

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

PROJECT OVERVIEW

General Project Information

Project Title:	Pajaro River Watershed Studies
Project Location:	Pajaro River Watershed
Estimated Cost:	\$285,000

Brief Project Description (1 to 2 sentences):

The FPA has completed several flood and sediment studies that provided insights into how sediment is eroded, transported and deposited in the Pajaro River watershed; however, these studies highlighted data gaps that are the subject of this project. The additional studies will focus on developing a better understanding of sediment issues and the cost and benefits of flood solutions in the watershed. The additional studies and projects involve calculating and managing sediment load and peak flows from the upper watershed into the lower Pajaro River.

Project Proponent Information

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Other participating agencies/organizations (if applicable):

San Benito County Water District, San Benito County, Santa Clara Valley Water District, Santa Clara County, Santa Cruz Zone 7 Flood District, Santa Cruz County, Monterey County Water Resources Agency, Monterey County

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.

There were five studies that were identified as necessary to better understand the Pajaro River flow and sediment regime. Two of the studies were funded through a Prop 84 IRWM Planning Grant. The remaining three studies include: (1) Performing an opportunities and constraints assessment for erosion reduction on the lower San Benito River (between Hollister and the confluence with the Pajaro River). The assessment will focus on arresting potential knickpoints that may migrate upstream, and on stabilizing the banks and bed of the San Benito River. (2) Development of a two-dimensional sediment transport model for the entire Lower Pajaro River Levee Reconstruction Project reach (from the Chittenden gage to the Pacific Ocean). (3) Performing an opportunities and constraints assessment for peak flow reduction on the San Benito River. The assessment will focus on identifying opportunities to detain water before it reaches the Pajaro River, reducing the flood peak for the downstream Lower Pajaro River Levee Reconstruction Project.

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Completing these studies will support the development of long term maintenance plans for the Levee Project and will help gain consensus on the overall flood protection strategy for the watershed. Completion of these studies provides benefits throughout the watershed.

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.

These studies are necessary to address data gaps that were identified through sediment, hydrologic and hydraulic modeling activities as document in the following FPA studies: (1) Phase 1 Hydrologic and Sediment Modeling (July 2002) (2) Phase 2 Flood Protection Alternatives Study (April 2003) (3) Phase 3 Selection of Projects and CEQA Analysis (March 2005)

Pajaro River Watershed IRWM Regional Goals & Objectives

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

Water Supply

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

Water Quality

- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | 1. Meet or exceed all applicable groundwater, surface water, wastewater, and recycled water quality regulatory standards. |
| <input type="checkbox"/> | 2. Identify and address the drinking water quality of disadvantaged communities in the Pajaro River Watershed. |

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- | | |
|---|--|
| | 3. Protect groundwater resources from contamination including salts and nutrients. |
| 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. |

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Flood Protection

x	1. Implement flood management strategies throughout the watershed that provide multiple benefits.
x	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-
0	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
0	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
x	2. Improve biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species and archaeological/historic sites when
	3. Address opportunities to protect, enhance, or restore habitat to support Monterey Bay National Marine Sanctuary marine life in conjunction with water supply
0	4. Address opportunities for open spaces, trails, parks along creeks and other recreational projects in the watershed that can be incorporated with water

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 and Transfers	Conveyance - Delta	
	Conveyance - Regional/local	
	System Reoperation	
	Water Transfers	
Increase Water Supply	Conjunctive Management & Groundwater Storage	
	Desalination	
	Precipitation Enhancement	
	Recycled Municipal Water	
	Surface Storage - CALFED	
	Surface Storage - Regional/local	
Improve Water Quality	Drinking Water Treatment & Distribution	
	Groundwater Remediation /Aquifer Remediation	
	Matching Quality to Use	

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	Pollution Prevention	
	Salt & Salinity Management	
	Urban Runoff Management	0
Improve Flood Management	Flood Risk Management	x
Practice Resources Stewardship	Agricultural Lands Stewardship	
	Economic Incentives (Loans, Grants, & Water Pricing)	
	Ecosystem Restoration	x
	Forest Management	
	Recharge Area Protection	
	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	
	Waterbag Transport/Storage Technology	
Please describe:		

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

The scope of the studies were developed based on an integration of the data gaps identified through the FPA Watershed Studies, the Army Corps proposed watershed studies, and the maintenance planning needs for the Pajaro River Levee Project.

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

San Benito County Water District, San Benito County, Santa Clara Valley Water District, Santa Clara County, Santa Cruz Zone 7 Flood District, Santa Cruz County, Monterey County Water Resources Agency, Monterey County

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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 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 type="checkbox"/>	Reduce water demand
<input type="checkbox"/>	Advance / expand recycled water use
<input type="checkbox"/>	Promote urban runoff reuse
<input checked="" type="checkbox"/>	Address sea level rise
<input 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 type="checkbox"/>	Re-introduce anadromous fish populations to watershed
<input type="checkbox"/>	Enhance and protect watershed forest and meadow systems

Please describe:

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

Please describe:

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

Social Benefits and Impacts

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

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disadvantaged communities of Watsonville and Pajaro.

Does the project address any known environmental justice issues?

No.

Project Cost

Total Estimated Capital Cost	\$285,000
Annual Operation & Maintenance (O&M) Cost	\$0
Cost Basis (Year)	2009
Source(s) of Funding for Capital	FPA Member Agency annual contributions
Source(s) of Funding for O&M Cost	N/A
Project Life (years)	N/A
Provide link to project cost estimate, if available	ESA/PWA Scope of Work 12/28/09

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.

No but the project benefits a DAC.

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.

The San Benito River is believed to be the main source of sediment that is restricting flood conveyance in lower Pajaro River, and thus sediment reduction in the San Benito River watershed has the potential to reduce flood damages downstream. Study 1, the opportunities and constraints study, will identify the main sediment sources within the watershed downstream of Hollister and identify conceptual alternatives and conceptual level cost estimates to treat and reduce sediment. This will allow cost-benefit comparisons to be made between treating sediment at source and removing sediment from the lower Pajaro River. Study 2, the two-dimensional sediment transport model, will allow the FPA to

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evaluate the proposed project alternatives for erosion and deposition characteristics, including assessment of meander bends, setbacks, floodplain benches, and the effects of vegetation management. It will also allow assessment of long term issues such as the effects of sea level rise on the Lower Pajaro River Levee Reconstruction project's performance. The San Benito River represents more than half the watershed area of the Pajaro River at their confluence, and is a major source of peak flows in the lower Pajaro River floodplain. Study 3 will help find opportunities to detain water in the upper watershed to reduce the frequency and depth of inundation downstream.

Project Readiness

Proposed Project Start Date:	Immediately
Anticipated Project Completion Date:	10 months from NTP

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

Project Element	Status	% Complete	Estimated Completion Date
<i>Feasibility Study</i>	Complete	100	
<i>Preliminary design</i>	N/A		
<i>CEQA/NEPA</i>	N/A		
<i>Permit Acquisition</i>	N/A		
<i>Construction Docs</i>	N/A		