PROJECT OVERVIEW

General Project Information

Project Title:	Agricultural Water Quality Program (AWQP)
Project Location:	Pajaro Watershed (San Benito, Santa Clara, Santa Cruz and Monterey)
Estimated Cost:	$1,500,000

Brief Project Description (1 to 2 sentences):

The RCDSCC AWQP consists of providing on-farm technical assistance and education to increase awareness of water quality concerns in the farming community and to implement practices that mitigate concerns. The intent of AWQP is to build on existing efforts to provide the agricultural community with tools and resources necessary to improve and implement best management practices that directly impact water quality.

Project Proponent Information

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Other participating agencies/organizations (if applicable):

Central Coast Agricultural Water Quality Coalition (Coalition), the USDA NRCS, RCDs of San Benito/Monterey/Loma Prieta, County of Santa Cruz, PVWMA, UCCE, CSUMB and Water Districts in San Benito/Monterey/Loma Prieta.

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.

AWQP is focused on providing technical assistance to growers in the Pajaro Watershed to address rising concerns of declining water quality in the region. The goals of AWQP are to 1) increase environmental awareness within the agricultural community through outreach and education 2) improve irrigation efficiency to reduce runoff from agricultural land 3) reduce nutrient loading in surface runoff from irrigation by improving management techniques and 4) implement practices that reduce production impacts on water quality (vegetative treatments, furrow alignment, erosion control, sediment basin etc.). RCDSCC staff, the Natural Resource Conservation Service (NRCS), regional agronomists and technical experts will work cooperatively with growers in the region to achieve these goals. Based on grower input, there is an interest from the community to receive non-regulatory assistance to increase their understanding of water quality and the resources available to support environmental stewardship tailored to their specific resources and management setting

, meet regulatory requirements and to implement practices and improve management techniques that benefit both the grower and the environment. AWQP takes an adaptive management approach to provide resources and support that allow growers to make informed decisions about their 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.

The RCDSCC has extensive experience in managing and implementing agricultural water quality projects in the Pajaro Watershed. The RCDs have a long list of working partnerships already developed pertinent to the project. The Pajaro Watershed Agricultural Water Quality Program has a high track record of working with NRCS, regional agronomists and technical consultants to identify, develop and implement high priority agricultural water quality projects in the region. The RCDSCC has been successful in implementing the following projects over the last five years 1) restoring wetland habitats and natural functions in Watsonville Slough by improving existing systems of agricultural drainage 2) implementing a countywide watershed restoration program that includes sediment control projects, habitat restoration projects, watershed education, and permit coordination to promote watershed restoration 3) creating a Performance-Based Conservation Incentives Project to improve conservation outcomes for water quality and quantity in the Pajaro Valley 4) providing growers in the Pajaro Watershed with technical, permitting, and cost-share assistance to implement irrigation and nutrient management practices and 5) providing outreach and assistance to socially disadvantaged farmers in the region. Building on a long history of providing technical assistance to growers in the Pajaro Watershed, the RCDSCC is uniquely equipped to identify, develop and implement agricultural water quality projects.

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.
x	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.
	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.
x	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.
	5. Meet or exceed delivered water quality targets established by recycled water users.

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-
x	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 and
	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
	2. Improve biological and cultural resources, including riparian habitats, habitats supporting sensitive plant or animal species and archaeological/historic sites when
x	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	x
	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	0
	Matching Quality to Use	0

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

This project supports other efforts by the Agricultural Water Quality Coalition such as the Irrigation Efficiency Program and the Meter Program with PVWMA, but covers the entire Pajaro Watershed. In addition, this project is supported by the SCFB mobile-lab project, which is one tool that would work in collaboration with many of the components of this project proposal.

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

RCDs of Santa Cruz, Monterey, San Benito and Loma Prieta, NRCS,

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

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

Please describe:

Mitigation Strategies

x	Increase water use efficiency or promote energy-efficient water demand reduction
0	Improve water system energy efficiency
	Advance / expand recycled water use
	Promote urban runoff reuse
	Promote use of renewable energy sources
	Contribute to carbon sequestration

Please describe:

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

The collection and distribution of irrigation water uses significant amounts of energy. The water sector in California is the largest energy user in the state (NRDC). Agricultural production consumes large amounts of energy, through the use of energy intensive inputs. Improved management practices that result in greater irrigation and nutrient management efficiency reduce water use and the use of energy intensive inputs, thus improving energy efficiency.

