City of Ventura
Convert Your Turf

Convert Your Turf
Regional Project Proposal

Santa Clara River Watershed Committee

April 17, 2015

* Incentivizes outdoor water-savings via the removal of high-water use landscapes with more “water-wise” landscapes
* Can provide immediate water savings and drought relief
* Multiple environmental benefits: Stormwater pollution prevention, reduced runoff, green waste reduction, increased habitat
* For every $400 invested, utility saves an estimated 1 acre-foot of water
* “Shovel-ready” - No CEQA – no complex studies
* Cities can augment existing programs (i.e. BeWaterWise)

Program Costs & Benefits

* $2 million proposal (grant amount)
  * Plus $500k (25% match)
  * Includes 3rd party admin costs
  * Does not include certain costs (i.e. grant application cost of 1-3%)
  * Ventura's portion: seeking $1 million of the grant
* City of Ventura will be lead agency
* Other agencies/cities can participate
  * Fillmore, Santa Paula, Casitas, Oxnard
* Estimated 1,000 residential homes and up to 120 AF of water savings per year for every $1 million in grant funds

Program Details

Approval Process

- *Water Survey
- *Application
- *Post-inspection
- *Reimbursement

Program Details

50% match up to $300 for:

<u>Irrigation Efficiencies</u>

- ***High efficiency/precision nozzles**
- ***Smart Controllers**
- ***Pressure regulating devices**
- ***Spray to drip conversion**

Program Details

$2 per square foot capped at $800 or $1,600 based on lot size for:

<u>Landscape Measures</u>

- **Turf removal and replacement**
- **Mulch and compost**
- **DG/Rock**
- **DT Plants**

VENTURA WATER.

Contact: Joe McDermott – Asst. GM Ventura Water

jmcdermott@venturawater.net

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

IMPORTANT: **It is important you review the Implementation Grant Guidelines and Proposal Solicitation Package (PSP) documents before submitting a project for consideration. Pay particular attention to (1) project and applicant eligibility, (2) project benefits, and requirements for technical justification, budget, and schedule.**

PSP
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_PSP_2015_Draft_2015_0312_Public.pdf

GUIDELINES
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_GL_Draft_2015_0312_Public.pdf

PAST APPLICATIONS CAN BE FOUND AT
http://www.ventura.org/wcvc/prop84/submitted_implementation_grants.htm

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:

Ventura Water (City of San Buenaventura)

Agency / Organization / Individual Address:

336 Sanjon Road, Ventura, CA 93002

Possible Partnering Agencies:

Casitas Water District
City of Santa Paula, City of Fillmore
City of Oxnard

Name:

Joe McDermott

Title:

Assistant General Manager

Telephone:	**Fax:**
805-654-7828	805-654-7573

Email:

jmcdermott@venturawater.net

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
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Part 2. Project Information

Project Name:

Convert Your Turf Incentive Program

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude:	34.27526º	**Project Longitude:**	-119.280134º

Location Description:	City of Ventura City Limits and boundaries of possible partnering agencies

Project Cooperating Agency(ies)/Organization(s)/Individual(s):

- Ventura Water, City of Ventura

Project Status (e.g., new, ongoing, expansion, new phase):

New

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

This would be a rebate program designed to incentivize outdoor water savings by removing water-intensive grass lawns and installing low water-use/drought tolerant plants in their place. Residents/commercial properties can apply for and receive rebates through a standardized process. Rebates will pay for up to $2 per square foot for turf replacement and up to $800 per property owner for parcels less than 1-acre and up to $1,600 for parcels greater than 1-acre. Rebates will also pay for up to $300 towards the installation of water-efficient irrigation systems, which can also include rebates for rain water harvesting equipment such as rain barrels/cisterns.

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This project will help save water and reduces both storm and dry weather runoff/runoff pollution. It can reduce green waste (lawn clippings) and improves air quality/noise (no lawn mower).

Please describe how the project does or could integrate with other projects in the Region.

Any city, unincorporated area of the county or areas served by a particular Water District could take advantage of this incentive program. Agencies served by Metropolitan Water District that already receive funds for landscape incentives can use funds from this grant to augment current funds that might be available.

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

• Lake Casitas
• Ventura and Santa Clara Rivers
• Mound Groundwater Basin
• Santa Paula Groundwater Basin
• Oxnard Plain/Fox Canyon

Please identify up to three available documents which contain information specific to the proposed project:

• Ventura Water Wise Landscape Incentive Program
• Ventura Water Wise FAQs (Draft)
• Ventura Water Wise Terms and Conditions (Draft)

Is the proposed project an element or phase of a regional or larger program? No
If yes, please identify the program

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Required IRWM Project Elements – Please select at least one

x	Water supply reliability, water conservation, and water use efficiency
x	Stormwater capture, storage, clean-up, treatment and management
	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
x	Groundwater recharge and management projects
	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
x	Watershed protection and management
	Drinking water treatment and distribution
	Ecosystem and fisheries restoration and protection

Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

The Program will encourage residents and commercial properties to replace water intensive turf landscaping such as grass lawns with low water use landscaping. This could result in up to a 75% reduction in outdoor water use for program participants. Outdoor water use accounts for approximately 50% of overall water use for most single-family residential homes in Ventura and adjacent communities. By taking advantage of this program, property owners could reduce overall water use by over 35%! If 1,000 residents took advantage of this program, up to 120-acre feet per year of water could be saved. This reduces the regions dependents on

diminishing water supplies. New outdoor landscapes will follow the Ocean Friendly Garden concept and eliminates potable water for irrigation by relying on rain and dew.

The Program will also help reduce storm runoff and will help reduce flooding. Program participants will be encouraged to install rain barrels and build "depressions" or rain gardens that look like dry creek beds that will help retain stormwater on their properties that could even allow water to percolate into the ground to help replenish groundwater. By reducing storm runoff, the Program will also reduce pollution that is often associated with storm runoff.

Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

1. Reduce dependence on imported water and protect, conserve and augment water supplies	The Program focuses on outdoor water waste and will result in lower water demands to individual properties by as much as 35% per property.
2. Protect and improve water quality	Stormwater capture at individual properties and natural percolation into the ground will reduce the amount of storm runoff and pollution associated with storm runoff.
3. Protect people, property and the environment from adverse flooding impacts	Stormwater capture and individual properties and natural percolation into the ground will reduce the amount of storm runoff.
4. Protect and restore habitat and ecosystems in watersheds	The removal of grass turf, which is unnatural to much of Southern California, and replacement with native and drought tolerant plant species will help create new habitat for birds, insects and other wildlife.
5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	This is a water conservation project that after implementation, will allow for precious water saved to be used in other more productive ways, including recreation and habitat protection.
6. Prepare for and adapt to climate change	Climate change is likely to result in more frequent and longer duration droughts in Southern California. Implementation of this Program will help eliminate water waste and save diminishing supplies of water for better purposes.

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Part 5. Program Preferences Addressed by the Project – Check all that Apply

x	Regional project or program - covers multiple watersheds
x	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
x	Effectively resolves significant water-related conflicts within or between regions
x	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
x	Addresses critical water supply or water quality needs of disadvantaged communities within the region
x	Effectively integrate water management with land use planning
x	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
x	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	Not Applicable	
Feasibility Study (or background documentation)	See Ventura Water Wise Incentive Program Plan	**March 2015**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)	Not applicable	
CEQA/NEPA	Categorically Exempt	
Permits	Not required	

Construction Drawings	Simple sketches by individual participants is required	
Detailed Schedule	Project can be implemented by no later than April 1, 2016 (sooner if allowed)	Will project go to bid by April 1, 2016? ___YES__ yes/no Will project by completed by October 31, 2020? __YES___ yes/no
Detailed Budget Available	YES _____ (yes/no)	If no, indicate when will be provided:
Funding match of 25% or more. Please indicate	YES-25% (yes/no)	Source of match: Retained Earnings from Water Fund and/or Drought Water Rates

For projects that do not include construction, please briefly describe the project readiness-to proceed.

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

For every 1,000 single family residential homes and/or commercial properties that participate, up to 120 acre-feet per year of water savings is anticipated. This assumes that each participant converts an average of 2,000 square feet of water intensive lawns.

For every 1,000 participants, the Program can create up to 2 million square feet of more diverse habitat for birds, insects, and small wildlife.

For every 1,000 participants, the Program can reduce storm runoff/flooding by 3 acre-feet for a 1-inch per hour storm event. This is because the Program encourages a holistic approach to conserving water, which includes the installation of rain barrels to capture runoff from roof tops.

Does the project address any known environmental justice issues?		
☐ **Yes**	☐ **No**	☒ **Not Sure**
Is the project located within or adjacent to a disadvantaged community?		
☒ **Yes**	☐ **No**	☐ **Not Sure**
Does the project include disadvantaged community participation?		
☐ **Yes**	☒ **No**	☐ **Not Sure**
If yes, please identify the group or organization: _____		

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($): 2,250,000

Upper estimated total capital cost ($): 2,500,000

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($): none

Annual Operation and Maintenance Cost ($): none from grant program funds

Design Life of Project (years): 20+ years

PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	**Yes**
Have you adopted the 2014 IRWM Plan Update?	**Scheduled for adoption April 27, 2014**
Is your project currently listed in the 2014 IRWM Plan?	**No**
Can you provide a high-quality map of your project location?	**Yes**
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	**No**
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	**No**
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	**Yes**
Does your project assist with the current drought, and how?	**Yes – targets and reduces outdoor water use**
Can you provide technical analysis for your project to support claimed physical benefits?	**Yes**

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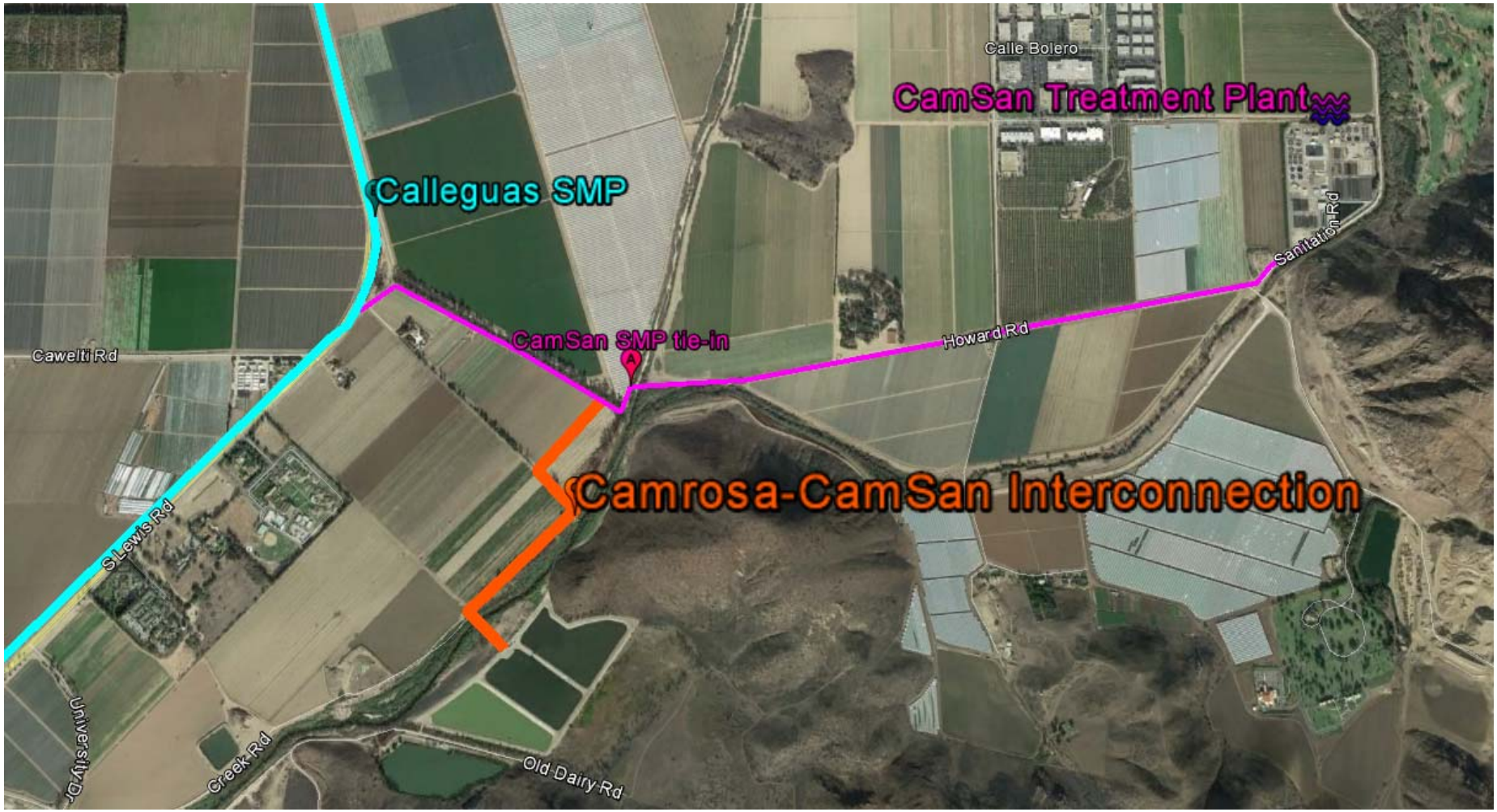
NOTE: Your agency must be willing to accept all of the terms of the Grant Agreement executed by the Department of Water Resources. Boilerplate language that was used in Round 2 can be found at:
http://www.water.ca.gov/irwm/grants/docs/Resources/ContractTemplates/GrantAgreement_Template_P84R2__FINAL.pdf

Camrosa-CamSan Interconnect

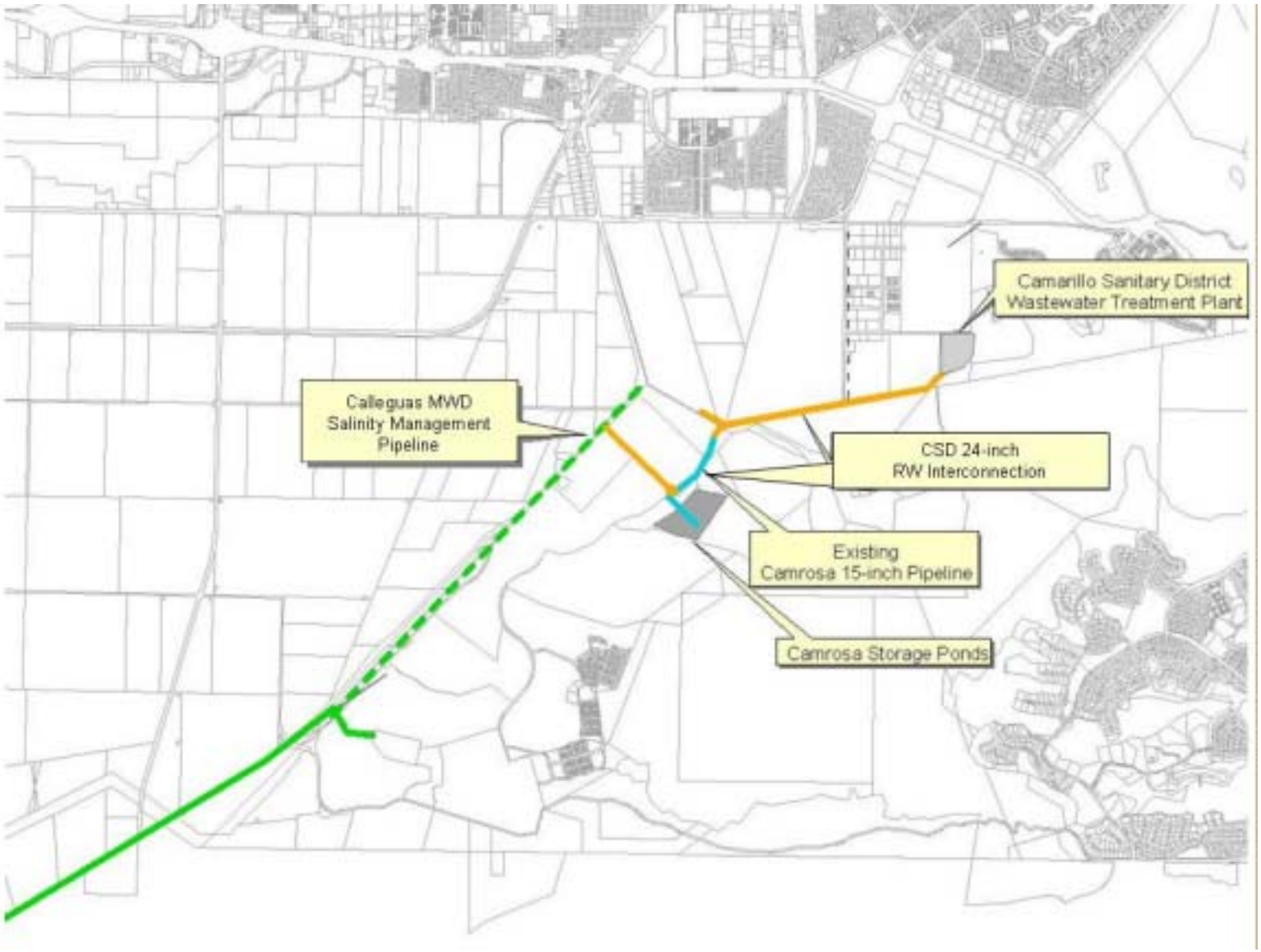
Camrosa-CamSan
Recycled Water Interconnection

