

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

**PROJECT OVERVIEW**

**General Project Information**

<b>Project Title:</b>	Upper Llagas Creek Flood Protection Project
<b>Project Location:</b>	City of Morgan Hill, Unincorporated San Martin, City of Gilroy, County of Santa Clara
<b>Estimated Cost:</b>	\$137,000,000 (2012 estimate)

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

The Upper Llagas Creek Flood Protection Project (Project) includes 12.5 miles of channel extending from Buena Vista Avenue (Gilroy) to Wright Avenue (Morgan Hill). Project will provide 100-year flood protection along 3.7 miles of channel, protection 946 acres of urban area of Morgan Hill. An additional 8.8 miles of channel modifications will provide 5- and 10-year protection for 1,280 acres of agricultural land.

**Project Proponent Information**

<b>Contact Name:</b>	Liang Lee
<b>Affiliation:</b>	Santa Clara Valley Water District
<b>Address:</b>	5750 Almaden Expressway, San Jose, CA 95118
<b>Phone Number:</b>	408-630-2927
<b>Email:</b>	<a href="mailto:llee@valleywater.org">llee@valleywater.org</a>

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

U.S. Army Corps of Engineers, City of Morgan Hill, County of Santa Clara

**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 Llagas Creek Watershed Project was authorized by Congress in 1969 under Public Law 83-566 (PL-566). The Natural Resources Conservation Service (NRCS) constructed the lower reaches of the Project. However, due to the steady decrease in NRCS's annual appropriations, the Project did not receive adequate Federal funding to complete the upper reaches of the Project. In 1999, Congressional authorization inducted the U.S. Army Corps of Engineers (Corps) to assume construction responsibility of the Project under the Water Resources Development Act (WRDA 1999). The Corps is responsible for the planning, design, and construction of the remaining 12.5 miles of channel improvements for the Project. Federal funding has been limited since 2000. Therefore, the Santa Clara Valley Water District (SCVWD) Board of Directors in 2009 decided to fund the remaining planning efforts, design, and preparation of the environmental EIS/EIR for the Project. The City of Morgan Hill agreed to fund up to \$3,000,000 for these efforts. Lack of Federal funding remains the obstacle for implementation. The Upper Llagas Creek Flood Protection Project (Project) includes 12.5 miles of channel extending from Buena Vista Avenue (Gilroy) to

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Wright Avenue (Morgan Hill). Project will provide 100-year flood protection along 3.7 miles of channel, protection 946 acres of urban area of Morgan Hill. An additional 8.8 miles of channle modifications will provide 5- and 10-year protection for 1,280 acres of agricultural land. The SCVWD anticipates completion of the design (65% by 3/2013) and EIS/EIR by the Summer of 2014 when, if funding is available, construction can begin.

**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.**

In 2010, SCVWD hired the Design Consultant, RMC Water and Environment, to complete remaining Project planning and design efforts. In 2011, SCVWD assumed responsibilities for the Corps Environmental Consultant, Cordno Entrix, due to lack of Federal funding. SCVWD anticipates completion of the design (65% by March 2013) and the EIS/EIR by summer of 2014. If funding is available, construction can begin in 2014. The Project is technically feasible and is progressing as scheduled in Design. For additional Project information, please see <http://www.valleywater.org/Services/UvasLlagasUpperLlagasCreek.aspx>

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

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

**Water Supply**

- |          |   |
|----------|---|
| <b>X</b> | 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.   |
| <b>X</b> | 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**

- |          |   |
|----------|---|
| <b>X</b> | 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.
	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.
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.
	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 and Transfers	Conveyance - Delta	
	Conveyance - Regional/local	
	System Reoperation	

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	Water Transfers	
Increase Water Supply	Conjunctive Management & Groundwater Storage	<b>X</b>
	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	
	Pollution Prevention	
	Salt & Salinity Management	
	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	x
	Water-Dependent Recreation	<b>X</b>
	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:** The Upper Llagas Creek Project has taken a comprehensive approach to provide flood protection, minimize impacts to the existing riparian habitat with widening contained to one bank where possible, maximize native replanting opportunities along the creek, and establish an 8-acre wetlands (Lake Silveira) and urban park development within a 50-acre site within the Project limits.

