

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

PROJECT OVERVIEW

General Project Information

Project Title:	Upper Pajaro River Restoration Project
Project Location:	Santa Clara and San Benito counties
Estimated Cost:	

Brief Project Description (1 to 2 sentences):

The Upper Pajaro River Restoration will restore natural communities and floodplain function to 572 acres of the Pajaro River and Llagas Creek waterways and riparian habitat in San Benito and Santa Clara counties, connecting existing conservation investments and supporting regional water quality, floodplain protection, and wildlife connectivity goals (including the ability of wildlife to move in response to climate change). The project also includes educational outreach to the local agricultural community with guidance regarding actions they can take to protect water quality, provide flood protection, and protect and restore natural resources on their properties.

Project Proponent Information

Contact Name:	Abigail Ramsden
Affiliation:	The Nature Conservancy
Address:	201 Mission St., Suite 400 San Francisco, CA 94105
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Other participating agencies/organizations (if applicable):

The Upper Pajaro River Conservation Collaborative currently consists of the Resource Conservation District of Santa Cruz County, Santa Clara County Open Space Authority, Peninsula Open Space Trust, The Nature Conservancy, Loma Prieta Resource Conservation District, Silicon Valley Land Conservancy, Land Trust of Santa Cruz County, Wild Farm Alliance, Community Alliance for Family Farmers, California State Coastal Conservancy and USDA Natural Resources Conservation Service.

DETAILED PROJECT INFORMATION

Description

Please provide a description of your project (including the location) and its purpose, what will be constructed and/or implemented, how the project will function, the area(s) and/or entities that will be affected by or will benefit from the project, and any potential obstacles to implementation.

The proposed project would protect and enhance the heart of the Upper Pajaro River floodplain by creating a mix of habitat types in the areas that are most marginal for farming while managing flood risk for the surrounding, more productive farming areas. The result would be a rich matrix of compatible land uses including seasonal farmlands, rangeland, flood control and associated lowland ecosystems within the Pajaro River Floodplain in Santa Clara and San Benito counties, between the Santa Cruz Mountains and the Mount Hamilton Range – the largest wetland complex between San Francisco Bay and Monterey Bay. The project would create a wildlife corridor across Soap Lake and a habitat mixture that will benefit the highest priority ecosystems and species, including migrating mammals such as badgers and neotropical migratory birds, as well as demonstrate the value of agricultural land to natural areas conservation. Farmlands would remain the dominant land use within the floodplain. Restoration would: (1) protect and enhance remnant riparian forests along the Pajaro River, lower Tar Creek, Carnadero Slough, lower Llagas Creek, Tequisquita Slough and lower Pacheco Creek; (2) protect and enhance the

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

unique series of vernal pools, marshes, sag ponds, sloughs, and annual grasslands of Tequisquita Slough and lower Pacheco Creek; and (3) maintain existing annual grasslands in rangeland or other compatible uses in order to enhance the long-term viability of upland wildlife including raptors, bobcats, badger, and deer. Benefits of restoration would also accrue to wildlife seeking to move across the floodplain in response to climate change, since the restoration project would provide areas of cover, forage, and habitat across the landscape. Project sponsors will work with local stakeholders, e.g. landowners, to employ land management practices that facilitate continued movement of wide-ranging upland wildlife throughout the Project Area.

Project proponents from the Upper Pajaro River Conservation Collaborative will manage project implementation and (as needed) design and permitting, contracting for construction and planting, and monitoring implementation in an adaptive manner to inform later stages, while working collaboratively with local landowners and agencies. The project will affect agricultural landowners in the project area, all of whom will be compensated for project-related land use through conservation and floodplain easements or property acquisitions funded by the Pajaro River Flood Protection Authority, state and federal granting agencies, private foundations, local water and flood management authorities; and potentially residents of downstream communities who would be negatively impacted if floodplain conservation and this associated restoration could not be implemented. Since the project will rely in part on land use alterations on private lands, inability to gain access to certain properties could hinder implementation.

