protects, and restores coastal wetlands, riparian areas, floodplains, and other sensitive watershed lands, including watershed lands draining to sensitive coastal or marine areas.

Pursuant to Section 31220(b)(7), the Conservancy is authorized to undertake a project or award a grant for a project that reduces the impact of population and economic pressures on coastal and marine resources.

As Section 31220(c) requires, the proposed projects are consistent with local and state watershed plans. This is discussed in detail below under “Consistency With Local Watershed Management Plan/State Water Quality Control Plan.” Pursuant to Section 31220(c) all the projects included under this section have a monitoring and evaluation component.

Consistent with this section, the proposed authorization would award grants to nonprofit organizations and public agencies to undertake the projects listed above and described in the “Project Summary” section.

Chapter 6: Coastal Resource Enhancement

The proposed Marin Resource Conservation District project would be undertaken pursuant to Chapter 6 of the Conservancy’s enabling legislation, Public Resource Code Sections 31251-31270, authorizing coastal resource enhancement activities.

Under Section 31251, the Conservancy may award grants for the purpose of enhancement of coastal resources that, because of natural or human-induced events, have suffered loss of natural and scenic values. The proposed MRCD project is intended to improve water quality in the Tomales Bay watershed, a coastal watershed that has been degraded by historical agriculture and urban land uses. Section 31251.2(a) allows the Conservancy to award grants to enhance a watershed resource that is partly outside of the coastal zone in order to enhance coastal resources

within the coastal zone. The proposed authorization would fund some enhancement projects outside the coastal zone and some within the coastal zone. However, all the projects are critical to water quality and habitat in Tomales Bay, a critically important estuary for countless species located within the coastal zone.

The proposed projects are consistent with Section 31252 which requires resource enhancement activities be consistent with the applicable Local Coastal Program, as detailed in the “Consistency with Local Coastal Program Policies” section, below.

Finally, as required by Section 31253, staff has considered the urgency of the projects, the availability of funding for other enhancement projects and the inability of the Marin RCD to fully fund the projects through other sources in determining the amount of proposed Conservancy funding for these projects. In recommending the projects for Conservancy approval, staff has also applied the Conservancy’s project selection criteria to the projects, as described in detail in the “Consistency with Conservancy Project Selection Criteria and Guidelines” section, below.

**CONSISTENCY WITH CONSERVANCY’S 2013
STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

The 20 projects proposed for funding and described in the “Project Summary” section assist the Conservancy with meeting a number of its 2013-2018 Strategic Plan Goals and Objectives. Relevant Goals and Objectives are listed below, along with the names of the projects that meet each Goal.

Public Access Goals

Consistent with **Goal 3, Objective A**, which seeks to implement waterfront revitalization projects that increase accessibility, create more inclusive access opportunities, and enhance cultural and historic resources, the City of Benicia project will assess how climate related risks will affect shoreline and community assets including watersheds, shoreline parks and trails, the Port of Benicia, and the Industrial Park.

Coastal Resources Conservation Goals

Consistent with Goal 4, Objective C, which seeks to implement projects that preserve and restore fish and wildlife corridors between core habitat areas along the coast and from coastal to inland habitat areas, the San Diego Zoo Institute for Conservation Research will restore the area surrounding Lake Hodges, which is the most westerly large tract of preserved land along a corridor that connects urban, coastal Del Mar to less-developed mountains 55 miles to the east.

Consistent with **Goal 5, Objective A**, which seeks to develop plans for the restoration and enhancement of coastal habitats, projects of the following grantees will contribute to this goal:

- City of Arcata
- San Diego Zoo Institute for Conservation Research

Consistent with **Goal 5, Objective B**, which seeks to restore or enhance coastal habitats, the San Diego Zoo Institute for Conservation Research will restore the area surrounding Lake Hodges, which is the most westerly large tract of preserved land along a corridor that connects urban, coastal Del Mar to less-developed mountains 55 miles to the east.