Project Location



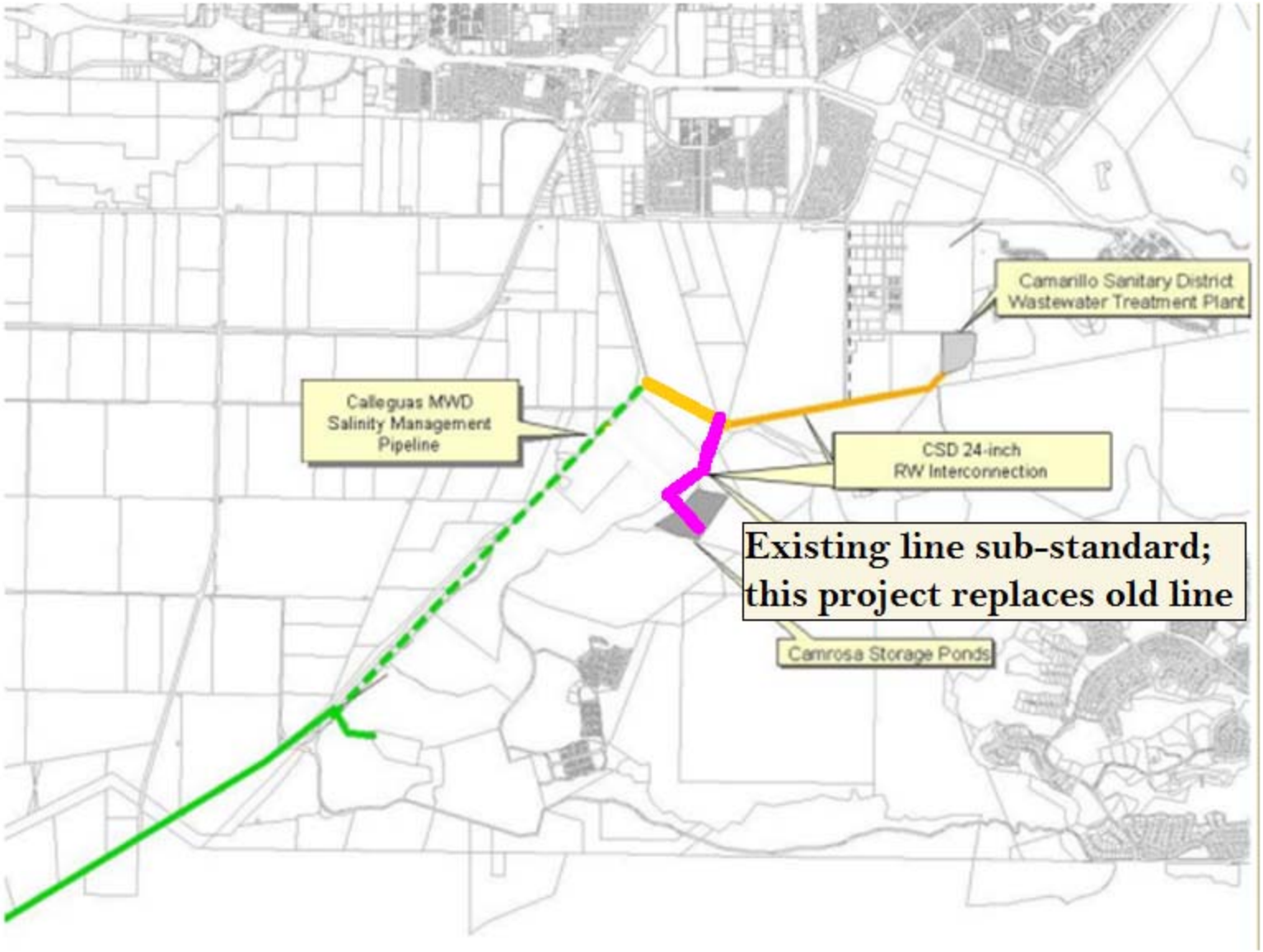
Camrosa/CamSan Interconnection

Round 1

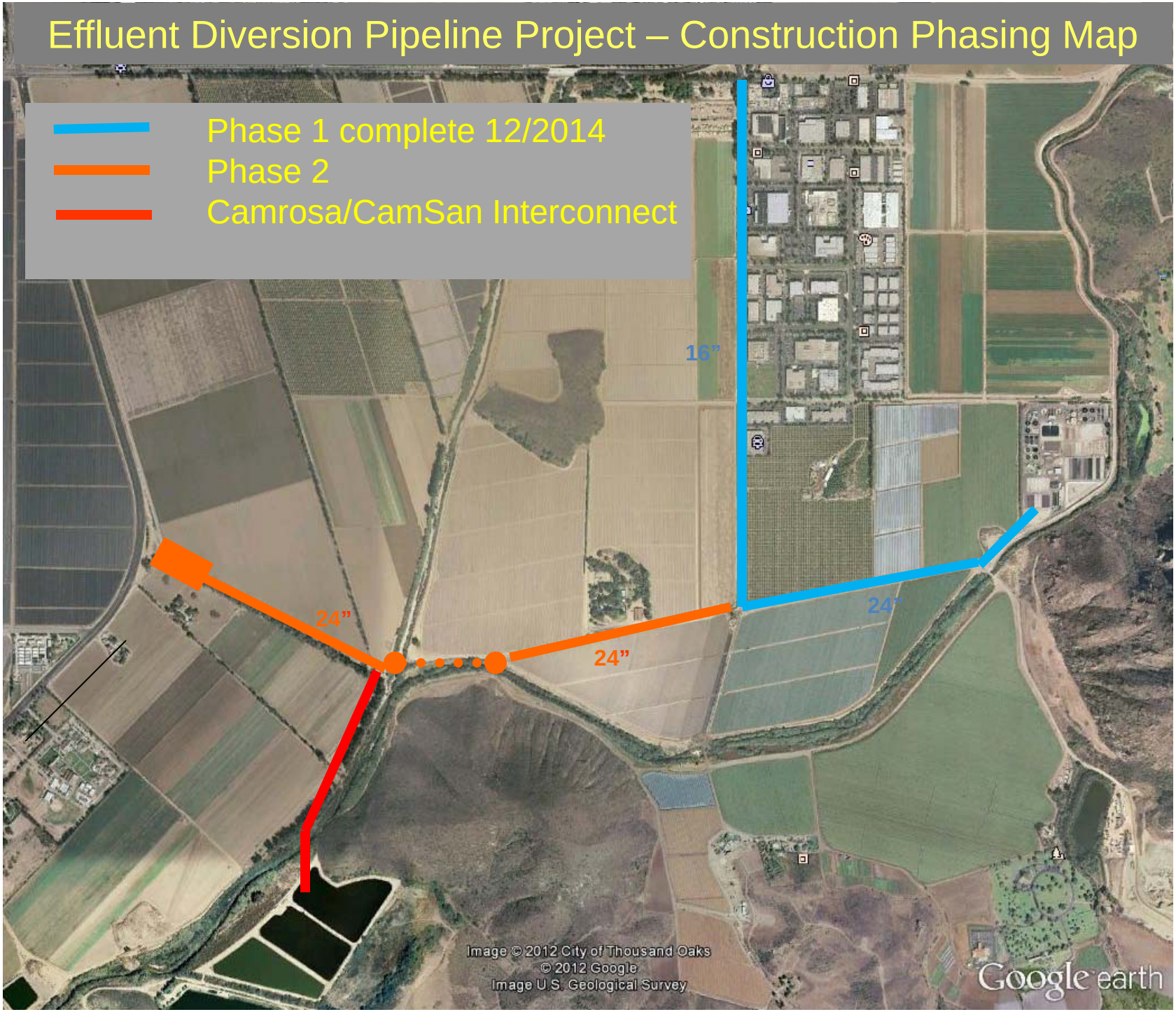


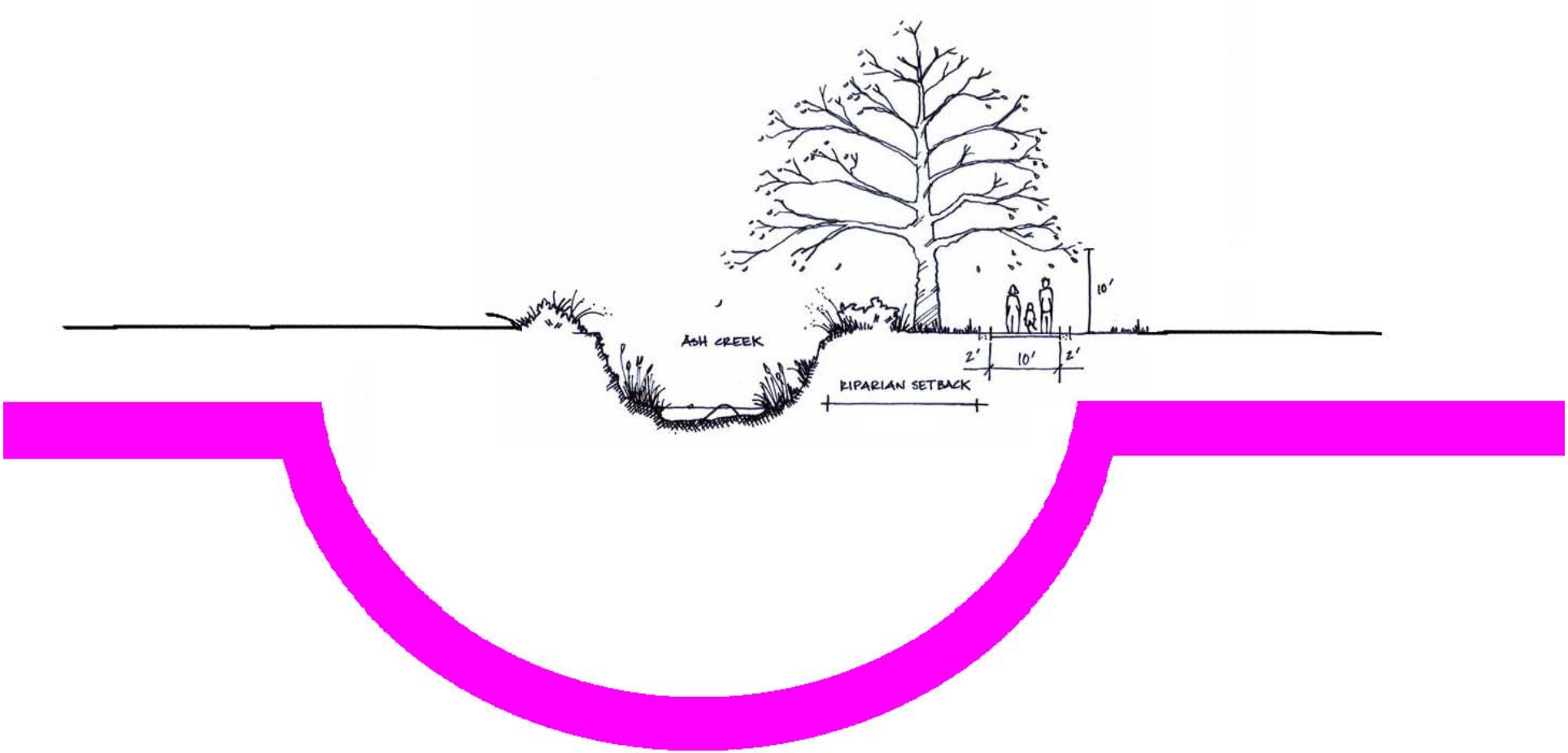
Camrosa/CamSan Interconnection

Round 4



Effluent Diversion Pipeline Project – Construction Phasing Map




ASH CREEK
RIPARIAN SETBACK
10'
2'
10'
2'

Make It Rain

- State drought ExOrd considers POTABLE water offsets only
- No credit given for local resources
- Recycled truly offsets potable = “rain”
- Without Camrosa/CSUCI/PV/growers, droughtproof resource goes to ocean
- TMDL compliance
- Grant $600k (project $800k)

Immediate Effect

- Easements: 09/01/2015
- Permitting: 10/01/2015
- Design/drawings/specs: 12/01/2015
- Bid: 02/01/2016
- Review: 03/01/2016
- Award: 03/15/2016
- Construction: 05/01/2016
- Completion: **09/01/2016**

CAMROSA WATER DISTRICT
BUILDING WATER SELF-RELIANCE

Camrosa-CamSan Recycled Water Interconnection

Camrosa Water District produces recycled water at the Camrosa Water Reclamation Facility (CWRF) for use at the California State University Channel Islands (CSUCI) for landscape irrigation and by local growers for agricultural irrigation. The CWRF is currently rated at 1.5 MGD and is in the process of being rerated to 2.25 MGD to accommodate expected influent increases over the next ten to twenty years as a result of development. Even at 2.25 MGD, however, demand for recycled water will far exceed what Camrosa will be able to produce; growers would use more recycled water more often on their crops, and the university, which is growing and expects to add more ball fields, open space and landscaping, has expressed a strong desire to convert to dual-plumbing for most of its buildings. In accordance with the state of California's Recycled Water Policy that calls for increasing the use of recycled water, it is a priority of Camrosa's to deliver as much of this renewable resource as our customers demand.

Camarillo Sanitary District (CamSan) is currently rated at 3.81 MGD and will likely grow in the coming years as the City of Camarillo reaches full build-out. Approximately 1.2 MGD of the recycled water CamSan produces is used immediately by adjacent growers; the rest has for many years been discharged to the nearby Conejo Creek, which is impaired for salts and under the purview of a Salts TMDL. With the completion of Calleguas Municipal Water District's Salinity Management Pipeline (SMP), CamSan can cease discharging into the creek, helping to return the creek to a more balanced state.

The SMP does not, however, alter the fact that a renewable resource is being treated to a tertiary level only to be disposed of in the Pacific Ocean. Camrosa customers can use that resource, and this Camrosa-CamSan Recycled Water Interconnection pipeline project is the conduit to fulfill that demand.

A little less than two miles of pipeline will connect the CamSan treatment plant to the SMP, along Howard Road and through farm fields. On the west side of Conejo Creek, Camrosa will tee into this pipeline to construct a 3,000-foot 16-inch pipeline leading to the Camrosa Storage Ponds, where over 300 AF of storage is available for Camrosa's non-potable and recycled water supplies. It will be necessary to tunnel, using a directional-drilling bore, under the creek to connect with the ponds, but otherwise, the alignment going exclusively through agricultural fields with whose owners Camrosa has good working relationships, the project is fairly straightforward, and within a year's time, Camrosa will be putting upwards of 500 AF/Y of recycled water to beneficial use, offsetting with each drop a commensurate amount of imported State Water Project water.

This project conforms to the goals and guidelines of the Integrated Regional Water Management program by capitalizing on regional, interagency management of water resources for beneficial reuse. In many ways this is an extension of a project that began in the first round of Proposition 84 funding with the Camrosa/CamSan Interconnection; this phase of the project completes what was started then. Camrosa plans to construct this pipeline and already has the $800,000 that it would require earmarked; thus, achieving the 25-percent match will not be a problem. Our progress on a (much more complicated) project in the 2014 drought round of Proposition 84 funding demonstrates Camrosa's ability to turn projects around quickly; the completion of the Round Mountain Water Treatment Plant demonstrates our ability to execute and follow through on even the most cutting-edge and progressive projects. A cooperative interagency pipeline project that completes an earlier phase of a grant-winning project would add a strong component to the Watersheds Coalition of Ventura County project suite.

Camrosa - CamSan Recycled Water Interconnection

From CamSan plant along Howard Road under Conejo Creek to Camrosa Storage Pond #4

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PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:

Camrosa Water District

Agency / Organization / Individual Address:

7385 Santa Rosa Road. Camarillo, CA 93012

Possible Partnering Agencies:

Camarillo Sanitary District

Name:

Terry Curson

Title:

Project Engineer

Telephone:

805.482.8063

Fax:

Email:

terryc@camrosa.com

Part 2. Project Information

Project Name:

CamSan/Camrosa Recycled Interconnection

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude: | | **Project Longitude:** | |

Location Description:	This project will connect the CamSan water reclamation plant to Camrosa's recycled water distribution line to increase the availability of recycled water for irrigation in the southeast portion of the watershed.

Watershed (Check all that apply):

Calleguas Creek	Santa Clara River	Ventura River	Countywide
☐	X	☐	☐

Project Cooperating Agency(ies)/Organization(s)/Individual(s):

Camarillo Sanitary District, Lucie McGovern

Project Status (e.g., new, ongoing, expansion, new phase):

new

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

Roughly 3,000 feet of 16-inch pipe will tee off of the effluent pipeline that CamSan is running to the SMP. This line will traverse exclusively agricultural land, tunnel under Calleguas Creek, and discharge into Pond 4 of Camrosa's storage ponds. As the wastewater is treated to tertiary at CamSan, no further treatment will be necessary.

Please describe how the project does or could integrate with other projects in the region.

CSUCI receives recycled water from Camrosa now, as do several growers in the area; this project would increase that use. Should PV ever convert any portion of its service area to recycled, this project could provide supply for that, as well.

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

Conejo Creek (CamSan effluent being removed from flows in)

Please identify up to three available documents which contain information specific to the proposed project:

Camrosa Draft Integrated Facilities Management Plan
WCVC IRWM Plan update 2014
Camrosa UWMP 2010
Is the proposed project an element or phase of a regional or larger program? NO

Required IRWM Project Elements – Please select at least one

✓	Water supply reliability, water conservation, and water use efficiency
	Stormwater capture, storage, clean-up, treatment and management
	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
	Groundwater recharge and management projects
	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
	Watershed protection and management
	Drinking water treatment and distribution
	Ecosystem and fisheries restoration and protection

Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

As imported water becomes increasingly scarce, local resources become more precious. This is especially true for renewable resources such as recycled water. CamSan is transitioning from discharging effluent into Conejo Creek, where it exceeds the TMDL for salts, to discharging into Calleguas Municipal Water District's Salinity Management Pipeline for disposal in the Pacific Ocean. Growers on the Perched Aquifer near CSUCI are in need of an alternate water source to imported water, and this project will provide indefinite access to a renewable resource.

Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

Reduce dependence on imported water and protect, conserve and augment water supplies	Recycled water provides a second life cycle to water that would otherwise flow to the ocean, and offsets portable water, including imported.
Protect and improve water quality	n/a
Protect people, property and the environment from adverse flooding impacts	n/a
Protect and restore habitat and ecosystems in watersheds	n/a
Provide water-related recreational, public access, stewardship, engagement and educational opportunities	n/a
Prepare for and adapt to climate change	To the extent that climate change impacts snowpack in the Sierras, this project protects end users against the reduced supplies Metropolitan and Calleguas will be importing from the Delta.

Part 5. Program Preferences Addressed by the Project – Check all that Apply

	Regional project or program - covers multiple watersheds
	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
	Effectively resolves significant water-related conflicts within or between regions
✓	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
✓	Addresses critical water supply or water quality needs of disadvantaged communities within the region
✓	Effectively integrate water management with land use planning
✓	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
✓	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	complete	**(04/01/2015)**
Feasibility Study (or background documentation)	n/a	**(mm/dd/yyyy)**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)	30%	**(mm/dd/yyyy)**
CEQA/NEPA	NegDec (not initiated)	**(06/01/2015**
Permits	**County/Watershed Protection for directional drilling under creek**	**(10/01/2015)**
Construction Drawings	In process	**(06/01/2015**
Detailed Schedule	Easements: 09/01/2015 Permitting: 10/01/2015 Design/drawings/specs: 11/01/2015 Bid: 02/01/2016 Review: 03/01/2016 Award: 03/15/2016 Construction: 07/01/2016 Completion: 01/01/2017	Will project go to bid by April 1, 2016? _yes____ yes/no Will project by completed by October 31, 2020? _yes____ yes/no
Detailed Budget Available	**yes** (yes/no)	Preliminary design estimate available; detailed engineering report available after drawings complete on 11/01/2015
Funding match of 25% or more. Please indicate	**yes** (yes/no)	Source of match: Camrosa

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

The CamSan-Camrosa recycled water interconnection will provide recycled water to Camrosa mostly during the winter months. Based off estimated flows, Camrosa expects to receive approximately 500 AFY from this project. Each acre foot delivered as irrigation will offset imported water use, achieving greenhouse gas emission reductions; moving towards the 20x2020 reduction; contributing to the state's Recycled Water Policy requiring the increase of recycled water use by 1,000,000 AFY by 2020 and 2,000,000 AFY by 2030; and conforming to drought regulations. Project will also contribute to TMDL compliance.

Does the project address any known environmental justice issues?
☐ **Yes** ☒ **No** ☐ **Not Sure**

Is the project located within or adjacent to a disadvantaged community?
☐ **Yes** ☒ **No** ☐ **Not Sure**

Does the project include disadvantaged community participation?
☐ **Yes** ☒ **No** ☐ **Not Sure**

If yes, please identify the group or organization: _____

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($):__**700,000**_____

Upper estimated total capital cost ($): __**800,000**_____

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($):

_____

Annual Operation and Maintenance Cost ($):_____

Design Life of Project (years): _**100**_____

PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	**Yes**
Have you adopted the 2014 IRWM Plan Update?	**Yes**
Is your project currently listed in the 2014 IRWM Plan?	**No**
Can you provide a high-quality map of your project location?	**Yes**
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	**No**
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	**No**
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	**Yes**
Does your project assist with the current drought, and how?	**Yes, by providing a second life cycle to imported water that would otherwise flow unused to the ocean. Recycled water offsets potable/imported water.**
Can you provide technical analysis for your project to support claimed physical benefits?	**Yes**

Pleasant Valley
Mutual Desalter

Pleasant Valley Mutual Water Company

Desalter Project

2015 IRWM Implementation Grant Program
(Proposition 84)

Calleguas Watershed Committee Meeting
April 15, 2015

Background

- PVMWC:
  - Serves 1,700 connections (5,000 – 10,000 people)
  - Uses primarily groundwater
- Problem:
  - Violation of secondary drinking water standards

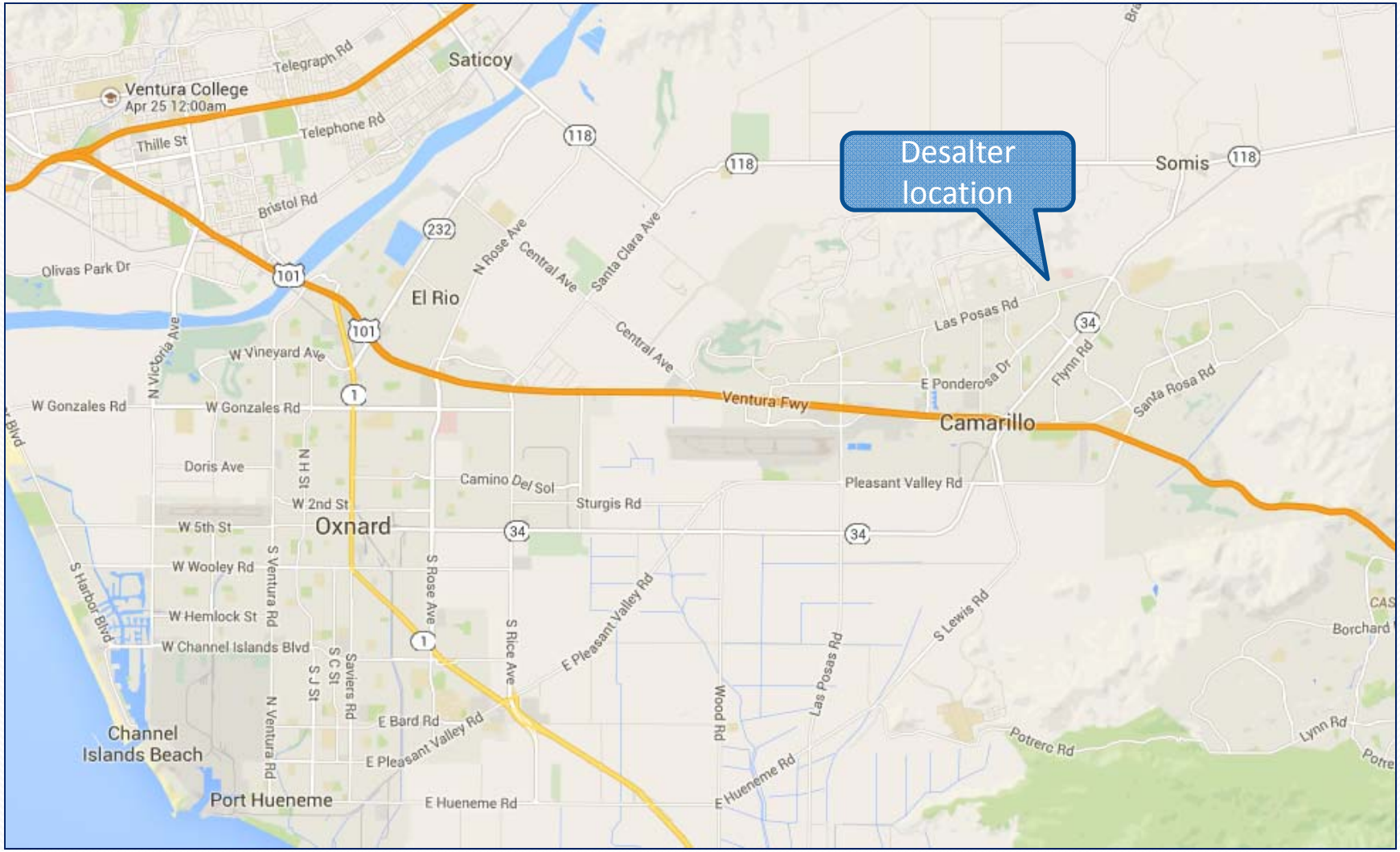
	Existing (system-wide)	Mandated
TDS (mg/L)	1,600	≤ 500
Sulfate (mg/L)	800	≤ 250

➢ Need treatment or alternative supply (imported water)

Project Description

- Reverse Osmosis (RO) Desalter
  - 16,000 sqft pre-engineered building
  - Will produce ~ 1,000 AFY permeate
  - Reduces TDS and Sulfates by ~70%
  - Brine discharge via Camarillo/Salinity Management Pipeline (SMP)
- RO bid documents complete
- 12 month project duration
- CEQA by Fall 2015
- Capital: $3.1 million
- Annual O&M: $20,640

Project Location



Project Benefits

- ~ 1,000 AFY imported water avoided (needed to blend)
- 2,700 MWh energy savings
- 1,200 tons/year CO_2 emission savings
- 2,400 tons/yr salts avoided and removed
- 70% reduction in TDS and sulfate concentrations

- Improved LOCAL supply reliability
- Improved drought preparedness
- Project would avoid need for imported water
- Helps PVMWC provide safe, affordable water

2015 IRWM Program Fit

- IRWMP Objectives:
  - 1. Reduce dependence on imported water
  - 2. Protect and improve water quality
  - 6. Prepare for and adapt to climate change
- Program Preferences:
  - Integration with regional programs (SMP and Camarillo)
  - Resolves water-related conflicts (avoids imports)
  - Contributes to CALFED objectives (avoids Delta imports)
  - IRWM Plan helps reduce reliance on Delta supplies
  - Addresses statewide priorities, including climate change and Human Right to Water Policy

2015 IRWM Program Fit (cont'd)

- Eligibility criteria met by time of application
  - Project to be included in WCVC IRWM Plan
  - PVMWC will adopt IRWM Plan
- PVMWC funds will cover 25% match and application expenses

Overall Strong IRWM Project:

- Multiple benefits
- Strong integration with regional programs
- Improves local water supply reliability
- Avoids dependence on imported water
- Improved drought preparedness
- Ready to implement!

Thank You

QUALITY
SINCE 1924

P.V.M.W.C.

PLEASANT VALLEY MUTUAL WATER COMPANY

PLEASANT VALLEY MUTUAL WATER COMPANY

1863 Las Posas Road, Camarillo, CA 93010 · (805) 482-5061
Fax (805) 482-5771 · Website: pvmwc.com · Email: office@pvmwc.com

Pleasant Valley Mutual Water Company Desalter

Pleasant Valley Mutual Water Company (PVMWC) is proposing the Desalter as a means to treat its groundwater that is currently exceeding drinking water standards for TDS and sulfates. The Desalter will enable PVMWC to continue using its local groundwater supplies and avoid purchase of approximately 1,000 AFY imported water. Due to its multiple benefits and integrative qualities, the Desalter is an excellent fit for the 2015 IRWM Implementation Grant Program.

The Desalter is a strong IRWM project as it directly meets at least five of the eight program preferences. The Desalter effectively integrates with the regional Salinity Management Pipeline (SMP), which has been a cornerstone effort to enhance water supplies in the region, including through the use of water quality-impaired groundwater resources. Brine discharged from the Desalter operation will be pumped to the City of Camarillo's desalter facility and subsequently to the SMP. With this relation to the SMP, the proposed Desalter provides a prime example of integrative water resource management and watershed-wide connections. The Desalter will also avoid import and/or help remove approximately 2,400 tons/year of salts from the watershed, thereby contributing to the ongoing salts management efforts across the Calleguas Creek Watershed.

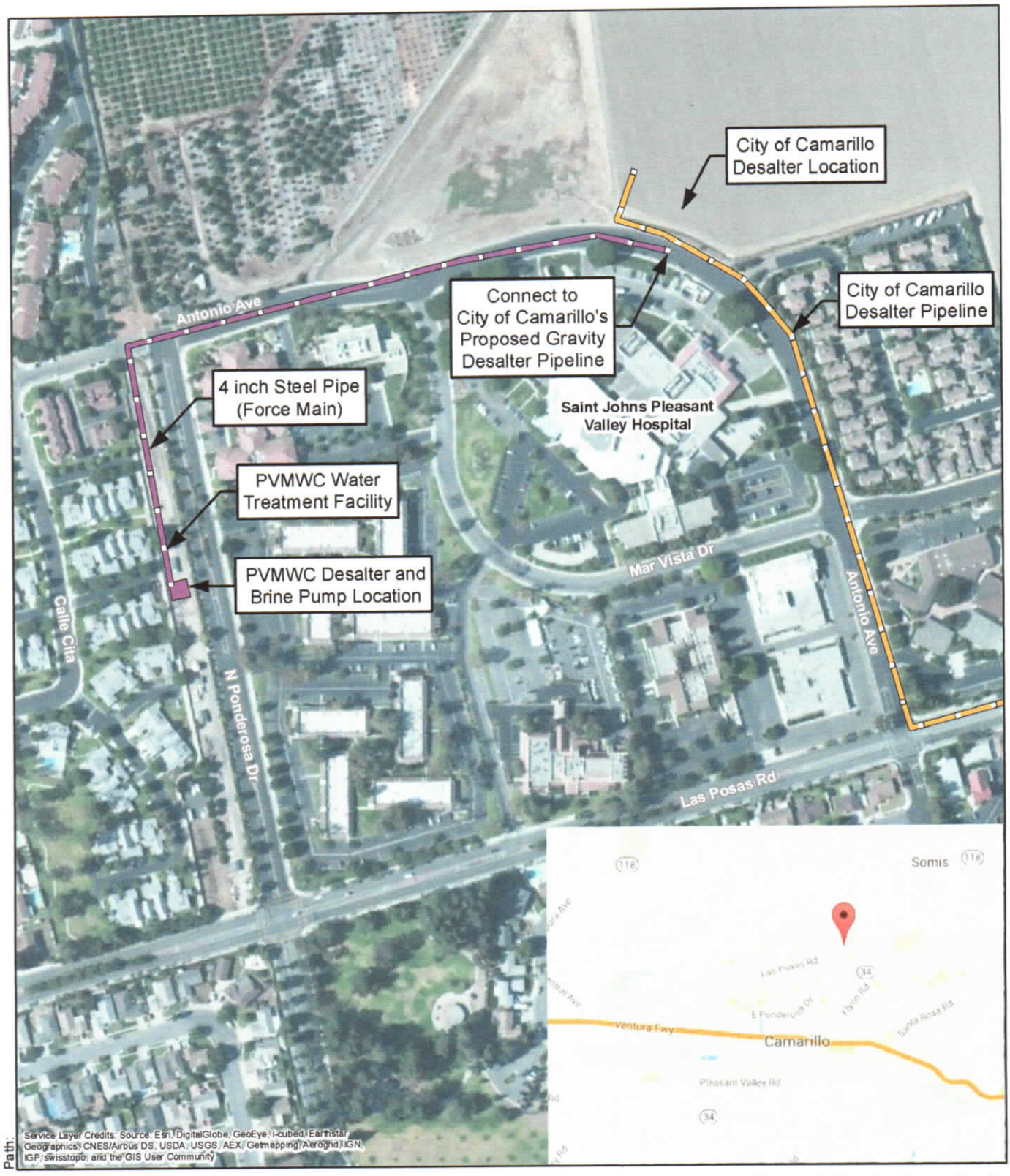
The Desalter also contributes to addressing water-related conflicts by improving local supply reliability and reducing dependence on increasingly strained and unreliable imported water supplies. In addition, through the integration of other water management systems, including the City of Camarillo's desalter and the SMP, the project shows strong collaborative efforts, which are critical in resolving water-related conflicts.

The Desalter will help reduce dependence on imported water from the Delta and will thereby also facilitate attainment of three of the four CALFED objectives. In addition, the Desalter will be included in the WCVC IRWM Plan, which is a Plan that helps the region reduce reliance on the Sacramento-San Joaquin Delta for water supply.

The Desalter addresses multiple statewide priorities, including climate change mitigation and adaptation. The Desalter will enable PVMWC to continue to meet water demands with local groundwater resources. Improving local water supply reliability is a principle means for preparing for and adapting to climate change, including anticipated more frequent and severe droughts. In addition, by avoiding the need for energy-intensive imported water supplies, the project provides significant energy and greenhouse gas emission savings. Further, the project will enable PVMWC to provide safe drinking water, in compliance with standards, while keeping costs down due to the avoidance of costly water imports. As a result, the project also contributes to the Human Right to Water Policy.

All project eligibility criteria have been or will be met by the time of the final application, including addition of the project to the WCVC IRWM Plan and PVMWC's adoption of the IRWM Plan. A further criterion includes Groundwater Management Plan (GWMP) compliance, which is met through the existing Fox Canyon Groundwater Management Agency GWMP.

The PVMWC Desalter will provide significant direct water supply and quality benefits to PVWMC customers. However, the Desalter is also a valuable project to include in the 2015 IRWM Implementation Grant Program application as a result of its many benefits and strong integration with ongoing watershed-wide and regional water management efforts.



Path:

Legend

Proposed Desalter Pipeline

PVMWC Desalter
and Brine Pump Location

N

0 150 300

Scale: Feet

Kennedy/Jenks Consultants

As needed Grant Support Services (2015)
Camarillo, California

Pleasant Valley Mutual Water Company
Desalter Project

April 2015

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

IMPORTANT: It is important you review the Implementation Grant Guidelines and Proposal Solicitation Package (PSP) documents before submitting a project for consideration. Pay particular attention to (1) project and applicant eligibility, (2) project benefits, and requirements for technical justification, budget, and schedule.

PSP
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_PSP_2015_Draft_2015_0312_Public.pdf

GUIDELINES
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_GL_Draft_2015_0312_Public.pdf

PAST APPLICATIONS CAN BE FOUND AT
http://www.ventura.org/wcvc/prop84/submitted_implementation_grants.htm

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:
Pleasant Valley Mutual Water Company

Agency / Organization / Individual Address:
1863 Las Posas Road
Camarillo, California 93010

Possible Partnering Agencies:
None

Name:
Jerry Doran

Title:
Water Superintendent

Telephone:
(805) 482-5061

Fax:
(805) 482-5771

Email:
Jerry@pvmwc.com

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Part 2. Project Information

Project Name:

Pleasant Valley Mutual Water Company Desalter

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude:	34.242099	**Project Longitude:**	-119.022994

Location Description:	The proposed desalter will be located at 2411 North Ponderosa Drive, on a PVMWC-owned property.