The project will support a variety of educational goals which have been proposed by the Wild Farm Alliance. These goals include but are not limited to the following objectives: (1) first, provide the agricultural community in the Upper Pajaro Valley with the information needed to make informed decisions on practices and actions that address water quality, provide flood protection, protect and restore natural resources, and improve biological resources. The proposed outcome is to create and publish a guide (in English and Spanish) with assistance from Technical Advisory Committee. (2) The next objective is to increase farmers', ranchers', and resource professionals' collective knowledge of water quality and biodiversity conservation management practices through educational outreach and networking. Partners would network with and distribute publications to farmers, ranchers, resource professionals, businesses, land trusts, USDA Natural Resources Conservation Service, UC Cooperative Extension, and California Department of Food and Agriculture. (3) The final outreach objective is to broaden regional community knowledge of water quality and biodiversity conservation management practices. Partners would provide a learning experience for student groups who help with river restoration plantings. Additionally, partners could create marketing materials for those participating farms and ranches that are interested in sharing their stewardship practices with their customers.

Based on these guidance materials and seminars, the partners will also assist local landowners and farmers to seek funding for implementation of the proposed best management practices.

Technical Feasibility

Discuss the technical feasibility of the project. If possible, cite references that contain information about the proposed project and detail the technical feasibility of the project.

A comprehensive implementation plan for this project was completed in 2008 by The Nature Conservancy, two engineering and planning firms, and a resource specialist: "A Restoration Vision for the Pajaro River and Soap Lake" (Philip Williams & Associates, Ltd., H.T. Harvey & Associates, The San Francisco estuary Institute. Nov. 2008. Prepared for The Nature Conservancy). The Restoration Vision identifies target locations and proposes restoration opportunities for each location.

The project area also coincides with the Bay Area Critical Linkages (BACL) planning effort (which identifies riparian areas in the region as crucial linkages) and is critically important to ensure long-term biological connectivity between the Santa Cruz Mountains and the Diablo Range. Funding for this project will be used to leverage additional funds associated with the BACL project, including the Santa Cruz Mountains Linkages Conceptual Area Protection Plan.

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

project, including the Santa Cruz Mountains Linkages Conceptual Area Protection Plan.

The Nature Conservancy, Santa Clara Valley Water District, and Santa Clara County Open Space Authority have acquired fee properties and flood and conservation easements in the project area that will facilitate implementation; these entities continue to pursue properties and easement rights within the Soap Lake floodplain, a 9,000-acre area that encompasses the proposed project area. In partnership with the Santa Clara Valley Open Space Authority, the Nature Conservancy is currently developing a contract to initiate channel restoration with an educational outreach component on a 2.7 km stretch of the Pajaro River, on a property acquired by the Conservancy in October 2012 with funding from a variety of sources including the prior IRWMP. This track record suggests that the partner organizations have the capacity to leverage multiple funding sources, then identify and work with local landowners to create conservation opportunities like those needed for implementation of the proposed project. However, each proposed restoration project will be predicated on cultivation and compensation of willing landowners in the region.

Technical feasibility of educational goals is not likely to be a problem, as the expertise to create such materials already exists among the partners and adequate funding would allow dedication of staff time and resources to create, edit, promote and distribute such materials.

Pajaro River Watershed IRWM Regional Goals & Objectives

Put an X next to any goal that the proposed project will achieve.

Water Supply

- | | |
|---|---|
| | 1. Meet 100% of M&I and agriculture demands (both current and future conditions) in wet to dry years including the first year of a drought. |
| | 2. Meet 85% M&I and 75% agriculture demands (both current and future conditions) in second and subsequent years of a drought. |
| | 3. Identify and address water supply needs of disadvantaged communities in the Pajaro River Watershed. |
| | 4. Implement water conservation programs to reduce M&I and agricultural water use consistent with SBx7-7 and CVPIA. |
| | 5. Maximize the use of recycled water during the irrigation season and expand other uses of recycled water. |
| X | 6. Optimize the use of groundwater and aquifer storage. |
| | 7. Maximize conjunctive use opportunities including interagency conjunctive use. |
| | 8. Optimize and sustain the use of existing import surface water entitlements from the San Felipe Unit. |
| | 9. Maximize the beneficial use of existing local water supplies while protecting existing surface water rights. |