Consistent with **Goal 6, Objective A**, which seeks to develop plans to enhance coastal working lands, projects of the following grantees will contribute to this goal:

- Gold Ridge Resource Conservation District
- Marin Resource Conservation District
- Sempervirens Fund

Consistent with **Goal 6, Objective B**, which seeks to implement projects that foster long-term viability of coastal working lands, projects of the following grantees will contribute to this goal:

- Marin Resource Conservation District
- Sempervirens Fund

Consistent with **Goal 7, Objective A**, which seeks to identify significant climate-related threats, management challenges and priority technical assistance needed to maintain resilient coastal communities and natural resources, projects of the following grantees will contribute to this goal:

- County of Santa Barbara
- Resource Conservation District of Santa Cruz County
- Sempervirens Fund
- The Nature Conservancy
- Gold Ridge Resource Conservation District
- Marin Resource Conservation District
- Sonoma County Regional Climate Protection Authority
- Bay Area Ridge Trail Council
- City of Benicia
- East Bay Dischargers Authority
- San Francisco International Airport and San Mateo County
- San Francisquito Creek Joint Powers Authority
- City of Hermosa Beach
- City of Imperial Beach
- Heal the Bay
- Council for Watershed Health
- Los Angeles County Department of Beaches and Harbors

Consistent with **Goal 7, Objective B**, which seeks to conduct site-specific, regional and landscape-level vulnerability assessments from sea level rise and extreme storm events, and develop adaptation plans and strategies, projects of the following grantees will contribute to this goal:

- County of Santa Barbara
- The Nature Conservancy
- City of Arcata
- City of Benicia
- East Bay Dischargers Authority
- Gold Ridge Resource Conservation District
- San Francisco International Airport and San Mateo County
- San Francisquito Creek Joint Powers Authority
- City of Hermosa Beach
- City of Imperial Beach
- Los Angeles County Department of Beaches and Harbors

Consistent with **Goal 7, Objective C**, which seeks to conduct site-specific, regional and landscape-level vulnerability assessments of uplands and waterways, and develop adaptation plan to address predicted climate change impacts to natural resources, biodiversity, and critical habitat, projects of the following grantees with contribute to this goal:

- Sonoma County Regional Climate Protection Authority
- City of Arcata

Consistent with **Goal 7, Objective D**, which seeks to implement adaptation pilot projects that reduce hazards from sea level rise and extreme storm events, and which protect natural resources and maximize public benefits, projects of the following grantees with contribute to this goal:

- County of Santa Barbara
- The Nature Conservancy
- City of Benicia
- East Bay Dischargers Authority
- San Francisco International Airport and San Mateo County
- San Francisquito Creek Joint Powers Authority
- City of Hermosa Beach
- City of Imperial Beach
- Los Angeles County Department of Beaches and Harbors

Consistent with **Goal 7, Objective E**, which seeks to implement adaptation pilot projects that address climate change impacts to uplands natural resources, biodiversity and critical habitat, projects of the following grantees with contribute to this goal:

- City of Hermosa Beach
- North East Trees
- Council for Watershed Health
- San Diego Zoo Institute for Conservation Research

Consistent with **Goal 7, Objective F**, which seeks to implement projects that reduce greenhouse gases by increasing carbon sequestration, or by supporting land uses that reduce energy

consumption including vehicle miles traveled, projects of the following grantees with contribute to this goal:

- Sempervirens Fund
- Marin Resource Conservation District
- Bay Area Ridge Trail Council
- East Bay Dischargers Authority

Consistent with **Goal 7, Objective G**, which seeks to implement tree and vegetation planting projects that reduce urban heat islands and provide other benefits such as reduced energy use, improved air quality, enhanced stormwater management, and improved quality of life, the North East Trees project that will plant a native tree community of 100 trees and hundreds of shrubs and other plants to enhance the beauty of the park and provide habitat while demonstrating how they improve air quality, help control stormwater runoff, help reduce soil erosion, and reduce greenhouse gases.

