

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

PROJECT OVERVIEW

General Project Information

Project Title:	Murphy Crossing with Recharge Basins
Project Location:	Watsonville, CA
Estimated Cost:	\$8,200,000

Brief Project Description (1 to 2 sentences):

The Murphy Crossing project would divert water from the Pajaro River between December and May, when the Pajaro River water quality is within an acceptable range and streamflows are above the required minimum necessary to maintain steelhead habitat. The project includes the construction of an infiltration gallery, pump station, monitoring wells, recharge

Project Proponent Information

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Other participating agencies/organizations (if applicable):

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 Murphy Crossing with Recharge Basins project would divert water from the Pajaro River between December and May, when the Pajaro River water quality is within an acceptable range and streamflows are above the required minimum necessary to maintain steelhead habitat. The project includes the construction of an infiltration gallery or screened bank intake, pump station, monitoring wells, recharge basins, and a connector pipeline from pump station to recharge basins. An infiltration gallery located upstream of the Murphy Crossing bridge or a bank intake located further upstream in bedrock would capture water and transport it to four recharge basins. The recharge basins would be located just north of the intersection of Highway 129 and Murphy Road. The site covers approximately 20 acres. The current version of the Murphy Crossing Project is for recharge only. Accounting for years of low precipitation volumes and consequently lower flows in the Pajaro River, a conservative yield of 500 afy is estimated assuming 54 diversion days at approximately 5 cfs. The key water quality parameter of concern is TDS. TDS concentrations of water in the Pajaro River are below 800 mg/l at flows between 45 cfs and 90 cfs, with TDS concentrations decreasing with increasing flows. The proposed project could possibly help decrease current groundwater TDS levels, thus improving current irrigation water quality from local

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wells. The project is part of the PVWMA Basin Management Program designed to balance the basin overdraft and stop seawater intrusion. The project benefits all water users in the PVWMA service area including the disadvantaged communities of Watsonville and Pajaro.

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.

The main challenges for implementation of the Murphy Crossing project concern fisheries and water rights. The Murphy Crossing Project was evaluated as a part of the Pajaro Valley Water Management Agency Local Water Supply and Distribution Projects Environmental Impact Report (ESA, 2002) and the Updated BMP EIR currently being prepared. An application for a water right was submitted to the SWRCB in 1995. The National Marine Fisheries Service (NMFS) and DFG requested that additional investigations be undertaken to evaluate the sediment disruption characteristics of the proposed infiltration gallery. The reduced diversions associated with the updated BMP version of the project may help alleviate the concerns of the NMFS and DFG.

Pajaro River Watershed IRWM Regional Goals & Objectives

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

Water Supply	
x	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.
x	2. Meet 85% M&I and 75% agriculture demands (both current and future conditions) in second and subsequent years of a drought.
x	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.
x	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.
x	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.

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	2. Identify and address the drinking water quality of disadvantaged communities in the Pajaro River Watershed.
	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

- | | |
|--|--|
| | 1. Implement flood management strategies throughout the watershed that provide multiple benefits. |
| | 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- |
| | 3. Work with stakeholders to preserve existing flood attenuation by implementing land management and conservation strategies throughout the watershed. |
| | 4. Develop approaches for adaptive management to minimize maintenance requirements and protect quality and availability of water while preserving ecologic |
| | 5. Provide community benefits beyond flood protection such as public access, open space, recreation, agriculture preservation and economic development. |

Environmental Protection and Enhancement

- | | |
|---|---|
| 0 | 1. Address opportunities to enhance the local environment and protect and/or restore natural resources, in cooperation with landowners, when developing water |
| 0 | 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 |
| | 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	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	
	Matching Quality to Use	x

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	Pollution Prevention	
	Salt & Salinity Management	X
	Urban Runoff Management	
Improve Flood Management	Flood Risk Management	
Practice Resources Stewardship	Agricultural Lands Stewardship	
	Economic Incentives (Loans, Grants, & Water Pricing)	
	Ecosystem Restoration	
	Forest Management	
	Recharge Area Protection	
	Water-Dependent Recreation	
	Watershed Management	
	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.

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

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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 checked="" type="checkbox"/>	Improve water supply reliability
<input checked="" type="checkbox"/>	Expand conjunctive use of multiple water supply sources
<input type="checkbox"/>	Increase water use and/or reuse efficiency
<input checked="" 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 type="checkbox"/>	Address sea level rise
<input checked="" type="checkbox"/>	Address other anticipated climate change impacts
<input type="checkbox"/>	Improve flood control
<input checked="" type="checkbox"/>	Promote habitat protection
<input type="checkbox"/>	Establish migration corridors
<input 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.

No.

Social Benefits and Impacts

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

Yes, the project is part of the overall BMP to provide a reliable water supply benefitting the disadvantaged communities of Watsonville and Pajaro.

Does the project address any known environmental justice issues?

No.

Project Cost

Total Estimated Capital Cost	\$8,200,000
Annual Operation & Maintenance (O&M) Cost	\$56,000
Cost Basis (Year)	2012
Source(s) of Funding for Capital	To be determined, however, likely to sell bonds with augmentation charges and water sales to pay debt
Source(s) of Funding for O&M Cost	Augmentation charges and water sales.
Project Life (years)	30 years
Provide link to project cost estimate, if available	Draft Updated BMP

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, however the project provides DAC benefits and is expected to have a B:C ration greater than 1.

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 project will yield approximately 500 afy for groundwater recharges. Additionally, the proposed project could possibly help decrease current groundwater TDS levels, thus improving current irrigation water quality from local wells. The project is part of the PVWMA Basin Management Program designed to balance the basin overdraft and stop seawater intrusion. The project benefits all water users in the PVWMA service area including the disadvantaged communities of Watsonville and Pajaro.

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Project Readiness

Proposed Project Start Date:	2025
Anticipated Project Completion Date:	2026

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>		0	
<i>CEQA/NEPA</i>	Ongoing	10	Dec-13
<i>Permit Acquisition</i>		0	
<i>Construction Docs</i>		0	