Water Quality

- | | |
|---|---|
| X | 1. Meet or exceed all applicable groundwater, surface water, wastewater, and recycled water quality regulatory standards. |
| 0 | 2. Identify and address the drinking water quality of disadvantaged communities in the Pajaro River Watershed. |
| 0 | 3. Protect groundwater resources from contamination including salts and nutrients. |

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

- | | |
|---|--|
| x | 4. Address impacts from surface water runoff through implementation of Best Management Practices or other surface water management strategies. |
| | 5. Meet or exceed delivered water quality targets established by recycled water users. |

Flood Protection

- | | |
|---|---|
| x | 1. Implement flood management strategies throughout the watershed that provide multiple benefits. |
| 0 | 2. Reach consensus on the Pajaro River Risk Reduction Project necessary to protect existing urban areas and infrastructure from flooding and erosion from the 100-year event and to maximize opportunities to protect agricultural land uses. |
| x | 3. Work with stakeholders to preserve existing flood attenuation by implementing land management and conservation strategies throughout the watershed. |
| x | 4. Develop approaches for adaptive management to minimize maintenance requirements and protect quality and availability of water while preserving ecologic and stream functions. |
| x | 5. Provide community benefits beyond flood protection such as public access, open space, recreation, agriculture preservation and economic development. |

Environmental Protection and Enhancement

- | | |
|---|--|
| x | 1. Address opportunities to enhance the local environment and protect and/or restore natural resources, in cooperation with landowners, when developing water management strategies. |
| x | 2. Improve biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species and archaeological/historic sites when implementing strategies and projects. |
| 0 | 3. Address opportunities to protect, enhance, or restore habitat to support Monterey Bay National Marine Sanctuary marine life in conjunction with water supply management strategies. |
| x | 4. Address opportunities for open spaces, trails, parks along creeks and other recreational projects in the watershed that can be incorporated with water management strategies, consistent with public use and property rights. |

Integration and Coordination

Put an X next to any Resource Management Strategies (RMS) that the proposed project will address.

Reduce Water Demand	Agricultural Water Use Efficiency	
	Urban Water Use Efficiency	
Improve Operational Efficiency	Conveyance - Delta	

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

and Transfers	Conveyance - Regional/local	
	System Reoperation	
	Water Transfers	
Increase Water Supply	Conjunctive Management & Groundwater Storage	X
	Desalination	
	Precipitation Enhancement	
	Recycled Municipal Water	
	Surface Storage - CALFED	
	Surface Storage - Regional/local	
Improve Water Quality	Drinking Water Treatment & Distribution	
	Groundwater Remediation /Aquifer Remediation	0
	Matching Quality to Use	
	Pollution Prevention	
	Salt & Salinity Management	X
	Urban Runoff Management	X
Improve Flood Management	Flood Risk Management	X
Practice Resources Stewardship	Agricultural Lands Stewardship	X
	Economic Incentives (Loans, Grants, & Water Pricing)	
	Ecosystem Restoration	X
	Forest Management	
	Recharge Area Protection	0
	Water-Dependent Recreation	
	Watershed Management	X
Other Strategies	Crop Idling for Water Transfers	
	Dewvaporation or Atmospheric Pressure Desalination	
	Fog Collection	
	Irrigated Land Retirement	
	Rainfed Agriculture	X
	Waterbag Transport/Storage Technology	

Please describe:

Restoration of conserved lands provides important co-benefits to flood management, resources stewardship, and other important strategies. Healthy, functioning riparian areas improve water quality by removing nutrients, improving dissolved oxygen, storing sediment and regulating temperatures in agricultural landscapes. Flood risks and water quality concerns are mitigated through establishment of vegetated corridors, which reduce and buffer impacts from human activities such as agriculture and paving. Vegetation and grading add to management and protection of recharge areas through water purification, filtering, and slower flows. Revegetation of degraded waterways can also increase infiltration through soil decompaction and increased water retention through root channel passages. Planting riparian areas can also enhance breeding and foraging habitats for resident and migrating birds, amphibians, reptiles and mammals. Restoration can also provide litter and shade to stream channels, improving in-stream conditions for fish and aquatic species. Stable, functioning wetland habitats improve flood protection by storing excess water and by reducing erosion from flood waters.

List the projects that were integrated to develop a single proposed project, if applicable.

The Soap Lake Floodplain Conservation Program, which was supported in the prior round of IRWM funding and continues to

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

provide support, funds acquisition of conservation and floodplain easements over the area that is now proposed for restoration. Therefore that project's benefits are integrated and leveraged by additional on-the-ground restoration of acquired parcels. The proposed work protects prior and ongoing IRWM investments in the Upper Pajaro floodplain and dovetails with conservation and biological goals identified in the prior funding cycle.

In addition, the agencies and organizations working to implement the proposed project are also engaged in other programs and activities whose targets are synergistic with the goals of the proposed project. These include RCD Rural Land Stewardship, Santa Clara County Open Space Authority Five-Year Plan, Bay Area Critical Linkages Project, Wild Farm Alliance Outreach and Education, and the Living Landscape Initiative Conservation Acquisition.

List the agencies and organization that are working together to implement the project.

The Nature Conservancy, Santa Cruz and San Benito Resource Conservation Districts, Santa Clara County Open Space Authority, Wild Farm Alliance.

Climate Change Mitigation and Adaptation

Put an X next to any climate change adaptation or mitigation strategy the proposed project will contribute to.

Adaption Strategies

<input type="checkbox"/>	Improve water supply reliability
<input type="checkbox"/>	Expand conjunctive use of multiple water supply sources
<input checked="" type="checkbox"/>	Increase water use and/or reuse efficiency
<input type="checkbox"/>	Provide additional water supply
<input checked="" type="checkbox"/>	Promote water quality protection
<input checked="" type="checkbox"/>	Reduce water demand
<input type="checkbox"/>	Advance / expand recycled water use
<input type="checkbox"/>	Promote urban runoff reuse
<input type="checkbox"/>	Address sea level rise
<input checked="" type="checkbox"/>	Address other anticipated climate change impacts
<input checked="" type="checkbox"/>	Improve flood control
<input checked="" type="checkbox"/>	Promote habitat protection
<input checked="" type="checkbox"/>	Establish migration corridors
<input checked="" type="checkbox"/>	Re-establish river-floodplain hydrologic continuity
<input checked="" type="checkbox"/>	Re-introduce anadromous fish populations to watershed
<input checked="" type="checkbox"/>	Enhance and protect watershed forest and meadow systems

Please describe: Restoration of riparian vegetation throughout the Upper Pajaro floodplain promotes climate change adaptation and mitigation by creating a landscape that is more friendly to wildlife (terrestrial, avian, and aquatic) requiring passage or different habitats due to the influences of climate change. It furthers the goals of habitat protection, establishment of migration corridors through planting of vegetation for cover and forage, shading of riparian areas during flow seasons, and general enhancement of seasonal meadow and slough systems that have been lost due to past agricultural practices.

Mitigation Strategies

<input type="checkbox"/>	Increase water use efficiency or promote energy-efficient water demand reduction
<input type="checkbox"/>	Improve water system energy efficiency
<input type="checkbox"/>	Advance / expand recycled water use

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

<input type="checkbox"/>	Promote urban runoff reuse
<input type="checkbox"/>	Promote use of renewable energy sources
<input checked="" type="checkbox"/>	Contribute to carbon sequestration

Please describe: Plants that are established and grow in the region due to revegetation efforts will contribute to carbon sequestration both by their own biological function and by improving soil stability. Revegetated areas will not be tilled for agricultural uses, further improving carbon sequestration in healthy soils.