San Francisco Bay Area Conservancy Program Goals

Consistent with **Goal 11, Objective C**, which seeks to develop plans for enhancement of Bay Area tidal wetlands, managed wetlands, seasonal wetlands, upland habitat, and subtidal habitat, projects of the following grantees with contribute to this goal:

- East Bay Dischargers Authority
- San Francisco International Airport and San Mateo County
- San Francisquito Creek Joint Powers Authority

Consistent with **Goal 11, Objective E**, which seeks to develop plans for the enhancement of riparian and riverine habitat or other watershed functions and processes for the benefit of wildlife or water quality, the Gold Ridge Resource Conservation project will develop on-farm water conservation infrastructure for added water security with multiple benefits to agriculture and wildlife.

Consistent with **Goal 12, Objective D**, which seeks to develop plans for completing segments of the San Francisco Bay Trail, projects of the following grantees with contribute to this goal:

- San Francisco International Airport and San Mateo County
- San Francisquito Creek Joint Powers Authority

Consistent with **Goal 13, Objective B**, which seeks to implement projects that assist Bay Area farmers and ranchers to steward the natural resources on their lands, the Marin Resource Conservation District will contribute to this goal by implementing a program for the selection of candidate Carbon Farms that utilizes aerobically composted agricultural waste to enhance rangeland and rancher resiliency to climate change while reducing greenhouse gas emissions and sequestering carbon.

**CONSISTENCY WITH CONSERVANCY'S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed projects are 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 "Program Financing" section above.
3. **Support of the public:** As indicated by the support letters provided in Exhibit 3, the suite of proposed projects are supported by elected officials, numerous community and nonprofit organizations, and local agencies.
4. **Location:** All 20 of proposed projects are located either within the coastal zone, a coastal watershed, or the nine-county San Francisco Bay region.
5. **Need:** Without Conservancy funding, the proposed projects will either not proceed or have to be scaled back.
6. **Greater-than-local interest:** The projects to be funded by this authorization will improve resiliency, public access, and recreation throughout the coastal regions of the state and the San Francisco Bay Area. Over the next century the California coastal region will experience more severe impacts from the combined effects of higher air and water temperatures, altered precipitation patterns, sea-level rise, salinity changes, ocean acidification, more severe El Niño climate events, increased storm frequency and intensity, higher coastal erosion rates, saltwater intrusion, and greater fire intensity and frequency. These impacts will in turn increase vulnerabilities of our coastal infrastructure, public health and safety, and our natural resources which support our economy and a vast number of other services.
7. **Sea level rise vulnerability:** Approximately half of the proposed Climate Ready projects address the impacts of sea-level rise. These impacts include more frequent and intense storms paired with rising sea-level will increase flooding, storm surge inundation, coastal erosion and shoreline retreat, and wetland loss, that will dramatically reshape California's coast and the San Francisco Bay. Funding the proposed projects takes a proactive step to protect our coastal communities and economy as well as our natural resources, public health, and recreational amenities from the impacts of sea-level rise.

Additional Criteria

8. **Urgency:** Over the next decade, decisions made about where new development is located and where open space is preserved will affect our ability to protect buildings and humans from increased fire and flood hazards. Similarly, land use planning and acquisition now will determine whether or not there will be open space that supports migration corridors for plant and animal range shifts. Coastal marshes that are restored today will be more resilient as sea level rises, thereby maintaining the flood protection and ecological benefits they provide.

Studies also indicate that building in early adaptation measures can result in overall lower cost. It is therefore urgent that we act now to protect our coastal communities and economy as well as our natural resources, public health, agricultural resources, and recreational amenities.

9. **Leverage:** See the “Project Financing” section above.
10. **Readiness:** All but one of the projects described in the “Project Summary” section above are ready to implement and complete within one to two years. The Heal the Bay project will take longer due to committee meetings scheduling and the pre-development of two demonstration projects.
11. **Realization of prior Conservancy goals:** See “Project History” above.
12. **Cooperation:** The Climate Ready projects are intended to foster cooperation across multiple regional and political boundaries to address the impacts of climate change. To achieve this goal multiple nonprofit organizations and federal, state, and local agencies are involved in project implementation.
13. **Minimization of greenhouse gas emissions:** Several proposed projects like City of Arcata, East Bay Dischargers, Marin Resource Conservation District, Bay Area Ridge Trail Council, and Sempervirens Fund propose to quantify the carbon sequestration potential of the project. These projects have the potential to contribute to reductions in greenhouse gases.