Error! Not a valid link.

Project Cooperating Agency(ies)/Organization(s)/Individual(s):

• City of Camarillo
•
•

Project Status (e.g., new, ongoing, expansion, new phase):

New

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Pleasant Valley Mutual Water Company (PVMWC) currently operates two groundwater wells to serve its entire service area with potable water. However, these water supplies are currently in exceedance of drinking water standards for TDS and sulfate. PVMWC is therefore proposing a desalter that will consist of a reverse osmosis (RO) treatment and chemical feed system that will be installed downstream of the existing iron and manganese (I/M) Treatment Plant. The construction of the new desalter will include an approximate 1600 square foot (sf) Pre-Engineered Building, in which the RO equipment will be located, as well as piping, permeate storage tank, water pumps, chemical tanks and chemical feed system, remote monitoring and control and a brine discharge pipeline. The proposed desalter is anticipated to produce a total of approximately 1,500 AFY drinking water (including bypass). This will result in the avoidance of imported water by approximately 1,000 AFY (the amount of water needed to blend with groundwater to reduce TDS and sulfates in PVMWC drinking water supplies).

Brine discharge from the desalter operation will be pumped to the City of Camarillo's desalter facility. From this location, the City of Camarillo's brine discharge pipeline will connect to a regional gravity discharge pipeline. The PVMWC has preliminary construction pricing for the desalter which will be constructed through a design build contract. It is anticipated that this project would be completed within approximately 12 months.

Please describe how the project does or could integrate with other projects in the Region.

The proposed desalter project integrates with the regional Salinity Management Pipeline (SMP), which has been a cornerstone effort to enhance water supplies in the region, including through the use of water quality-impaired groundwater resources. Brine discharged from the desalter operation will be pumped to the City of Camarillo's desalter facility. From this location, the City of Camarillo's brine discharge pipeline will connect to the SMP. With this relation to the SMP, the proposed desalter provides a prime example of integrative water resource management and watershed-wide connections.

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

- Pleasant Valley Groundwater Basin
-
-
-

Please identify up to three available documents which contain information specific to the proposed project:

- Filtronics. TDS Removal Project Proposal. June 17, 2014.

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

• California Department of Public Health. Letter regarding Secondary Standard Exceedance: Sulfates and Total Dissolved Solids. October 14, 2013.
• PVMWC. Variance Request to Emergency Ordinance E for FCGMA Account: Pleasant Valley Mutual Water Company. 2014.

Is the proposed project an element or phase of a regional or larger program? **No**
If yes, please identify the program

Required IRWM Project Elements – Please select at least one

x	Water supply reliability, water conservation, and water use efficiency
	Stormwater capture, storage, clean-up, treatment and management
	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
	Groundwater recharge and management projects
x	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
	Watershed protection and management
x	Drinking water treatment and distribution
	Ecosystem and fisheries restoration and protection

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Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

PVMWC currently operates two groundwater wells. Water from each of these wells is treated at an existing Iron and Manganese (I/M) Treatment Plant and disinfected with sodium hypochlorite prior to delivery to the end user. Currently, the PVMWC system is in violation of public health requirements as a result of secondary standards exceedances for sulfates and total dissolved solids (TDS). Testing performed in response to a letter from the California Department of Health (now Division of Drinking Water [DDW]) showed system-wide averages of TDS at 1,320 milgrams per liter (mg/L) and sulfate at 630 mg/L, thereby exceeding the secondary standard upper limit for TDS (1,000 mg/L) and short term limit for sulfates (600 mg/L). In response, DDW has mandated that PVMWC reduce TDS in drinking water to equal to or less than 500 mg/L and sulfate to equal or less than 250 mg/L.

The proposed desalter will use reverse osmosis technology to reduce concentrations of TDS, sulfates, as well as other water quality constituents, in order to allow PVMWC to meet mandated standards and continue to provide drinking water from groundwater sources. If the desalter is not constructed, PVMWC will not be able to operate its wells and will be required to supplement water supplies with imported water from Calleguas. Given the severe statewide drought conditions, increasingly limited supplies available for import, as well as related cost and energy implications, the proposed desalter is crucial to using local groundwater resources and thereby improving local supply reliability.

Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

1. Reduce dependence on imported water and protect, conserve and augment water supplies	The desalter will enable PVMWC to avoid supplementing water supplies with imported water and continue using local groundwater resources. This project is important for increasing local water supply reliability.
2. Protect and improve water quality	The desalter will reduce TDS and sulfate concentrations in water supplies to enable delivery of groundwater that meets safe drinking water standards.

3. Protect people, property and the environment from adverse flooding impacts	n/a
4. Protect and restore habitat and ecosystems in watersheds	n/a
5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	n/a
6. Prepare for and adapt to climate change	Improving local water supply reliability is a principle means for preparing for and adapting to climate change. Imported water supplies are becoming increasingly unreliable and increasingly strained as a result of dry weather conditions. The proposed project will enable PVMWC to continue to meet water demands with local groundwater resources rather than relying on imported water supplies.

Part 5. Program Preferences Addressed by the Project – Check all that Apply

	Regional project or program - covers multiple watersheds
x	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
x	Effectively resolves significant water-related conflicts within or between regions
x	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
	Addresses critical water supply or water quality needs of disadvantaged communities within the region
	Effectively integrate water management with land use planning
x	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
x	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

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PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	Complete	7/17/2014 **(mm/dd/yyyy)**
Feasibility Study (or background documentation)	A letter from the California Department of Public Health (now Division of Drinking Water) documents PVMWC's requirement to treat its water. Also Filtronics. TDS Removal Project Proposal. June 17, 2014.	10/14/2013 **(mm/dd/yyyy)**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)	100% design to be completed within approximately 13 weeks after notice to proceed to D/B contractor.	Notice to proceed is pending grant award decision. **(mm/dd/yyyy)**
CEQA/NEPA	Anticipated to be Notice of Exemption.	Fall of 2015 **(mm/dd/yyyy)**
Permits	It is not anticipated there will be a need for special permits. DDW amendment will be needed for water supply permit.	Any required permits will be obtained prior to construction. Water supply permit amendment will be obtained before operation. **(mm/dd/yyyy)**
Construction Drawings	Not initiated.	Upon construction completion. **(mm/dd/yyyy)**
Detailed Schedule	A conceptual schedule including all major tasks is available. The project is anticipated to be complete within approximately 12 months.	Will project go to bid by April 1, 2016? Yes, bid documents already complete. Will project by completed by October 31, 2020? Yes Anticipated to be completed within 12 months of notice to proceed.

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PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Detailed Budget Available	yes (yes/no) Preliminary construction pricing is available. See Filtronics TDS Removal Project Proposal. June 17, 2014.	If no, indicate when will be provided:
Funding match of 25% or more. Please indicate	Yes (yes/no)	Source of match: PVMWC capital fund. In addition, a loan is in the process of being secured for additional expenses. Loan will not be from the State Revolving Fund.

For projects that do not include construction, please briefly describe the project readiness-to proceed.

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

The proposed project has multiple benefits, including avoidance of water imports and salt reductions within the watershed. By enabling PVMWC to continue using groundwater supplies, the project will help avoid importing costly SWP water supplies by approximately **1,000 AFY** (the amount of water needed to blend with groundwater to reduce TDS and sulfates in the PVMWC service area). The avoidance of energy intensive imported water supplies would in turn result in energy savings of

approximately **2,700 MWh** and emission savings of approximately **1,200 tons of CO_2**.

The proposed desalter will also provide benefits of improved salts management within the watershed. By avoiding the need for water imports, the project would in turn avoid the import of approximately **440 tons/yr** of salts to the watershed. Additionally, by discharging salty brine via the SMP, approximately **1,970 tons/yr** of salts will be removed from the watershed.

Based on conceptual design the desalter will reduce TDS and sulfate concentrations by nearly **70%** each. In addition, avoiding the import of SWP water will enable PVMWC to avoid increasing customer rates in order to cover costly import purchases.

Does the project address any known environmental justice issues?		
☐ **Yes**	☒ **No**	☐ **Not Sure**
Is the project located within or adjacent to a disadvantaged community?		
☐ **Yes**	☒ **No**	☐ **Not Sure**
Does the project include disadvantaged community participation?		
☐ **Yes**	☒ **No**	☐ **Not Sure**
If yes, please identify the group or organization: _____		

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ 0implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($): 3,160,000

Upper estimated total capital cost ($): 3,160,000

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($): 0 (there is no need for land purchase or easements)

Annual Operation and Maintenance Cost ($):$20,640 per year

Design Life of Project (years): 50

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
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PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	No.
Have you adopted the 2014 IRWM Plan Update?	Not yet.
Is your project currently listed in the 2014 IRWM Plan?	No.
Can you provide a high-quality map of your project location?	Yes.
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	No.
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	No.
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	Yes.
Does your project assist with the current drought, and how?	Yes. It will enable PVMWC to continue to use local groundwater supplies for drinking water deliveries, rather than increasing demand on already strained imported water.
Can you provide technical analysis for your project to support claimed physical benefits?	Yes.

NOTE: Your agency must be willing to accept all of the terms of the Grant Agreement executed by the Department of Water Resources. Boilerplate language that was used in Round 2 can be found at:
http://www.water.ca.gov/irwm/grants/docs/Resources/ContractTemplates/GrantAgreement_Template_P84R2__FINAL.pdf

County Waterworks #1
Moorpark Desalter

Public Works Agency

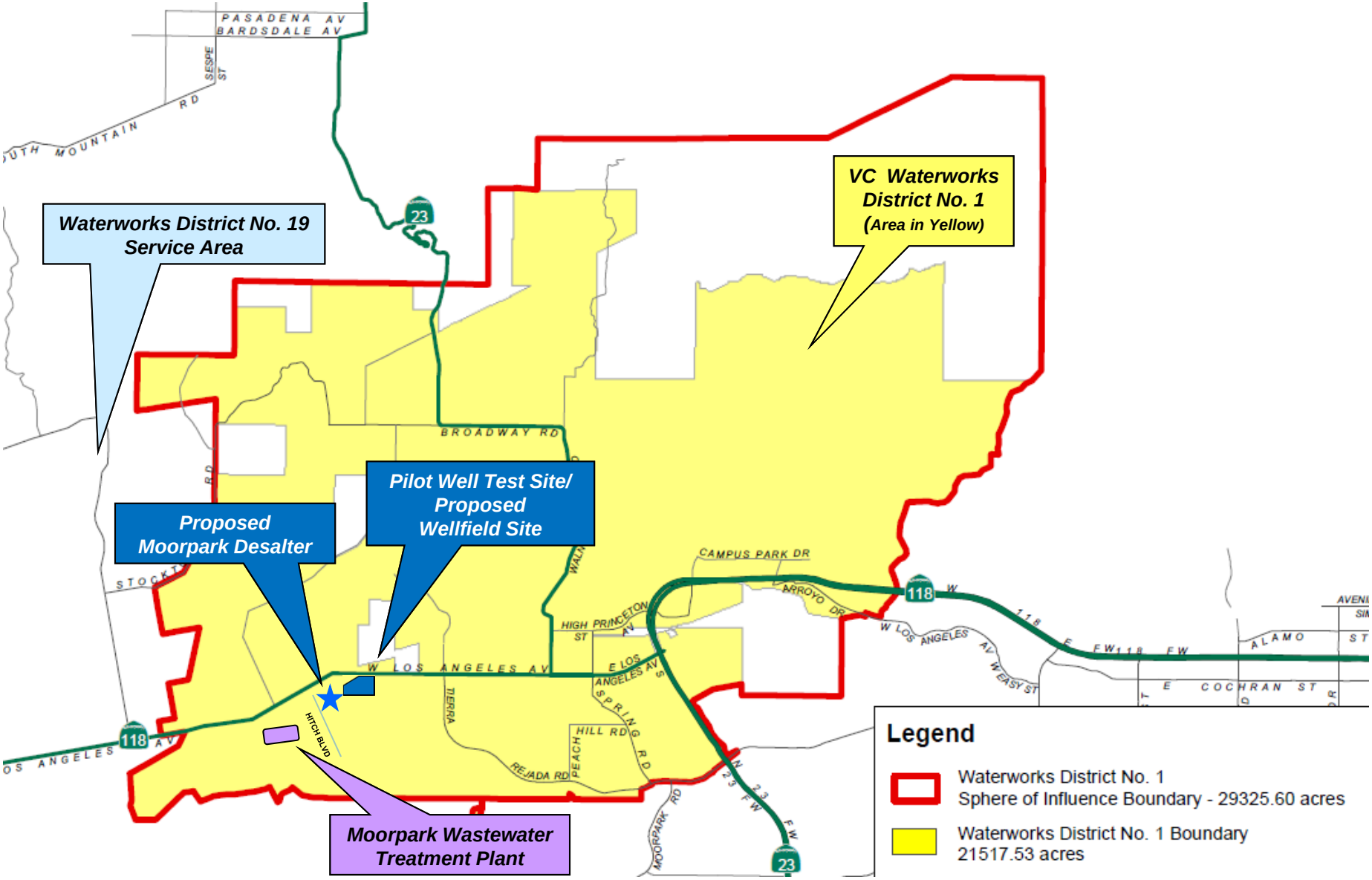
Water and Sanitation Department

Ventura County Waterworks District No. 1

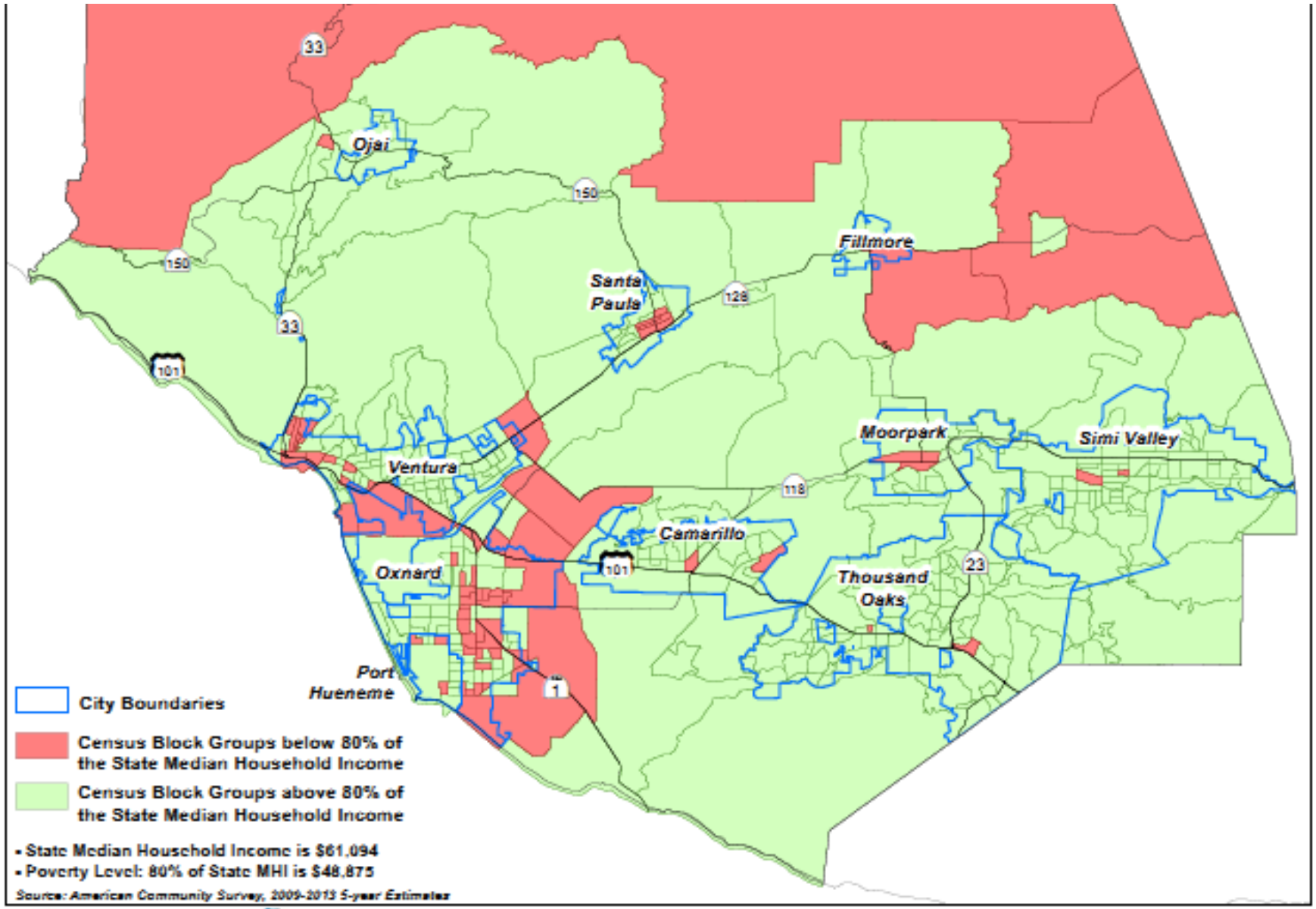
Moorpark Desalter Project

Susan Pan, P.E.
Manager of Engineering Division
Water and Sanitation Department
Public Works Agency
April 15, 2015