Does the proposed project reduce regional greenhouse gas emissions and/or improve energy efficiency? If so, explain how.

Tree plantings will increase the potential for carbon dioxide sequestration in the area beyond what it is currently.

Social Benefits and Impacts

Does the project provide specific benefits to disadvantaged communities and/or Native American tribal communities? If so, explain.

The project will enhance floodplain capacity of the Soap Lake Floodplain. Preserving this floodplain in agricultural and natural uses will serve to reduce the intensity of flooding in downstream communities, including the disadvantaged downstream communities of Pajaro and Watsonville.

The Amah Mutsun Tribal Band is already very active in regional conservation and sacred site preservation, including hosting of seminars for protection and restoration of the Upper Pajaro Basin. The Pajaro floodplain forms a portion of the Amah Mutsun Tribal Band's historical territory, so restoration activities in the area will benefit the ecology and function of historical tribal lands.

Does the project address any known environmental justice issues?

Plans for restoration include working with local stakeholders to create manuals of best practices for riparian habitat conservation in English and Spanish that could be put in place by other landowners at a variety of scales to improve overall habitat conditions throughout the floodplain and create stewards for long-term health of the floodplain within historically overlooked communities. Other implementation plans include restoration planting accomplished by groups from local schools to educate children about the importance of riparian and wildlife habitat. As a result, some communities not usually included in the conservation conversation will be brought into the landscape and invited to become stakeholders in the overall health of the region.

Project Cost

Total Estimated Capital Cost
Annual Operation & Maintenance (O&M) Cost
Cost Basis (Year)
Source(s) of Funding for Capital

\$10,500,000	
	Would depend on total acreage restored; intent would be for restored areas to be self-sustaining after initial establishment and monitoring period
Proposed sources for matching funds include local entities (Santa Clara County Parks, Santa Clara County Open Space Authority, private donors and foundations), State agencies (Wildlife Conservation Board, Dept. of Transportation, Department of Conservation, Coastal Conservancy), Federal sources (Section 6 Endangered Species Act), and local land trusts and non-profits.	

**Pajaro River Watershed Integrated Regional Water Management Plan Update
Project Solicitation Form**

Source(s) of Funding for O&M Cost

Potential sources include local land management agencies, national and local land trusts, and regional integrated management programs.

Project Life (years)

10

Provide link to project cost estimate, if available

Capital cost estimate includes project design, permitting, implementation, administration, monitoring, education and outreach. Please note that the proposed project involves extensive earth moving to enhance plantings and floodplain capacity, which accounts for a significant share of the cost estimates.

Economic Feasibility

Has a benefit:cost or cost effectiveness analysis been completed for your project? If so, please cite reference and briefly summarize. If no economic analysis has been completed for the project, the project may receive zero points out of a possible 100 points for the financial considerations criteria unless the project is a DAC project. If the project is not a DAC project but the B:C ratio is expected to be greater than 1, please provide a justification. The lack of an economic analysis may also affect the project's readiness score.

If known, please provide the Benefit:Cost Ratio.

Provide a detailed discussion of the benefits the project will provide. To the extent possible, quantify changes and benefits (e.g. water quality and water supply benefits) that will result from project implementation; otherwise, describe benefits qualitatively.

Project Readiness

Proposed Project Start Date:	2015
Anticipated Project Completion Date:	2025

Please Indicate the status (pending, in process, complete) of the following.

Project Element	Status	% Complete	Estimated Completion Date
Feasibility Study	Complete	100	-
Preliminary design	Complete	100	-
CEQA/NEPA	Pending		
Permit Acquisition	Pending		
Construction Docs	Partial	50	

Depends on scale of restoration project; re-vegetation is exempt from CEQA under [guidelines section]
Similarly, need for permits depends on scale and design specifics
Design documentation already done at conceptual stage for each proposed restoration project