For the San Diego Zoo Institute for Conservation Research habitat restoration project, transportation to and from the Lake Hodges site will create emissions. However, the project estimates the creation of a net carbon sink because long-lived woody shrubs will replace invasive annual grasses. Carbon will be stored in the biomass of these shrubs. While infrequent disturbances can release some of this stored carbon, coastal sage shrub recolonization will regain this lost carbon.

The North East Trees project will have a direct carbon footprint from design and construction activities for the project at less than 3 metric tons of carbon. This would be balanced by carbon the project would sequester and reduce which we estimate at: 5 metric tons annually of direct carbon sequestration from the new trees and plants, and over 30 tons annually by creating local water resources and reducing the need for imported, energy costly water.

The Sempervirens Fund project will also contribute greenhouse gas emissions that will come from the vehicle miles driven by the consultants. Sempervirens Fund will offset these emissions by retiring credits from its Lompico Forest Carbon Project, once it has fulfilled its contractual obligations to deliver 14,000 credits to Pacific Gas and Electric.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

Since the Marin Resource Conservation District is the only project authorized under Chapter 6 of Division 21, it is the only project that requires an explanation of its consistency with the relevant Local Coastal Program. However, many of the other Climate Ready projects are planning and feasibility studies that will inform and be consistent with local coastal planning policies.

The Marin Resource Conservation District project areas will be within either the Coastal Zone of Marin County, or within the Tomales Bay watershed, draining to the coastal zone. The Marin County Local Coastal Program Unit 2 Land Use Plan identifies Marin's numerous coastal zone streams and creeks as sensitive habitats for many species of birds and fish. Lagunitas Creek's runs of coho and steelhead are specifically highlighted (*The Marin County Local Coastal Program Unit 2 Land Use Plan*, p. 65). Freshwater inflows, sedimentation, water pollution, and protection of riparian habitats are identified as the key concerns for protecting the aquatic resources of the Tomales Bay ecosystem (*ibid*, pp. 66-67). The project enhances habitat values and water quality of coastal waters, and is thus consistent with the following policy contained in the Marin Local Coastal Program Amendment (2012):

C-WR-1. Water Quality Protection and Biological Productivity. Monitor, protect, and enhance the quality of coastal waters for the benefit of natural communities, human health, recreational users, and the local economy. Maintain and, where feasible, restore the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health through means such as minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The proposed project will develop a countywide model that includes planning, implementation and scaling conservation and carbon-beneficial practices on working lands that improve soil carbon and soil health which will enhance the ecosystems services provided by working lands, reduce greenhouse gases, sequester atmospheric carbon in soils and provide for healthy watersheds that are resilient to climate change. Additional benefits include providing improved water quality and habitat for wildlife and people and the improved viability of sustainable agriculture. Therefore, the proposed project is consistent with the Local Coastal Program Policies.

Section 2 of the Marin LCP also articulates a general agricultural policy to "protect the existing and future viability of agricultural lands in its coastal zone. These policies are also intended to...protect coastal wildlife, habitat and scenic resources in accordance with Section 30240 of the Coastal Act." (pg. 98). By working with private landowners, the Marin Resource Conservation District will improve the viability of agricultural lands and enhance the natural resources within the watershed.

**CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/
STATE WATER QUALITY CONTROL PLAN:**

Projects undertaken pursuant to PRC Section 31220 must be consistent with the following, if available and relevant: Integrated Watershed Resource Management Programs (IWRMP); local watershed management plans; and water quality control plans adopted by the state and regional water boards.