Moorpark Desalter / Ventura County WWD No. 1 Service Area



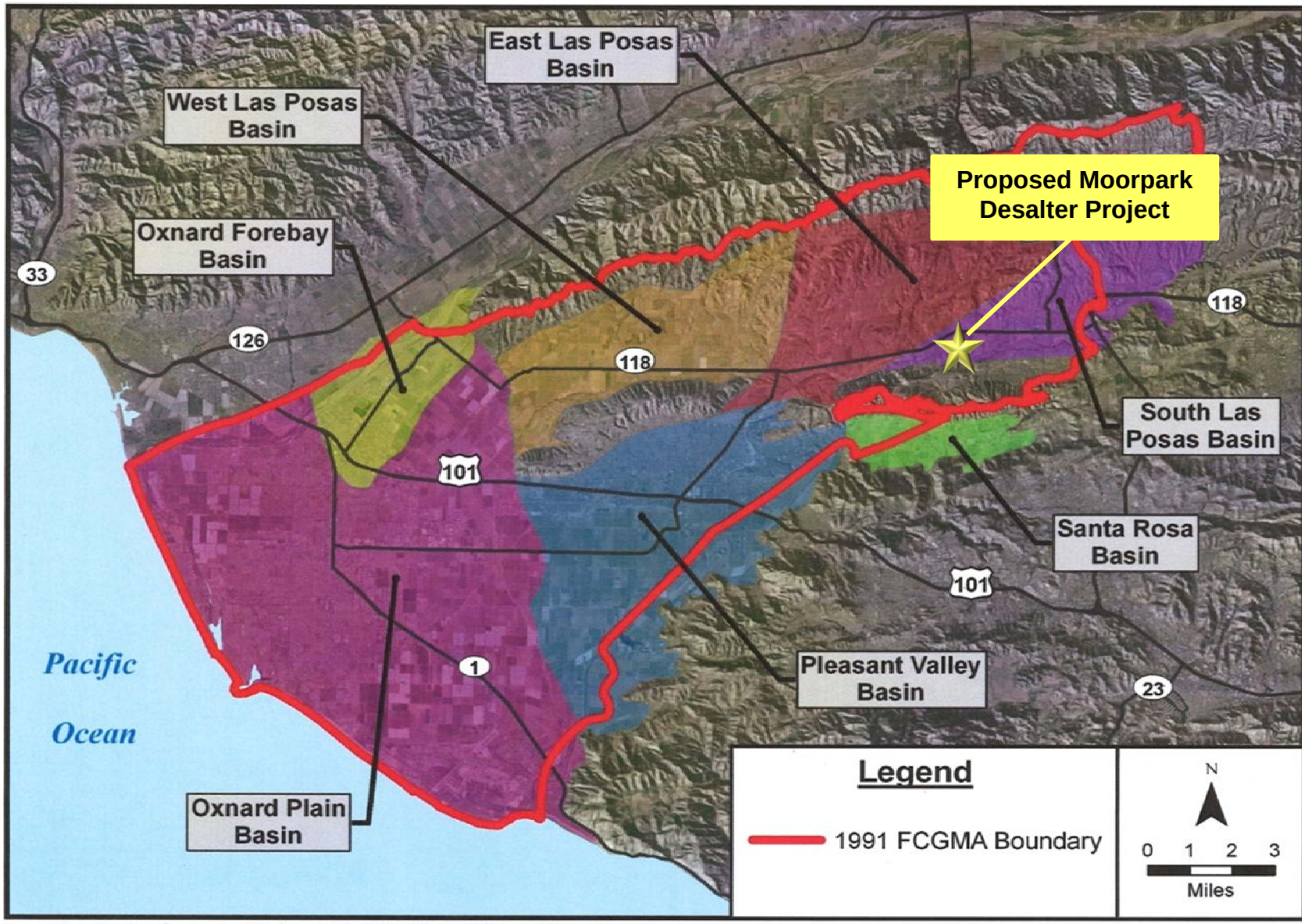
Disadvantaged Communities WCVC IRWM Region



Ventura County Resource Management Agency Information Systems Department

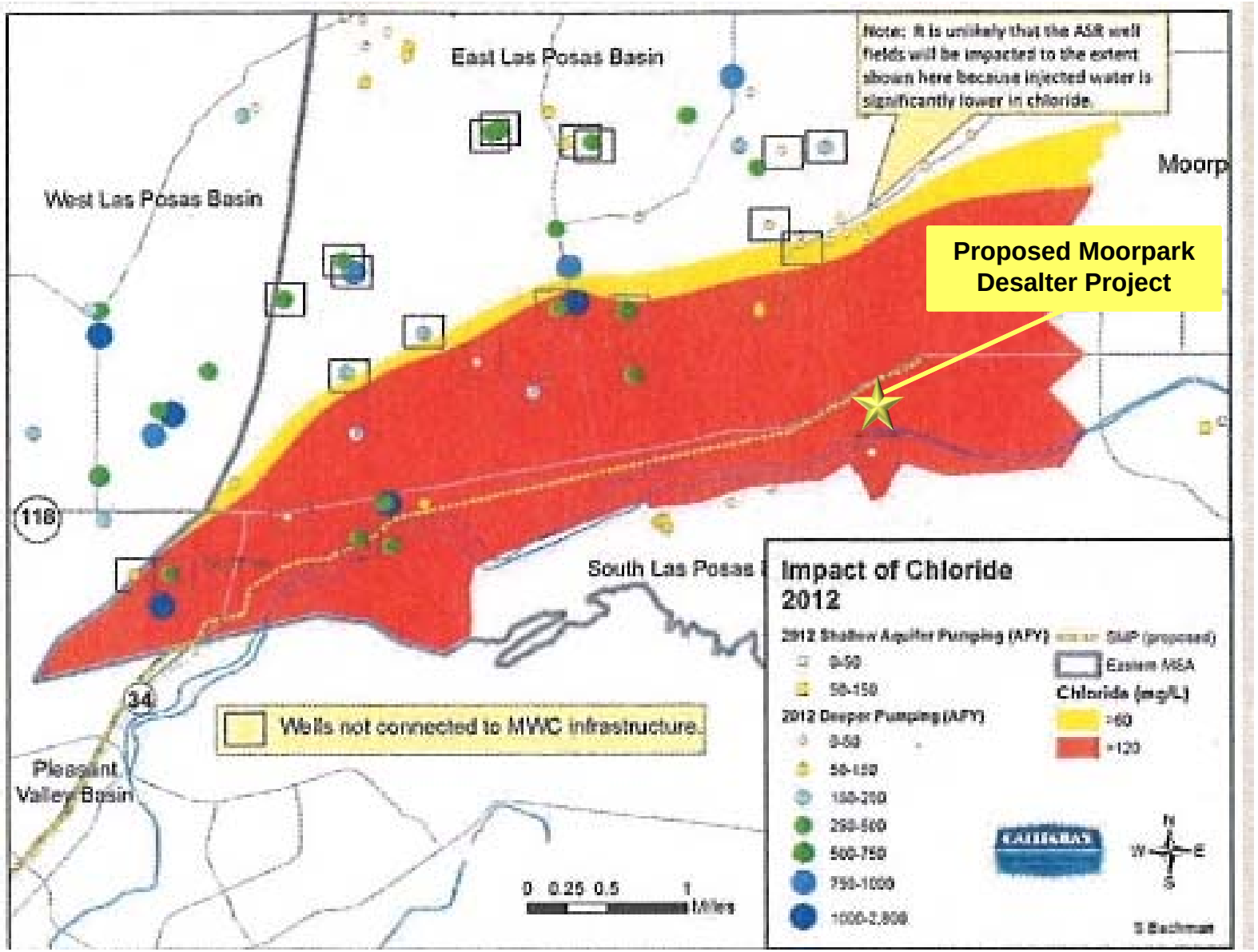
Figure 3-17 (Revised April 2015)
Disadvantaged Communities
WCVC IRWM Region

Groundwater Basins within Fox Canyon Groundwater Management Agency (GMA)



Note: Basins from 2007 Update to the FCGMA GW Mgmt. Plan – Figure 3

Current Conditions (2012) Impacted by High Chlorides

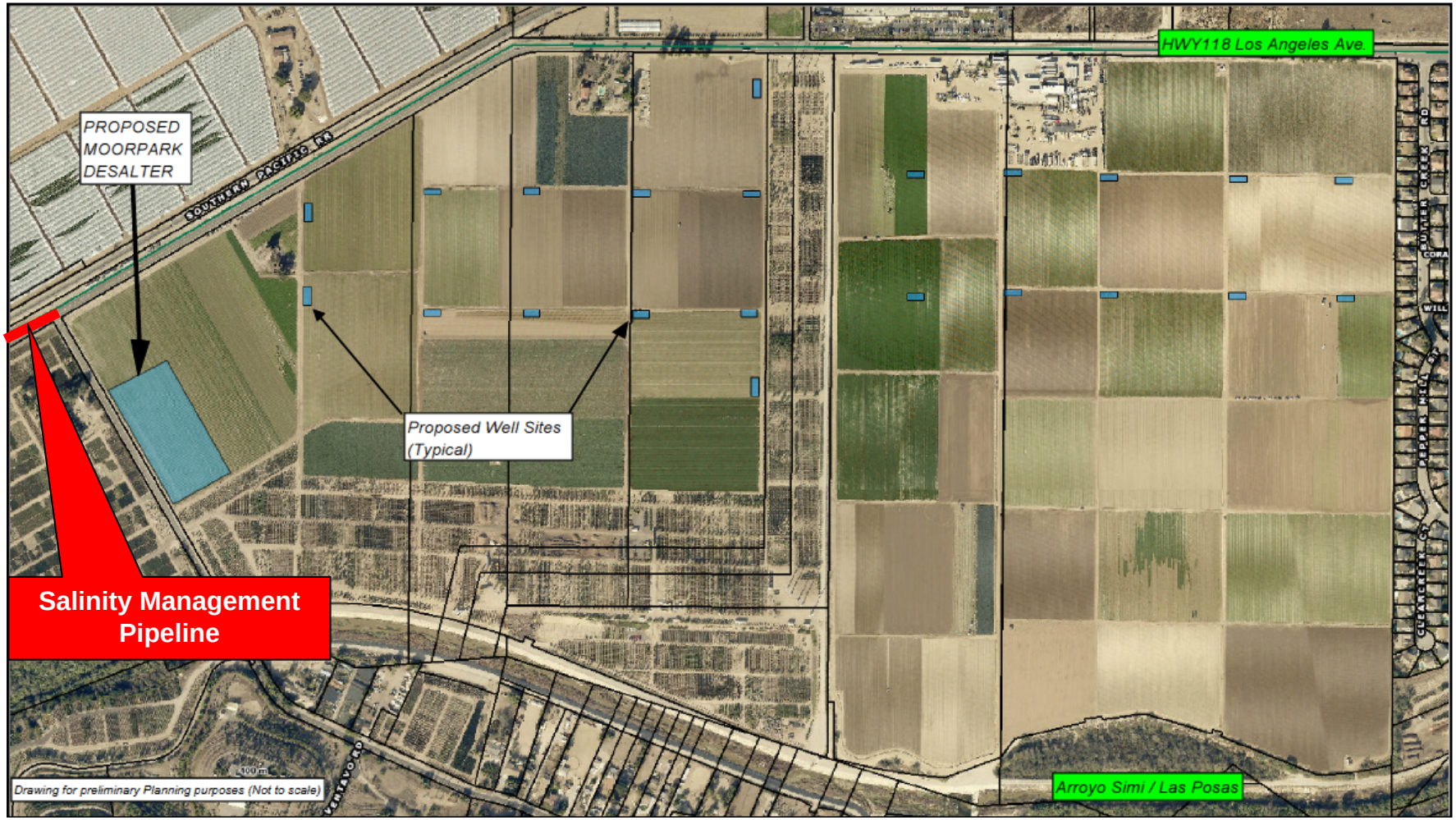


Public Works Agency

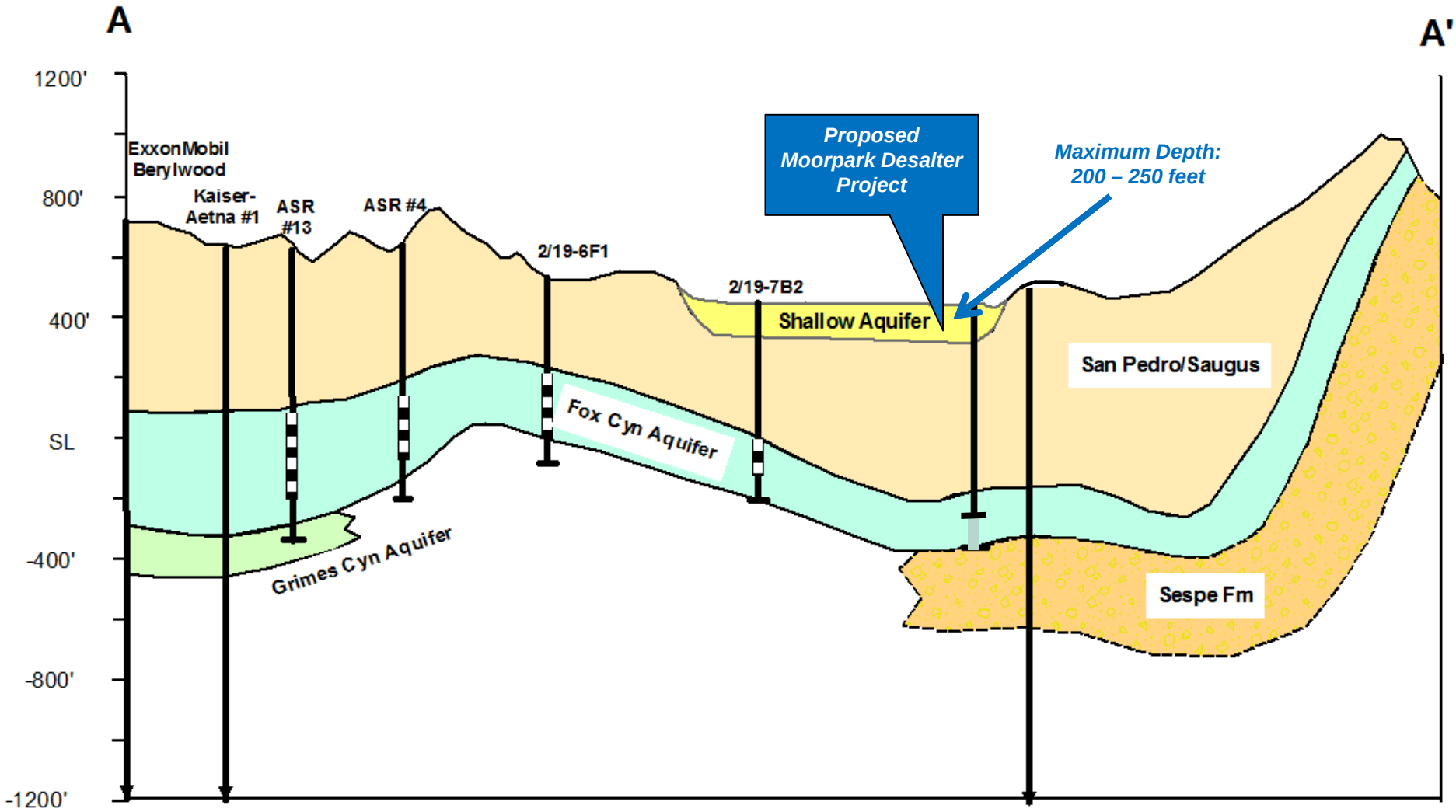
Need for Project

- **High salinity and TDS levels in the South Las Posas Groundwater Basin**
  - Problems for agricultural crops and human consumption
  - Salt plume is spreading into East and West Las Posas Basins
  - Not meeting LARWQCB's water quality objectives for the Las Posas Basin and Calleguas Creek Watershed
  - Need to improve groundwater quality and help reduce migration of the salt plume
  - Need to help local wastewater treatment plants to comply with salts TMDLs adopted by the LARWQCB in October 2007 and the Calleguas Creek Watershed Salt and Nutrient Management Plan under development
- **California is in the fourth drought year; water supply shortage**
  - Imported water is not dependable, allocation cutbacks
  - Cost of imported water has increased by 300% in 20 years
  - Need to develop local water supply and reduce dependence on imported water
  - Need to stabilize customers' water rates

Project Site Map



Fox Canyon Aquifer and Shallow Aquifer



Public Works Agency

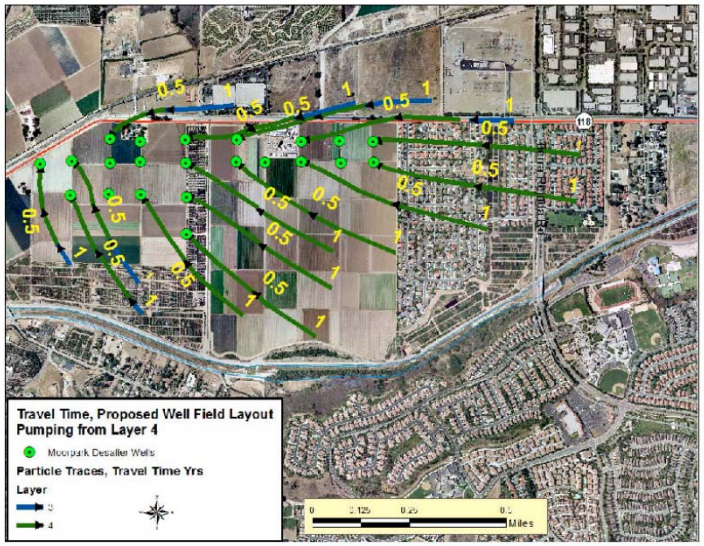
Project Description

- Up to twenty 250-foot-deep production wells
- Membrane treatment process
  - low-pressure reverse osmosis for brackish water
- Post treatment
  - pH stabilization with sodium hydroxide
  - Disinfection – chlorination system
- Produce up to 5,000 AFY or 4.5 MGD of treated water
- Treated water will be connected to VCWWD No. 1 and Calleguas MWD (wheeling) water distribution systems
- Treated water quality will be compatible with imported water quality
- Brine will be discharged into Calleguas MWD's Salinity Management Pipeline
- One MW solar photovoltaic electricity generation system

