

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

**PROJECT OVERVIEW**

**General Project Information**

<b>Project Title:</b>	Watsonville Slough and North Dunes Recharge Basin Project
<b>Project Location:</b>	Watsonville, CA
<b>Estimated Cost:</b>	\$11,200,000

**Brief Project Description (1 to 2 sentences):**

The Watsonville Slough and North Dunes Recharge Basin project would divert Watsonville Slough water during wintertime high flows from December to May for storage in the surficial groundwater aquifer at the proposed North Dunes Recharge Basin or an alternative location near the existing Harkins Slough Recharge Basin (the Southeast Recharge Basin).

**Project Proponent Information**

<b>Contact Name:</b>	Mary Bannister, General Manager
<b>Affiliation:</b>	Pajaro Valley Water Management Agency
<b>Address:</b>	36 Brennan Street, Watsonville, CA 95076
<b>Phone Number:</b>	(831) 722-9292
<b>Email:</b>	<a href="mailto:bannister@pvwma.dst.ca.us">bannister@pvwma.dst.ca.us</a>

**Other participating agencies/organizations (if applicable):**

Resource Conservation District of Santa Cruz 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.**

The Watsonville Slough system is a network of approximately 800 acres of coastal salt marsh, seasonal wetlands, brackish and freshwater emergent marsh and riparian communities and receives runoff from a 13,000-acre watershed area. The Resource Conservation District of Santa Cruz County is currently (October 2011-September 2013) conducting a hydrologic study of Watsonville Slough which should increase the understanding of the Watsonville Slough system. This project is designed to utilize the available freshwater surface supply. The project would divert Watsonville Slough water during wintertime high flows from December to May for storage in the surficial groundwater aquifer at the proposed North Dunes Recharge Basin or an alternative location near the existing Harkins Slough Recharge Basin (the Southeast Recharge Basin). Water would be diverted from Watsonville Slough just south of the Harkins Slough diversion or through the proposed constructed wetlands on an adjacent property and would be filtered, pumped to the recharge site through the Harkins Slough Recharge Facilities pipeline and through a new connecting pipeline, and then stored in the aquifer. The proposed North Dunes Recharge Basin would require a 25 acre percolation area assuming a percolation rate of 0.3 ft/day based on a maximum diversion rate of 2,000 afy from Watsonville Slough between December and May. The Southeast

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Recharge Basin would require a smaller percolation area of 14 acres due to a faster infiltration rate of 0.6 ft/day, but would require further evaluation to determine storage and recovery characteristics. Recovery wells constructed around the recharge basin would extract water during the irrigation season. As currently planned, this project would require construction of a diversion structure, inlet pump station, filtration facility, booster pump station, recharge basin, recovery wells, and approximately 6,000 feet of connecting pipelines. The pipeline routing could be modified if the CDS Expansion Project were built, allowing for a shared pipeline leading to the Harkins Slough Recharge Basin and additional piping leading to the North Dunes Recharge Basin.

**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 project feasibility was established in the 2002 BMP, the 2012 BMP Update, and is currently being further studied by the RCD and under consideration in the BMP Update EIR.

**Pajaro River Watershed IRWM Regional Goals & Objectives**

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

<b>Water Supply</b>	
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.
0	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.
<b>Water Quality</b>	
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.
X	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.
X	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.
	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.
x	4. Develop approaches for adaptive management to minimize maintenance requirements and protect quality and availability of water while preserving ecologic and
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
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
	4. Address opportunities for open spaces, trails, parks along creeks and other recreational projects in the watershed that can be incorporated with water management

**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	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	
<b>Please describe:</b>		

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

RCD created wetlands project and the Watsonville Slough water supply project

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

PVWMA and RCD of Santa Cruz 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 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 checked="" 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.**

**Social Benefits and Impacts**

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

Yes, the project helps balance the basin and stop seawater intrusion, directly benefiting the disadvantaged communities of

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Watsonville and Pajaro.

**Does the project address any known environmental justice issues?**

No.

**Project Cost**

<b>Total Estimated Capital Cost</b>	\$11,200,000
<b>Annual Operation &amp; Maintenance (O&amp;M) Cost</b>	\$130,000
<b>Cost Basis (Year)</b>	2012
<b>Source(s) of Funding for Capital</b>	To be determined, however, likely to sell bonds with augmentation charges and water sales to pay debt
<b>Source(s) of Funding for O&amp;M Cost</b>	Augmentation charges and water sales.
<b>Project Life (years)</b>	30
<b>Provide link to project cost estimate, if available</b>	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 would yield approximately 1,200 afy. Additionally, the project would beneficially use floodwaters that are currently lost to the bay.

**Project Readiness**

<b>Proposed Project Start Date:</b>	2020
<b>Anticipated Project Completion Date:</b>	2022

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

<b>Project Element</b>	<b>Status</b>	<b>% Complete</b>	<b>Estimated Completion Date</b>
<i>Feasibility Study</i>	ongoing	90	Jul-13
<i>Preliminary design</i>			
<i>CEQA/NEPA</i>	ongoing	10	Jul-13
<i>Permit Acquisition</i>			
<i>Construction Docs</i>			