Resource Conservation District of Santa Cruz County

This project is consistent with the Pajaro Valley Watershed Management Agency Basin Management Plan Draft (2012) which addresses the extent of aquifer overdraft, saltwater intrusion in coastal wells, and the impact of overdraft on sustainable water supply for the city of Watsonville. This project is consistent with this plan in that it will inform management efforts to enhance groundwater stability by implementing a mixture of conservation, recycling, and managed recharge.

Since the Resource Conservation District of Santa Cruz project focuses on stormwater recharge it is also consistent with the Pajaro River Watershed Integrated Regional Water Management Plan (2007) which describes an analysis showing that recharge efforts are the most cost effective option for meeting future water supply shortages in the region when compared with recycled water and surface water treatment.

Lastly, this project is consistent with the Northern Santa Cruz County Integrated Regional Water Management Plan (2005) which describes the extent of groundwater levels that have declined. This project directly aligns with the following findings of the plan to reduce the likelihood of water shortages there is a need to protect and enhance opportunities for groundwater recharge.

Gold Ridge Resource Conservation District

The proposed project is consistent with the North Coast Integrated Regional Water Management Plan and the Salmon Creek Integrated Watershed Management Plan. In particular, this project meets the goals of the North Coast IRWMP by developing on-farm water conservation infrastructure for added water security and enhancing water supply with minimal environmental impacts. This project also meets the goals of the Salmon Creek IRWMP since the study areas are located in the Estero Americano and Salmon Creek watersheds, and the project seeks to enhance surface water and groundwater supplies within the watershed that are managed to support residents' quality of life, family agriculture, and ecosystem needs. This project is looking at the use of on-farm water conservation infrastructure to reduce the extraction of water sources that impact summer streamflows thereby offering alternative water sources or improved storage.

Heal the Bay

This project is consistent with the watershed management plans required by the Los Angeles Regional Water Quality Control Board under the municipal stormwater permit (MS4) which was updated in late 2012. Specifically, the MS4 requires green infrastructure in certain transportation corridors and incentivizes municipalities to incorporate green infrastructure components in street projects. The MS4 also incentivizes water quality projects that provide multi-benefits (i.e. water supply). The Heal the Bay project is also consistent with the Greater LA Integrated Resources Water Management Plan (IRWMP) which focuses on the use of green infrastructure.

North East Trees

The North East Trees project focuses on infiltration of urban runoff and is consistent with the Los Angeles River Restoration Master Plan, adopted by the City in 2007, and with the Los Angeles River Improvement Overlay District, which encourages the use of infiltration technologies in streetscapes along the river. Infiltration of urban runoff is also consistent with

recommendations of both the City of Los Angeles' Integrated Resources Plan and the Greater Los Angeles County Region Integrated Regional Water Management Plan.

This project is consistent with the County and City of Los Angeles, RWQCB, and the SWRCB prioritization of the use of Low Impact Development and source controls as the preferred approach to stormwater management, including for the purpose of water quality compliance. Specifically, the North East Trees project prioritizes and uses Low Impact Development by demonstrating inexpensive simple and low engineered solutions that utilize natural systems. The North East Trees project is also consistent with the Los Angeles River Total Maximum Daily Load implementation plans and guidelines, which aim to restore the Los Angeles River and prioritize "green solutions" including tree planting and stormwater best management practices that effectively reduce the volume of urban runoff and remove pollutants from urban runoff through natural processes.

Council for Watershed Health

Specifically this project is consistent with the objective of the Greater Los Angeles Integrated Regional Water Management Plan (2006; Draft Update 2013), to "Optimize local water resources to reduce the Region's reliance on imported water." This project also addresses explicit goals that call for greater groundwater recharge and stormwater capture and use.

The project is also consistent with the Standard Urban Stormwater Mitigation Plan (SUSMP) for LARWQCB Region 4 which was adopted in 2000 to address stormwater pollution from new developments and redevelopment projects. This Plan requires capturing the first ¾-inch of rain from a storm event for new and re-development projects.