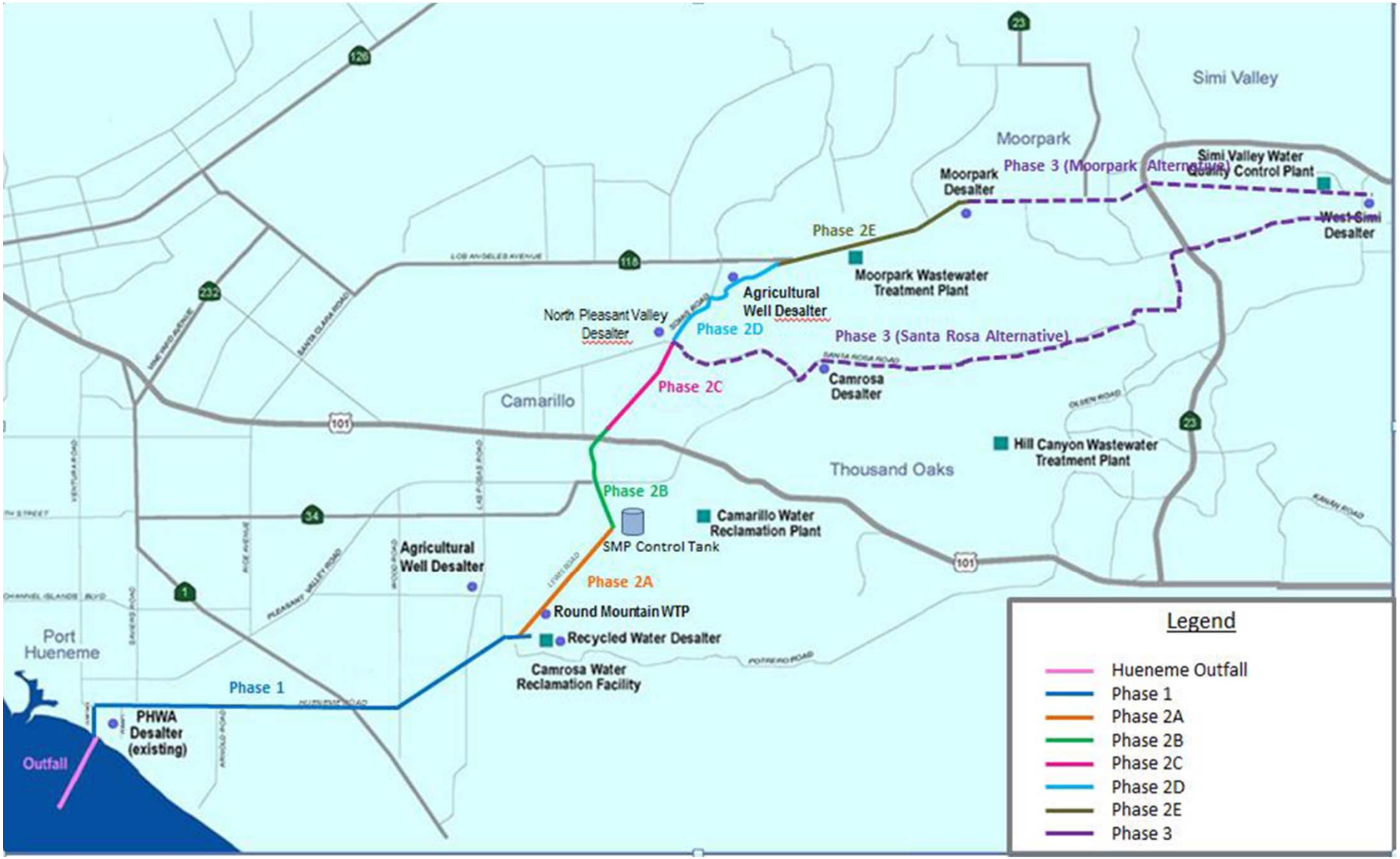
Public Works Agency

Project Readiness

- Preliminary Design Report Aug. 2010
- Pilot Well Tests Phase I Nov. 2012
- Cone Penetrometer Tests Nov. 2013
- Treated Water Distribution Infrastructure PDR Nov. 2013
- Brine Disposal Alternatives Evaluation Jan. 2014
- 3D Groundwater Modeling and Tracer Study Jan. 2015
- Pilot Well Tests Phase II April 2015
- CEQA Documents Dec. 2015



Salinity Management Pipeline



Public Works Agency

Project Physical Benefits

- Provide up to 5,000 AFY of local water supply and reduce dependence and usage of imported water.
- Remove up to 1,800,000 lb/yr of salts from the Las Posas Groundwater Basin
  - Improve groundwater quality
  - Reduce the migration of salt plume to East and West Las Posas Basins
  - Help compliance with the LARWQB permits and Calleguas Creek Watershed Salt and Nutrient Management Plan
- Increase aquifer recharge by approximately 4,000 AFY with surface water including 3,000 AFY of higher quality storm water runoff
- The one-MW solar photovoltaic system for renewable electricity generation will reduce greenhouse gas emissions
  - 2,270,785 lbs of carbon dioxide
  - 2,400 lbs of sulfur dioxide
  - 3,327 lbs of nitrous oxide
- Produce water at about $835/AF vs imported water at $1,300/AF
  - Stabilize water rates for paying customers

Public Works Agency

Project Schedule

- Second pilot well testing 2014
- 3-D groundwater modeling report and groundwater monitoring plan 2014
- Financing plan (grants and SRF loan) 2014
- CEQA documents 2014
- **Design and Construction**
  - Well field: Design–bid–build process 2015/2016
  - Membrane treatment system and solar PV system: 2017/2018 Design-build process
  - Complete construction before the SMP is extended to Moorpark Desalter
- **Operations Plan**
  - Comply with the adopted mitigation and monitoring plan

Public Works Agency

Project Cost Estimate

- Total project cost is estimated to be $50 million
- IRWM grant request is $5 million
- Ventura County Waterworks District No. 1 will provide a 50% match

Public Works Agency

Questions?

Moorpark Desalter Project Description

Ventura County Waterworks District No.1 (District) serves approximately 38,000 customers and encompasses nearly 20,000 acres including the City of Moorpark as well as contiguous unincorporated areas to the north and west. The Moorpark Desalter Project (Project) will serve the District including the downtown Moorpark area, which is a Disadvantaged Community per Figure 3-17 (Revised April 2015) "Disadvantaged Community Regions WCVC IRWM Region." Approximately 15% of the population served by the District is in the Disadvantage Community Regions. Approximately 80-85% of the average 12,400 acre-feet of water delivered to the District's customers consists of imported water; whereas, 15-20% is supplied by local groundwater wells.

The District lies within the South Las Posas Groundwater Basin which is a part of the Calleguas Creek Watershed. Salinity levels in the groundwater as well as surface waters within the area, have been increasing over the years primarily due to historic and ongoing point and non-point source pollution from the urbanization and agricultural activities in the region. Surface waters consisting of tertiary-treated wastewater, urban runoff, storm water runoff, agricultural return flows, and perennial flows from the Arroyo Las Posas are the main source of recharge to the Basin. These surface waters percolate into the South Las Posas Basin, the shallow aquifer, and eventually the Fox Canyon aquifers. The shallow aquifer in the South Las Posas basin is approximately 200 feet deep with groundwater levels at approximately 50 feet below grade. Water permeating through the soil to reach these aquifers absorbs salts that have accumulated over time and further increases the salinity of the local groundwater.

The high salt plume is currently mainly in the South Las Posas Basin. However, it is spreading and migrating into the East and West Las Posas Basins. The high salt level causes problems for agricultural crops as well as human consumption. It has become necessary for the impacted areas to blend the high-salt groundwater with the less salty imported water in order to use the groundwater supply.

The local groundwater quality is not meeting the water quality goals for salts and TDS set by the State Regional Water Quality Control Board. This project will help improve the groundwater quality by removing salts from the groundwater and meeting the Calleguas Creek Watershed Salt and Nutrient Management Plan and compliance with the RWQCB.

Through desalination and removing salt from the brackish groundwater, this assessable shallow aquifer becomes a viable water resource. It would have beneficial uses within the watershed, including municipal, industrial, and agricultural water supply and habitat. It will provide local water supply and reduce dependence and usage of imported water supply.

The Project will extract the high salinity groundwater from the shallow aquifer at a newly constructed well field and then treat the water at a state-of-the-art desalination (desalter) plant using membrane filtration technology for the removal of salts including chloride, Total Dissolved Solids (TDS), boron, and sulfate. The well field will consist of constructing approximately twenty 200-foot-deep wells, and the pumped well water will be treated at the desalination plant through a membrane process to remove the salts and TDS. The treated water will meet Title 22 potable water quality standards and will be distributed to the District's customers and potentially to other adjacent water agencies. The brine generated from the desalination plant will be discharged into the Salinity Management Pipeline being built by the Calleguas MWD. The Project will include constructing a one-mega-watt solar photovoltaic system to provide electricity and renewable energy to the facilities.

Moorpark Desalter Project Description

To further conserve water, the Ventura County Watershed Protection District is pursuing the study of the nearby Gabert Canyon Channel Restoration Project including storm water retention facilities which will create opportunities for increased groundwater infiltration and recharge.

The project physical benefits are listed as following:

1. The Project will enable the District to utilize the available local groundwater to reduce dependency on and usage of imported water. Maximizing production of local water from the South Las Posas Basin's shallow, unconfined aquifer at safe yields will serve to reduce the District's dependency on imported water from the Bay-Delta area and will help conserve resources from the State Water Project. **The project will produce up to 5,000 acre-feet per year (AFY) of local potable water and will reduce usage of State-imported water.**

2. The Project will improve and protect the Las Posas Basin water quality by removing salts from the groundwater basin. It will help local wastewater treatment plants comply with the Calleguas Creek Watershed Salt and Nutrient Management Plan and reduce the migration of salts into the East and South Las Posas Basins, thus helping to protect regional water quality. **The project will be able to remove up to 1,800,000 lb/yr of salt from the Las Posas Groundwater Basin and improve groundwater quality.**

3. The Project will create underground storage in the South Las Posas Basin's shallow aquifer which is currently full. It will increase the ability to capture higher-quality storm water runoff as well as urban runoff and other sources of surface water that would otherwise flow out to the ocean during storm events. **The project will increase aquifer recharge by approximately 4,000 acre-feet per year (AFY) with surface water including 3,000 AFY of higher quality storm water runoff into the Las Posas Groundwater Basin.**

4. The Project will incorporate the use of renewable energy and environmental conservation measures. It will include the construction of a one-mega-watt solar photovoltaic system for electricity generation. **The system will reduce greenhouse gas emissions: 2,270,785 pounds of carbon dioxide (CO_2), 2,400 pounds of sulfur dioxide (SO_2), and 3,327 pounds of nitrous oxide (N_2O).**

5. The Project will also produce water at a lower cost than the cost of imported water and help to stabilize the water rates paid by the water customers. **The Project cost to produce the local water is estimated to be $835 per acre foot (in 2015 dollars) which is less than the cost of imported water at $1,300 per acre-foot.**

Moorpark Desalter

Desalter Layout

Printed: Apr 13, 2015

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

IMPORTANT: **It is important you review the Implementation Grant Guidelines and Proposal Solicitation Package (PSP) documents before submitting a project for consideration. Pay particular attention to (1) project and applicant eligibility, (2) project benefits, and requirements for technical justification, budget, and schedule.**

PSP
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_PSP_2015_Draft_2015_0312_Public.pdf

GUIDELINES
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_GL_Draft_2015_0312_Public.pdf

PAST APPLICATIONS CAN BE FOUND AT
http://www.ventura.org/wcvc/prop84/submitted_implementation_grants.htm

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:

Ventura County Waterworks District No. 1

Agency / Organization / Individual Address:

6767 Spring Road, Moorpark, CA 93020

Possible Partnering Agencies:

Fox Canyon Groundwater Management Agency Ventura County Waterworks District No. 1 Ventura County Waterworks District No. 19 County of Ventura Ventura County Watershed Protection District Las Posas Basin Pumpers Users Group Calleguas Municipal Water District City of Moorpark City of Simi Valley

Name:

David Sasek

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Title:
Water and Sanitation Department Director

Telephone:
805-378-3005

Fax:
805-529-7542

Email:
david.sasek@ventura.org

Part 2. Project Information

Project Name:
Moorpark Desalter Project

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude: 34° 16' 30" N **Project Longitude:** 118° 55' 36" W

Location Description:	The project is located near the intersection of Los Angeles Avenue and Hitch Road on the south side of HWY 118/ Los Angeles Avenue in Moorpark.

Project Cooperating Agency(ies)/Organization(s)/Individual(s):

- David Sasek, Water and Sanitation Department Director, County of Ventura
- Susan Pan, Manager of Engineering Division
- Matthew Grieger, Project Manager

Project Status (e.g., new, ongoing, expansion, new phase):
New project

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

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Ventura County Waterworks District No.1 (District) serves approximately 38,000 customers and encompasses nearly 20,000 acres including the City of Moorpark as well as contiguous unincorporated areas to the north and west. The Moorpark Desalter Project (Project) will serve the District including the downtown Moorpark area, which is a Disadvantaged Community per Figure 3-17 (Revised April 2015) "Disadvantaged Community Regions WCVC IRWM Region." Approximately 15% of the population served by the District is in the Disadvantage Community Regions. Approximately 80-85% of the average 12,400 acre-feet of water delivered to the District's customers consists of imported water; whereas, 15-20% is supplied by local groundwater wells.

The Project will extract the high salinity groundwater from the shallow aquifer at a newly constructed well field and then treat the water at a state-of-the-art desalination (desalter) plant using membrane filtration technology for the removal of salts including chloride, Total Dissolved Solids (TDS), boron, and sulfate. The well field will consist of constructing approximately twenty 200-foot-deep wells, and the pumped well water will be treated at the desalination plant through a membrane process to remove the salts and TDS. The treated water will meet Title 22 potable water quality standards and will be distributed to the District's customers and potentially to other adjacent water agencies. The brine generated from the desalination plant will be discharged into the Salinity Management Pipeline being built by the Calleguas MWD. The Project will include constructing a one-mega-watt solar photovoltaic system to provide electricity and renewable energy to the facilities.

To further conserve water, the Ventura County Watershed Protection District is pursuing the study of the nearby Gabert Canyon Channel Restoration Project including storm water retention facilities which will create opportunities for increased groundwater infiltration and recharge.

Please describe how the project does or could integrate with other projects in the Region.

1. Calleguas Creek Watershed Salt and Nutrient Management Plan
2. Calleguas MWD: Salinity Management Pipeline Project
3. Arroyo Las Posas-Simi Arundo Removal Project
4. Ventura County Watershed Protection District: Gabert Canyon Channel Restoration Project

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

- Arroyo Los Posas - Simi
- Los Posas Groundwater Basin
-

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Please identify up to three available documents which contain information specific to the proposed project:

• Moorpark Desalter Groundwater Modeling Report, January 2015
• Watershed Coalition of Ventura County Integrated Regional Water Management Plan 2014
• Moorpark Desalter, Pilot Well Test, Summary of Cone Penetrometer Testing and Preliminary Hydrogeological Study, August 2014
• Moorpark Desalter, Brine Disposal Alternatives Evaluation, January 2014
• Moorpark Desalter, Treated Water Distribution Infrastructure Preliminary Design Report, November 2013
• Moorpark Desalter, Pilot Well Test, Summary of Operations Report and Preliminary Hydrogeological Study, February 2013
• Los Posas Basin-Specific Groundwater Management Plan, August 2012
• Calleguas Creek Watershed Salt and Nutrient Management Plan, 2012
• Moorpark Desalter Prelimlinary Design Report, August 2010

Is the proposed project an element or phase of a regional or larger program? Yes
If yes, please identify the program: 1. Calleguas Creek Watershed Salt and Nutrient Management Plan, Total Maximum Daily Load Plan. **2.** Calleguas MWD Salinity Management Pipeline Program.

Required IRWM Project Elements – Please select at least one

X	Water supply reliability, water conservation, and water use efficiency
X	Stormwater capture, storage, clean-up, treatment and management
	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
X	Non-point source pollution reduction, management and monitoring
X	Groundwater recharge and management projects
X	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users

X	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
	Watershed protection and management
X	Drinking water treatment and distribution
	Ecosystem and fisheries restoration and protection

Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

The District lies within the South Las Posas Groundwater Basin which is a part of the Calleguas Creek Watershed. Salinity levels in the groundwater as well as surface waters within the area, have been increasing over the years primarily due to historic and ongoing point and non-point source pollution from the urbanization and agricultural activities in the region. Surface waters consisting of tertiary-treated wastewater, urban runoff, storm water runoff, agricultural return flows, and perennial flows from the Arroyo Las Posas are the main source of recharge to the Basin. These surface waters percolate into the South Las Posas Basin, the shallow aquifer, and eventually the Fox Canyon aquifers. The shallow aquifer in the South Las Posas basin is approximately 200 feet deep with groundwater levels at approximately 50 feet below grade. Water permeating through the soil to reach these aquifers absorbs salts that have accumulated over time and further increases the salinity of the local groundwater.

The high salt plume is currently mainly in the South Las Posas Basin. However, it is spreading and migrating into the East and West Las Posas Basins. The high salt level causes problems for agricultural crops as well as human consumption. It has become necessary for the impacted areas to blend the high-salt groundwater with the less salty imported water in order to use the groundwater supply.

The local groundwater quality is not meeting the water quality goals for salts and TDS set by the State Regional Water Quality Control Board. This project will help improve the groundwater quality by removing salts from the groundwater and meeting the Calleguas Creek Watershed Salt and Nutrient Management Plan and compliance with the RWQCB.

Through desalination and removing salt from the brackish groundwater, this assessable shallow

aquifer becomes a viable water resource. It would have beneficial uses within the watershed, including municipal, industrial, and agricultural water supply and habitat. It will provide local water supply and reduce dependence and usage of imported water supply.

Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

1. Reduce dependence on imported water and protect, conserve and augment water supplies	Yes, the project will produce local water and reduce dependence on imported water and protect, conserve and augment water supplies.
2. Protect and improve water quality	Yes, the project will remove salt from the groundwater and therefore improve the water quality in the Las Posas Groundwater Basin.
3. Protect people, property and the environment from adverse flooding impacts	NA
4. Protect and restore habitat and ecosystems in watersheds	NA
5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	Yes, the project will provide public access, stewardship, engagement and educational opportunities for the general public.
6. Prepare for and adapt to climate change	Yes, the project produces and utilizes renewable energy source and helps reduce greenhouse gas emission.

Part 5. Program Preferences Addressed by the Project – Check all that Apply

	Regional project or program - covers multiple watersheds
X	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR

X	Effectively resolves significant water-related conflicts within or between regions
X	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
X	Addresses critical water supply or water quality needs of disadvantaged communities within the region
	Effectively integrate water management with land use planning
X	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
X	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	Completed	**(8/2010)**
Feasibility Study (or background documentation)	Completed	**(1/2014)**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)	90% Completed	**(8/2014)**
CEQA/NEPA	In progress	**(9/30/2015)**
Permits	In progress	**(12/30/2015)**
Construction Drawings	In progress	**(9/30/2015)**
Detailed Schedule		Will project go to bid by April 1, 2016? __Yes__ yes/no Will project by completed by October 31, 2020? __Yes__ yes/no

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PROJECT INPUT FORM
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Detailed Budget Available	Yes (yes/no)	If no, indicate when will be provided:
Funding match of 25% or more. Please indicate	Yes (yes/no)	Source of match: VCWWD #1 Capital Reserve Fund

For projects that do not include construction, please briefly describe the project readiness-to proceed.

NA

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

1. The Project will enable the District to utilize the available local groundwater to reduce dependency on and usage of imported water. Maximizing production of local water from the South Las Posas Basin's shallow, unconfined aquifer at safe yields will serve to reduce the District's dependency on imported water from the Bay-Delta area and will help conserve resources from the State Water Project. **The project will produce up to 5,000 acre-feet per year (AFY) of local potable water and will reduce usage of State-imported water.**

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surface water including 3,000 AFY of higher quality storm water runoff into the Las Posas Groundwater Basin.

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5. The Project will also produce water at a lower cost than the cost of imported water and help to stabilize the water rates paid by the water customers. **The Project cost to produce the local water is estimated to be $835 per acre foot (in 2015 dollars) which is less than the cost of imported water at $1,300 per acre-foot.**

Does the project address any known environmental justice issues?
☐ **Yes** ☒ **No** ☐ **Not Sure**

Is the project located within or adjacent to a disadvantaged community?
☒ **Yes** ☐ **No** ☐ **Not Sure**

Does the project include disadvantaged community participation?
☒ **Yes** ☐ **No** ☐ **Not Sure**
If yes, please identify the group or organization: The project serves the downtown Moorpark area, which is a Disadvantaged Community per Figure 3-17 (Revised April 2015) Disadvantaged Community Regions WCVC IRWM Region. Approximately 15% of the population served by the District are in the Disadvantage Community Regions.

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($): $45,132,000.00

Upper estimated total capital cost ($): $52,830,000.00

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($):
$1,000,000.00

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PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Annual Operation and Maintenance Cost ($): $2,220,000.00

Design Life of Project (years): 50

PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	**Yes, VCWWD #16 is a project recipient for Prop 84 Round One, and VCWWD #1 is a project recipient for Round Two.**
Have you adopted the 2014 IRWM Plan Update?	**Yes, the County of Ventura has adopted the 2014 IRWM Plan Update.**
Is your project currently listed in the 2014 IRWM Plan?	**Yes, the desalter project is listed in the 2014 IRWM Plan.**
Can you provide a high-quality map of your project location?	**Yes.**
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	**No.**
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	**No.**
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	**Yes.**
Does your project assist with the current drought, and how?	**Yes, the project provides local water supply and reduces need and use of State imported water.**
Can you provide technical analysis for your	**Yes.**

project to support claimed physical benefits?	

NOTE: Your agency must be willing to accept all of the terms of the Grant Agreement executed by the Department of Water Resources. Boilerplate language that was used in Round 2 can be found at:
http://www.water.ca.gov/irwm/grants/docs/Resources/ContractTemplates/GrantAgreement_Template_P84R2__FINAL.pdf

Cal Trout
Invasive Plant Removal

Santa Clara River
Steelhead Coalition

IRWM Invasive Plant Removal, Ecosystem Restoration, and Habitat Protection Project – Santa Clara River Steelhead Coalition

Santa Clara River Watershed Committee Meeting
April 17, 2015
Santa Paula, CA

Santa Clara River Steelhead Coalition

Contents

1. Implementing Agent
2. Project Information
3. Project Need
4. IRWMP Objectives Addressed
5. Program Preferences Addressed
6. Project Readiness
7. Physical Benefits
8. Cost Estimate
9. Additional Information
10. Q&A

Santa Clara River Steelhead Coalition

1. Implementing Agent: California Trout on behalf of the SCR Steelhead Coalition

California Trout is the Chair of the Santa Clara River Steelhead Coalition, which is an active member of the Santa Clara River Watershed Committee. The Coalition is a collaboration of non-profit organizations, government resource agencies, and interested stakeholders - that's mission is to protect and restore wild Southern California steelhead (*Oncorhynchus* mykss) and its habitat in the Santa Clara River watershed.

Members:

CALIFORNIA TROUT
KEEPER OF THE STREAMS

Wishtoyo

VENTURA COASTKEEPER

The Nature Conservancy
Protecting nature. Preserving life.™

STOECKER ECOLOGICAL

UCSB

msi

Santa Clara River
Steelhead Coalition

Coalition Participants include:

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

Coastal Conservancy

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

Stillwater Sciences

Santa Clara River Watershed Conservancy
preserving the nature of our communities

Santa Clara River Steelhead Coalition

2. Project Information

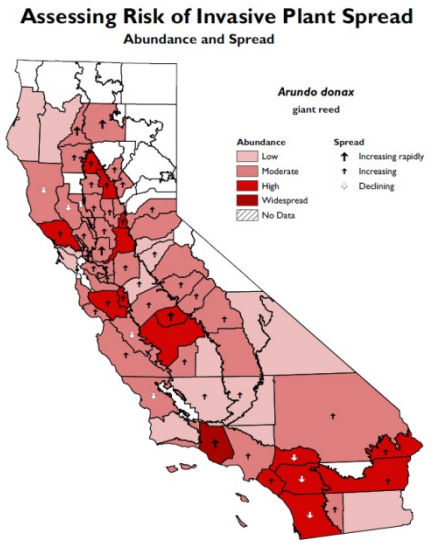
The Problem:

- Uses six times as much water as native plants
- Higher fire frequency and intensity.
- Modified river hydrology and extensive flood damage
- Outcompetes native plant species – reduce wildlife habitat

Giant reed chokes riversides and stream channels, crowds out native plants, interferes with flood control, increases fire potential, and reduces habitat for wildlife.

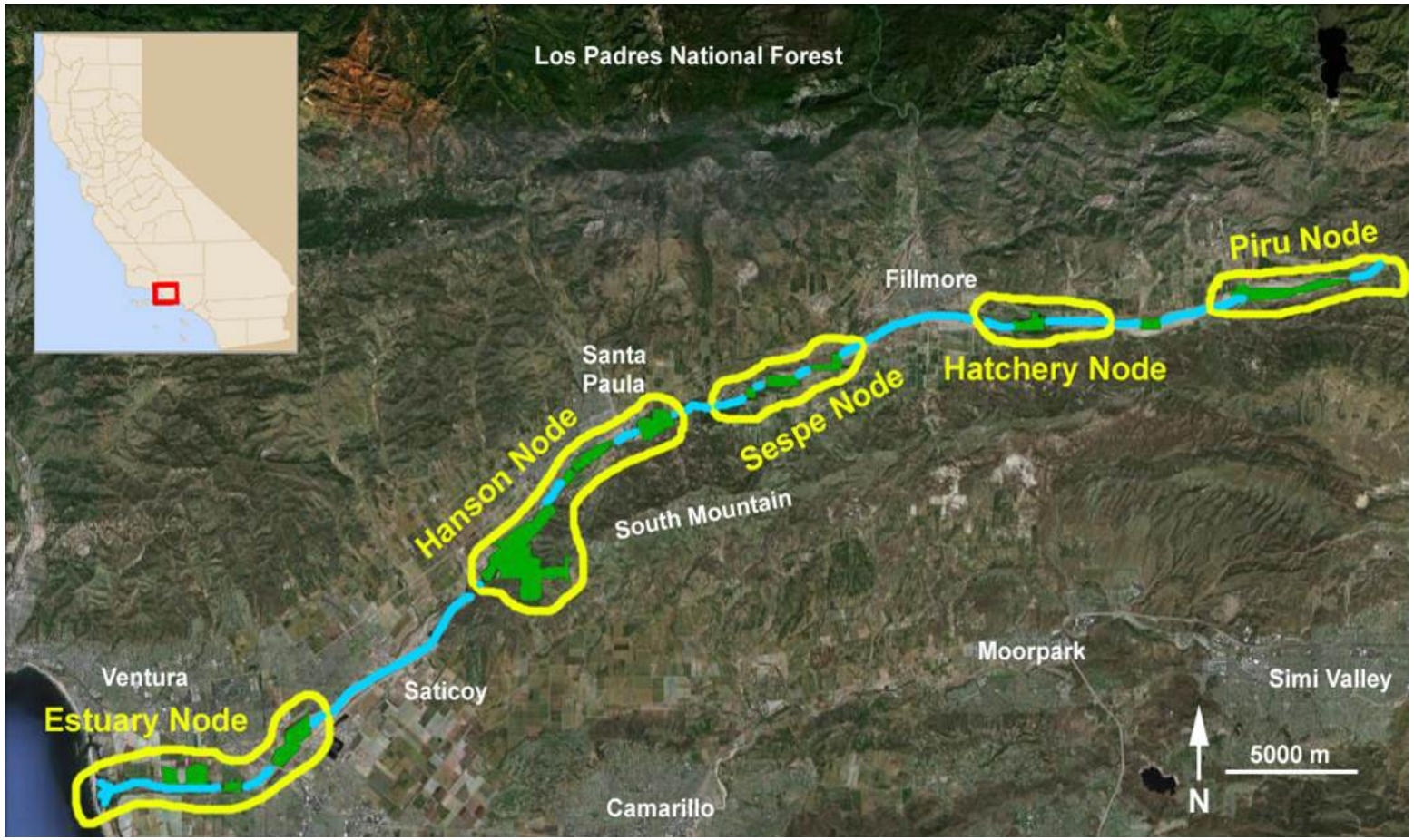
During floods, large rafts of dislodged arundo can cause bridges to collapse as tons of arundo pile up around bridge supports.

The long, fibrous, interconnecting root mats of giant reed form a framework for debris dams behind bridges, culverts, and other structures that lead to damage.

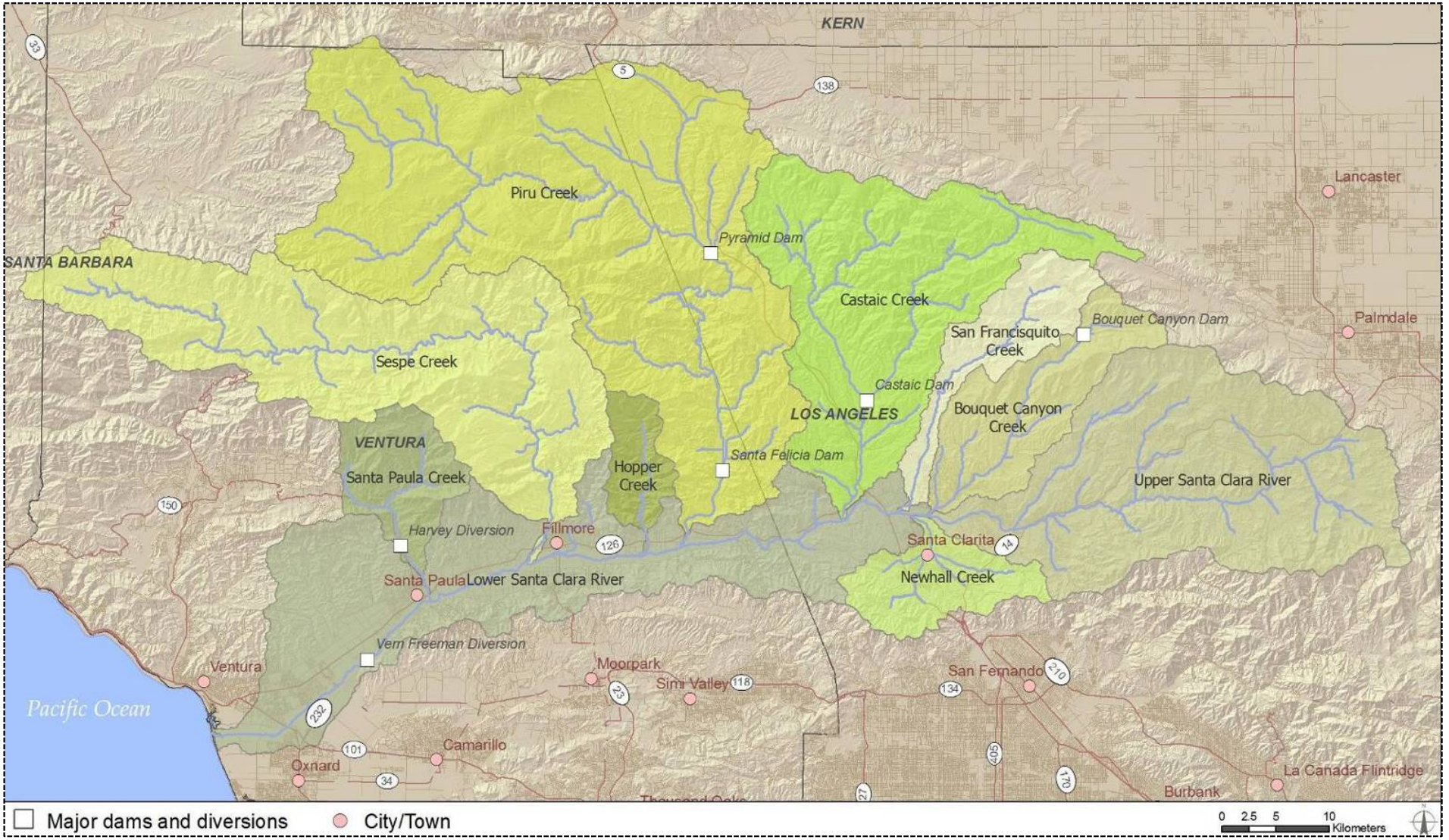


Santa Clara River
Steelhead Coalition

Location: Santa Clara River Floodplain, river reach between Sespe Creek and Santa Paula Creek (6 mi). Flow originating in this reach provides recharge for the underlying Fillmore and Santa Paula Groundwater Basins and Oxnard Plain. We're in discussions to incorporate sites in Santa Clarita in the Upper Santa Clara River Watershed.



Santa Clara River
Steelhead Coalition



Santa Clara River Steelhead Coalition

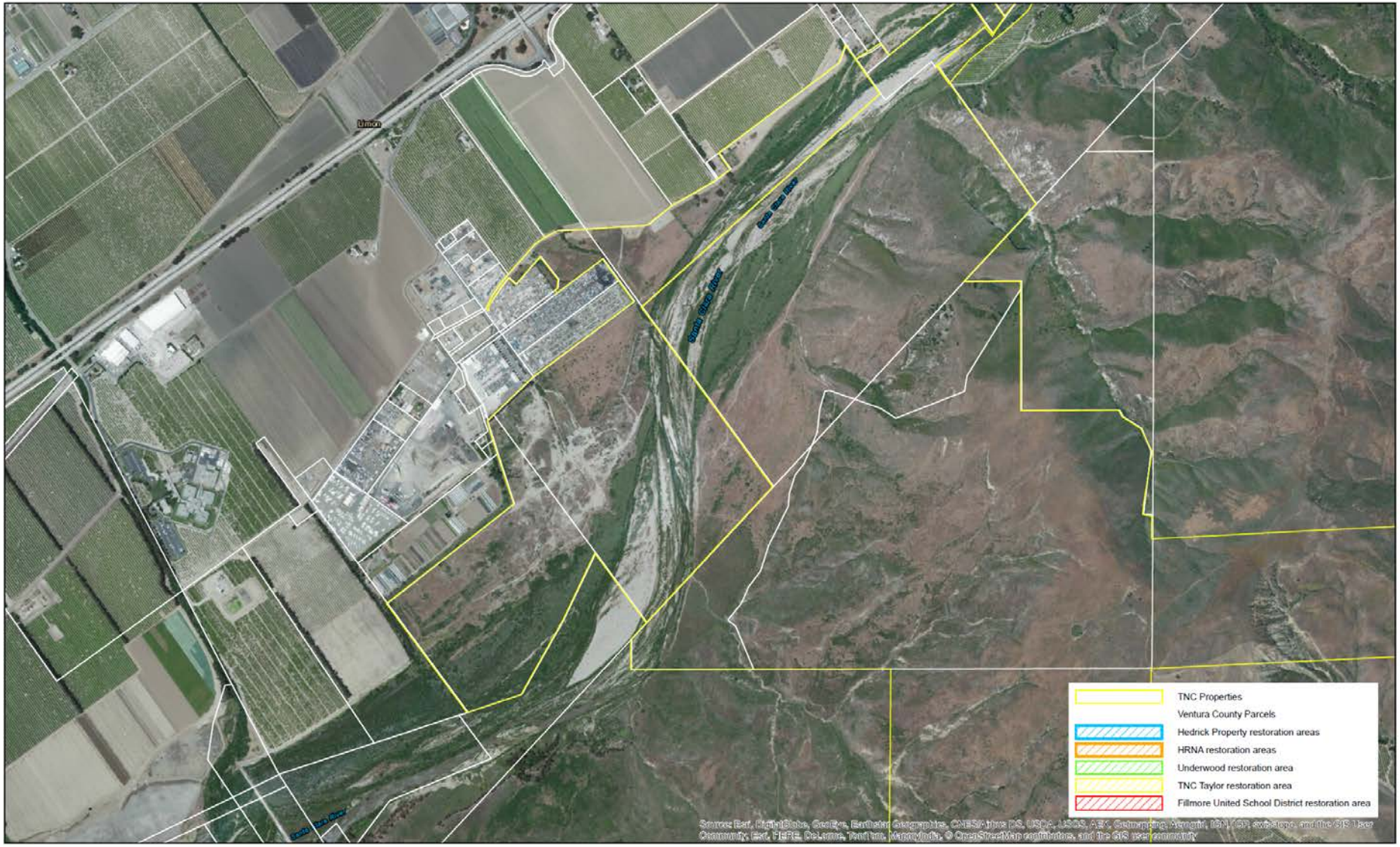
- **Partnering Agencies:**

- The Nature Conservancy (20 acres Taylor, 60 acres Peto)
- UC Santa Barbara
- Friends of the Santa Clara River (40 acres)
- Hedrick Ranch Nature Area
- City of Santa Clarita (?)