Social Benefits and Impacts

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

AWQP aims to provide assistance to small-scale growers in the region that without technical assistance could not afford to implement conservation initiatives. The RCDSCC received funding from the Socially Disadvantaged Farmers and Ranchers USDA Program in 2010 to start the Manejo Agrícola con Nuevos Amigos (Agricultural Management with New Friends) (MANA) Program. The MANA program focuses on the technical assistance and production needs of the socially disadvantaged Spanish speaking farming community in the Pajaro River Watershed. AWQP directly supports these efforts by providing cost-share assistance for Spanish speaking farmers to work with RCDSCC staff and a regional agronomist to improve their irrigation and nutrient management practices. The US Census Bureau reports that the Hispanic community accounts for 30 percent of Santa Cruz County's population and out of the 1268 agricultural operators in Santa Cruz County, 189 or 15 % are Hispanic. Similarly in Monterey and Santa Barbara Counties, Hispanic growers account for 15-16% of all growers. To enhance water quality benefits in the Spanish speaking farming community of the Pajaro Watershed, cost-share assistance to implement best management practices is desperately needed to support the outreach capabilities of the MANA program. The AWQP will achieve this.

Does the project address any known environmental justice issues?

In partnership with the RCDSCC MANA Program, AWQP addresses environmental justice issues by providing technical assistance to Spanish-speaking growers in the Pajaro Watershed to provide them with resources that support them to be responsible environmental stewards of their land.

Project Cost

Total Estimated Capital Cost	$1,500,000
Annual Operation & Maintenance (O&M) Cost	$0
Cost Basis (Year)	
Source(s) of Funding for Capital	Funding for this project could come from multiple sources, potentially including Prop 84 funds, C13 grants, local grant sources, and other state grant sources.
Source(s) of Funding for O&M Cost	
Project Life (years)	2
Provide link to project cost estimate, if available	

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.

Over the past 6 years working with growers on water quality projects has shown I high return on investment. Although it is difficult to quantify the economic benefit for improved water quality, a number of studies regarding ecosystem services are currently underway. In addition, smaller interventions with private landowners limit the need for larger capital projects to address water quality.

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.

AWQP will provide benefits to both the farmers of the agricultural community and the environment. While the proposed project does not directly measure organic matter, soil erosion, water quality or water quantity it will have environmental benefits for each resource concern. Addition of organic soil amendments will likely be a recommendation to help farmers achieve targets for reduced water use and nutrient leaching. Therefore it is anticipated that the project will result in improved soil quality on participating acreage. Participating farmers may adopt grass filter strips, cover crops, or change row arrangement to reduce slope resulting in a reduction in erosion within the field. Significant improvements in water use efficiency is anticipated as a result of the installation of flow meters and soil moisture monitoring equipment. Actions taken by individual farmers to reduce fertilizer use will not be detectable for decades to come but the projects modeling and tracking services will provide immediate feedback to farmers about the amounts of nutrients leaching below the root zone. We anticipate that there will be detectable reductions in nitrates leaving the farm in surface runoff as a result of adoption of conservation practices provided by AWQP. To the extent possible the RCDSCC will quantify these benefits with available models such as the EPA Region 5 Model and/or the Water Quality Index (WQI). In addition to environmental benefits this project will also directly benefit the farmers who implement these conservation practices. Many of the requirements of the new agricultural order represent a financial burden to the Ag community, by raising costs of management through unverified water quality practice improvements. AWQP will assist farmers in documenting water quality improvements and provide technical and financial assistance to farmers as an incentive to meet regulatory pressures and minimize their impacts on water quality.

Project Readiness

Proposed Project Start Date:	current
Anticipated Project Completion Date:	ongoing

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

Project Element	Status	% Complete	Estimated Completion Date
Feasibility Study	n/a		
Preliminary design	n/a		
CEQA/NEPA	n/a		
Permit Acquisition	n/a		
Construction Docs	n/a		