Stormwater infiltration for groundwater recharge which is a focus of the Council for Watershed Health project is also consistent with the MS4 Permit for Los Angeles, adopted in 2013 by LA Regional Water Quality Control Board, which requires all permittees to develop a watershed management plan or an enhanced watershed management plan where it specifically mentions stormwater infiltration as a preferred means of compliance for the permittees.

This project is also consistent with the Ballona Creek, Arroyo Seco, and Compton Creek Watershed Management Plans since all of these plans explicitly support the capture and infiltration of stormwater as a local water supply source.

Lastly, this project is consistent with the Metropolitan Water District Integrated Resources Plan, adopted on October 12, 2010, since that plan identifies stormwater for groundwater replenishment as a local resource that can act as a buffer supply that will help achieve the goal of a 20% reduction in water use by 2020.

City of Arcata:

This proposed City of Arcata project will design a marsh to provide a buffer to the waste water treatment plant, and quantify carbon sequestration potential of the proposed 22 acres of protective salt marsh. These tasks are consistent with the City of Arcata Urban Water Management Plan

(June 2010). Specifically this project will address potential climate change effects on technical resource areas.

CONSISTENCY WITH SAN FRANCISCO BAY PLAN:

The following proposed projects are being undertaken pursuant to Chapter 4.5 of Division 21 of the Public Resources Code, are within the jurisdiction of BCDC, and are consistent with the policies of BCDC’s San Francisco Bay Plan (Bay Plan) as discussed below: East Bay Dischargers Authority, San Francisco International Airport and San Mateo County, City of Benicia, and San Francisquito Creek Joint Powers Authority.

These proposed projects are consistent with Part IV, Public Access policies because they will promote public access opportunities along the bay shoreline. Public Access Policy 9 states that access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connects to the nearest public thoroughfare where convenient parking or public transportation may be available. Diverse and interesting public access experiences should be provided which would encourage users to remain in the designated access areas to avoid or minimize potential adverse effects on wildlife and their habitat. The proposed projects will facilitate appropriate enjoyment and use of the San Francisco Bay shoreline in a manner consistent with this policy.

These proposed projects are consistent with Part IV, Recreation, because they will increase access to natural areas in and near the shoreline of San Francisco Bay. The Recreation section finds that “the Bay is the most important open space in the Bay region. The Bay and its shoreline provide unique recreational opportunities. Participating in recreation activities on the Bay and along its shoreline can inspire an appreciation of the Bay and can motivate people to participate in the responsible management and protection of the Bay.”

These proposed projects are consistent with Part IV, Climate Change policies, because they will address the resilience of the project areas to flooding and the capacity of the project areas to adapt to climate change impacts. Specifically, these projects will investigate the protection of existing and future shoreline development with the enhancement of the Bay ecosystem, such as by using feasible shoreline protection measures that incorporate natural Bay habitat for flood control and erosion prevention.

COMPLIANCE WITH CEQA:

The following projects considered for funding under this authorization are exempt from the California Environmental Quality Act (CEQA) (all section citations are to Title 14 California Code of Regulations):

The City of Hermosa Beach’s proposed project is categorically exempt from review under CEQA pursuant to Section 15301, which exempts minor alteration of existing public structures and facilities involving negligible expansion of existing use, and Section 15306, which exempts basic data collection that does not result in a serious or major disturbance to any environmental

resource. This project includes installing two shallow groundwater monitoring wells at an approximate depth of 30 feet at locations approximately two city blocks inland of the beach. The wells will be located in developed areas within public rights-of-way, such as municipal parking lots. Installation will be completed in a single day, and all drilling and construction will be performed by a licensed driller (C-57 license) under the supervision of a professional geologist or certified hydrogeologist, in accordance with the guidelines of the California Department of Water Resources, and in compliance with the well construction permit issued by the local permitting agency. The City does not anticipate access impacts during installation or future data downloads (e.g., the wells can be installed without interrupting traffic; readings would preclude use of only one parking space for only a few hours). Because the wells will be installed in developed public rights of way, and will occupy only a small amount of space, they constitute a minor alteration of existing facilities. The use of a right of way for installation of a well to collect ground water data will not interfere with the current right of way use and therefore is at most a negligible change in use of the right of way. Because the wells will be in developed areas, the collection of data from the wells, which will require only a few hours every few months, will not result in any disturbance to an environmental resource. Accordingly, installation and operation of the monitoring wells is exempt from CEQA pursuant to the above-described categorical exemptions.