**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.**  
Santa Clara Valley Water District, U.S. Army Corps of Engineers, City of Morgan Hill, County of Santa Clara

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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 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 checked="" type="checkbox"/>	Re-introduce anadromous fish populations to watershed
<input type="checkbox"/>	Enhance and protect watershed forest and meadow systems

**Please describe:** This Project will provide flood protection, improve water quality, and provide on-site mitigation, and off-site mitigation with the creation of the Lake Silveira wetlands (habitat protection).

**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 checked="" 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**

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

There are 11 DAC blocks, with a total population of about 14,000, in the Llagas Subbasin. This Project will provide flood protection, improve water quality, and provide on-site mitigation, and off-site mitigation with the creation of a wetland and Lake Silveira urban park.

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

**Project Cost**

Total Estimated Capital Cost	\$137,000,000
Annual Operation & Maintenance (O&M) Cost	\$500,000
Cost Basis (Year)	2012
Source(s) of Funding for Capital	\$17M-Clean Safe Creek bond measure, \$30M-State Subventions Reimbursement, \$5M-Stream Stewardship, \$3M-City of Morgan Hill, \$39M pending Measure B approval (11/2012)
Source(s) of Funding for O&M Cost	SCVWD stream stewardship funding
Project Life (years)	100 50 years
Provide link to project cost estimate, if available	<a href="http://www.valleywater.org/Services/UvasLlagasUpperLlagasCreek.aspx">http://www.valleywater.org/Services/UvasLlagasUpperLlagasCreek.aspx</a>

**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.**

The U.S. Army Corps of Engineers completed a benefit: cost (BC) analysis for the Project in May 2005. The Corps determined the portion of the Project providing 100-year protection had a BC=to 0.32. SCVWD will add Corps 2005 BC analysis to Project link at <http://www.valleywater.org/Services/UvasLlagasUpperLlagasCreek.aspx>. In August 2011, the USACE headquarters issued an Implementation Guidance (IG) for the Project. The IG required the preparation of a Limited Reevaluation Report (LRR) and Design Documentation Report (DDR). The LRR is to be prepared to determine the benefits-to-cost ratio and hence the level of federal participation. The DDR is a required USACE implementation document. Due to the lack of Federal funding, SCVWD is currently funding the Corps to complete these Documents. SCVWD believes BC ratio is greater than the 2005 Corps analysis, because the Corps did not include Environmental benefits, potential of restoration of the Creek corridor, social and recreation benefits to the community.

**If known, please provide the Benefit:Cost Ratio.**

0.32 (2005)

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**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 incorporate design elements to enhance the fish habitat, natural creation of pools and riffles to improve water quality, integrated approach to bank stabilization, and the addition of native vegetation. The Project will remove invasive/nonnative species while minimizing the removal of remnant Sycamores which will greatly improve the riparian canopy. The Project will provide opportunities for wetland creation, riparian and stream re-construction by mitigating Project impacts. The Project will provide for the protection and habitat for a range of listed species, including steelhead. Project will be designed with the principles of geomorphology to allow for effective transport of sediment. Social benefits include maintenance roads along either side of the creek that will be used as trails (potentially up to 20 miles) for the enjoyment of the public. The creation of a trails system at Lake Silveira to connect City of Morgan Hill and the County of Santa Clara trails master plan will be a benefit of the Project.

**Project Readiness**

<b>Proposed Project Start Date:</b>	Summer 2014 (Construction Start)
<b>Anticipated Project Completion Date:</b>	December 2017 (Pending Federal Funding/Grants/Bond Measure)

**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>	Complete	100%	-
<i>Preliminary design</i>	Complete	100%	July 2012
<i>CEQA/NEPA</i>	In Progress	25%	January 2014
<i>Permit Acquisition</i>	In Progress	10%	July 2014
<i>Construction Docs</i>	In Progress	45%	July 2014