The North East Trees and the San Diego Zoo Institute for Conservation Research projects are categorically exempt under Section 15304 as these two projects will involve minor alterations of land or water which will not include the removal of healthy, mature, scenic trees. Specifically, the San Diego Zoo Institute for Conservation Research project entails removal of invasive species by hand and through herbicide application, and planting of native coastal sage scrub. No grading will occur. The North East Trees project is so small it will not require a grading permit from the City of Los Angeles, and will use dirt and materials already existing at the site as well as hand tools or a small caterpillar for creating the swales which is consistent with 15304(a). The North East Trees project also fits the example provided by Section 15304(b) as a new landscaping project which will replace existing, conventional landscaping with water efficient landscaping.

The projects of the following grantees, as described in the “Project Summary” section, are statutorily exempt from the California Environmental Quality Act (CEQA), pursuant to 14 Cal. Code of Regulations Section 15262. Consistent with Section 15262, the proposed projects will involve preparation of planning and feasibility studies for possible future actions which the Conservancy has not approved, adopted, or funded. Consistent with this section, the studies will consider environmental factors. These projects are also categorically exempt from CEQA, pursuant to 14 Cal. Code of Regulations Section 15306. Consistent with this section, development of the project designs may require basic data collection and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource.

- County of Santa Barbara
- Resource Conservation District of Santa Cruz County
- Sempervirens Fund
- The Nature Conservancy
- City of Arcata

- Gold Ridge Resource Conservation District
- Sonoma County Regional Climate Protection Authority
- Bay Area Ridge Trail Council
- City of Benicia
- East Bay Dischargers Authority
- San Francisco International Airport and San Mateo County
- San Francisquito Creek Joint Powers Authority
- City of Imperial Beach
- Heal the Bay
- Council for Watershed Health
- Los Angeles County Department of Beaches and Harbors

Upon approval, staff will file a Notice of Exemption for each proposed project that is exempt from CEQA.

The Conservancy previously authorized the disbursement of funding to the Marin Resource Conservation District (MRCD) for its Tomales Bay Watershed Habitat Enhancement project at its meeting of October 18, 2012, and at that time reviewed the MRCD's "Initial Study/Mitigated Negative Declaration (the "Mitigated Negative Declaration"), attached to this staff recommendation as Exhibit 4. The Conservancy's review of the Mitigated Negative Declaration found it adequate for that project. The project proposed by the MRCD under this authorization consists of the same practices within the same project area analyzed by the Mitigated Negative Declaration. One component of the current project, compost application to annual grasslands, was not described as one of the 17 pre-approved and defined enhancement practices; however, the Mitigated Negative Declaration discussed and evaluated this enhancement practice as part of Mitigation Measure PH-9.

PH – 9: Organic amendments may be used to ensure successful establishment of restoration vegetation associated with the practices. Organic fertilizers may be used above the normal high water mark the year of planting, if necessary. No chemical fertilizers will be used.

The proposed project involves the application of 3,736 cubic yards of compost on a total of 87 acres of annual grassland (uplands). Staff has independently evaluated the potential for adverse environmental impacts from this mitigation measure and concludes it will not have any significant environmental impacts. In addition, the practice will result in a net gain in carbon sequestration due to increased rangeland productivity, and a reduction in greenhouse gas emissions due to avoided emissions from disposing of the manure in lagoons and landfills. As a responsible agency, the Conservancy staff has again independently reviewed the Initial Checklist/Mitigation Negative Declaration, adopted by the MRCD on November 22, 2010, as well as the checklist and public comment (Exhibit 4). Staff recommends that the Conservancy find that the project as designed and mitigated will not have a significant adverse effect on the environment. Upon approval, staff will file a Notice of Determination for the project.