- **Possible Cooperating Agencies:**

- City of Santa Paula
- Private Landowners: Ralph and Ann Winn APN 107-0-011-220 (79.67 acres), Davide and Valarie Lagesse APN 107-0-050-425 (33.32), United Harvey Properties/Vintage Oil LLC APN 107-0-050-025 (5.86), Farmers Irrigation Co. APN 107-0-043-055 (23.83 acres), Linda Espinosa APN 046-0-230-250 (46.60 acres), Joseph Pierce/Rio Vista Citrus Co. APN 107-0-011-205 (19.15), Mike Levy (>208.43 acres)

Santa Clara River
Steelhead Coalition



Santa Clara River Restoration Areas
Hanson Reach

Santa Clara River
Steelhead Coalition

Santa Clara River Restoration Areas
Bunn-Birrell Reach

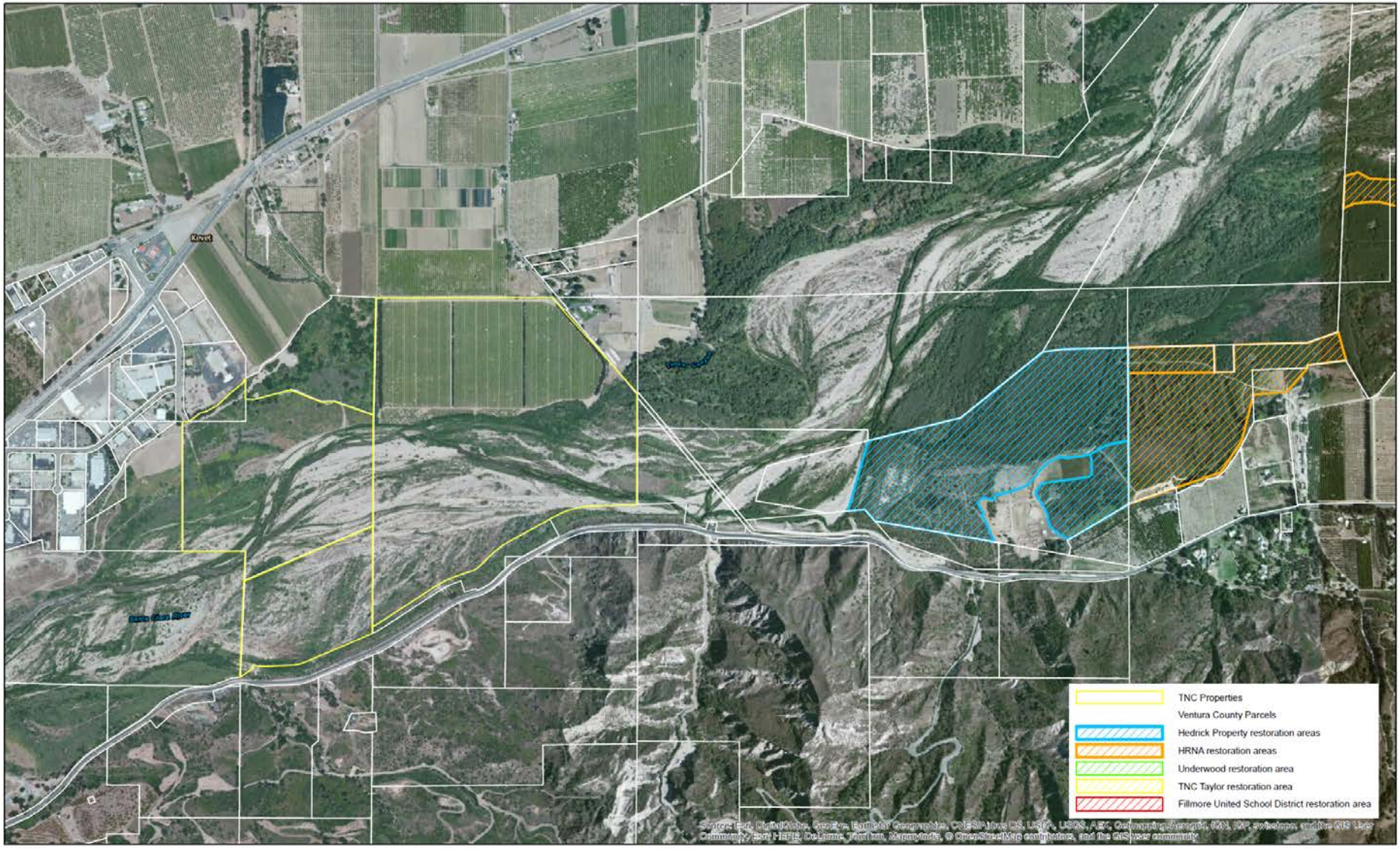
Santa Clara River
Steelhead Coalition

Santa Clara River Restoration Areas
12th Street Reach

N

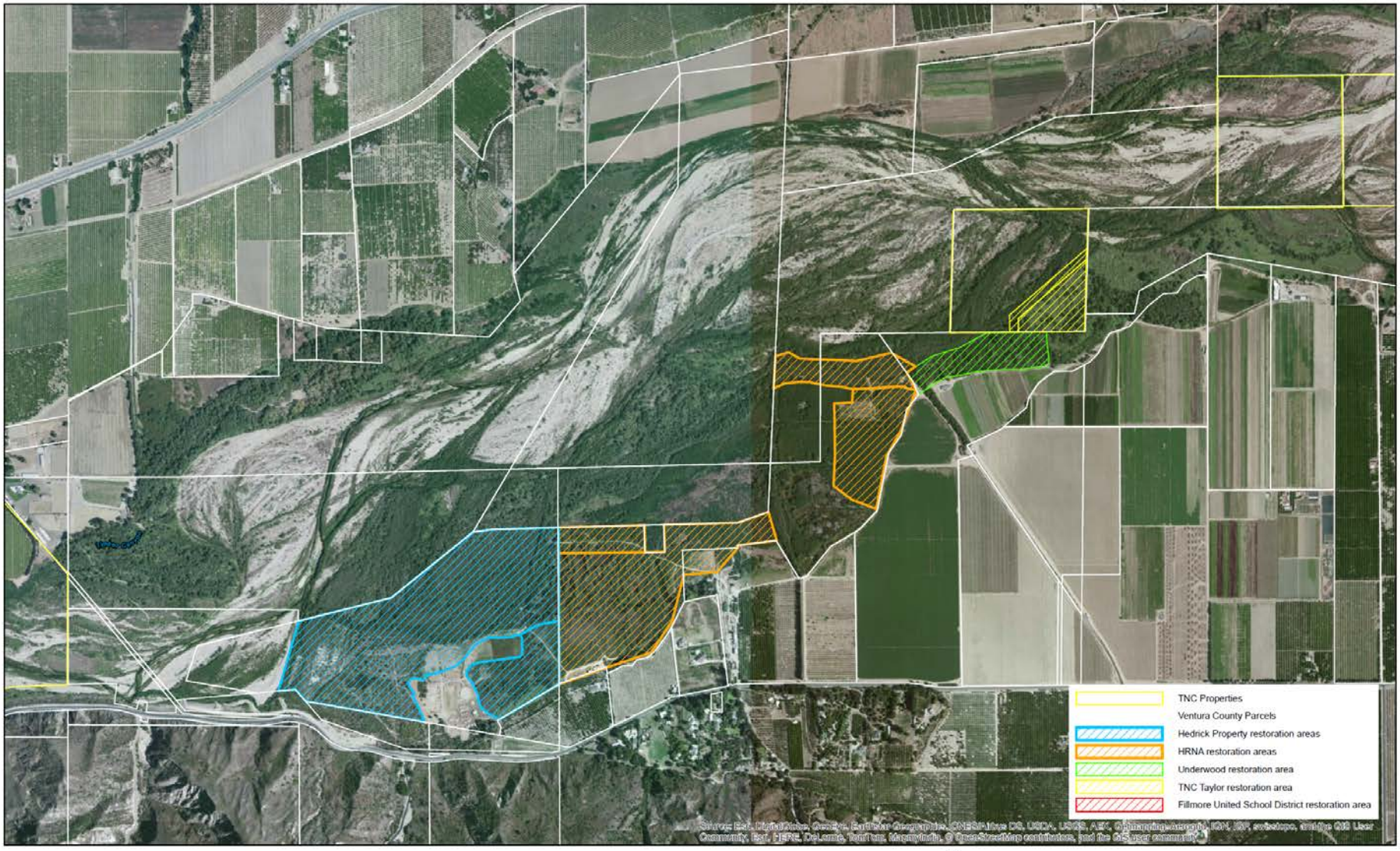
Meters
0 125 250 500 750 1,000

Santa Clara River
Steelhead Coalition



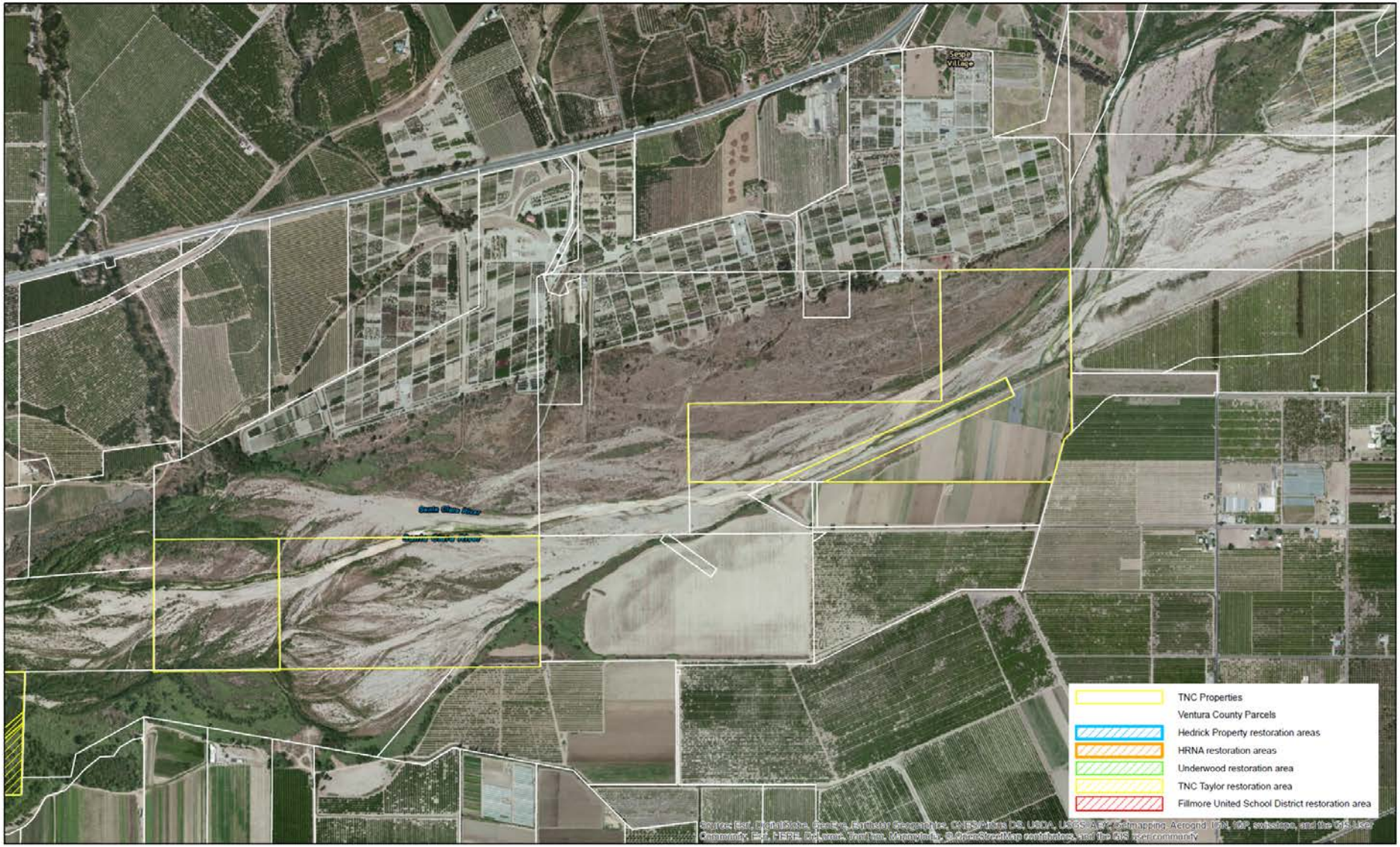
Santa Clara River Restoration Areas
Peto Reach

Santa Clara River
Steelhead Coalition



Santa Clara River Restoration Areas
HRNA Reach

Santa Clara River
Steelhead Coalition

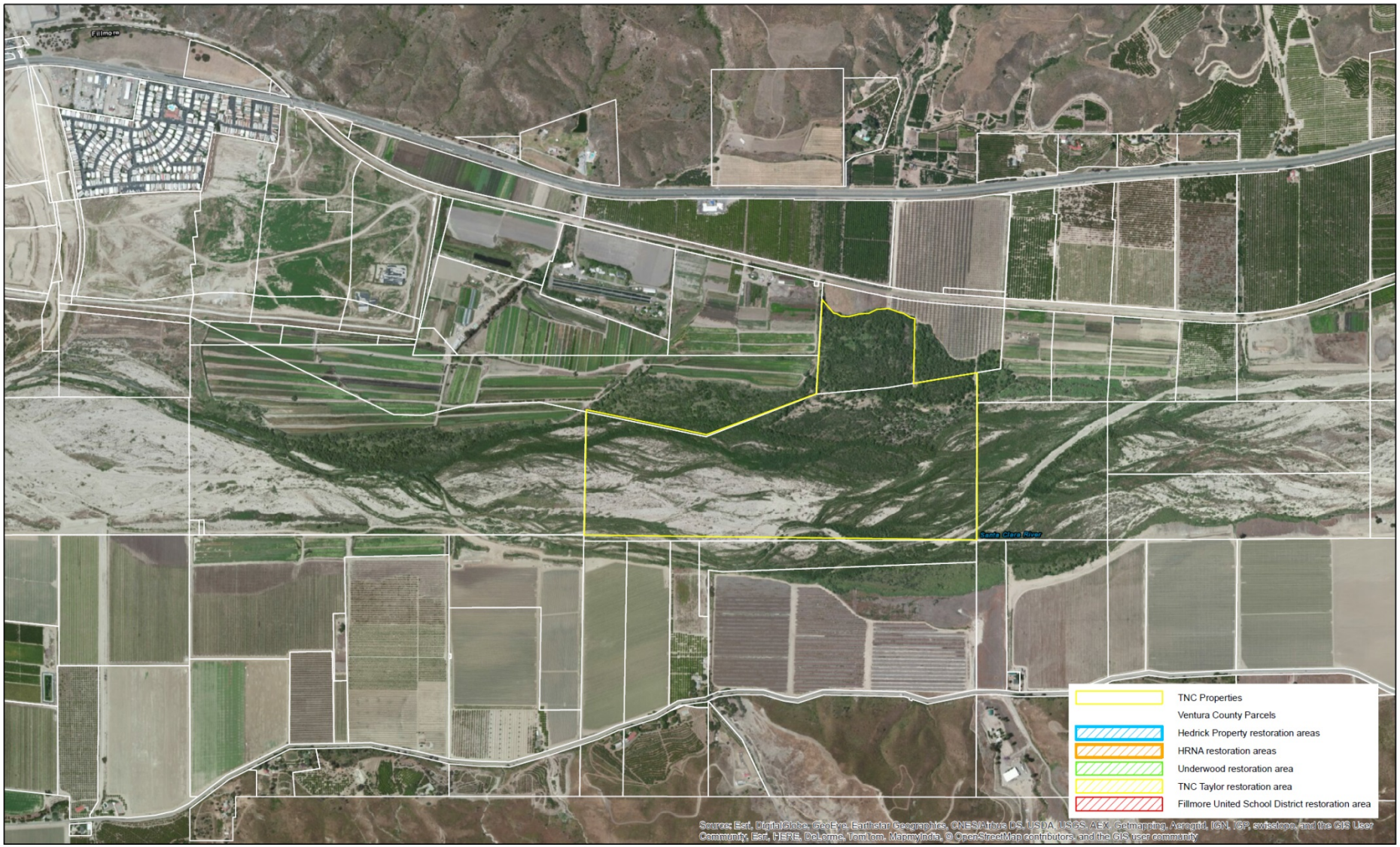


Santa Clara River Restoration Areas
Aflalo Reach

Santa Clara River
Steelhead Coalition

Santa Clara River Restoration Areas
Fillmore USD Farm Reach

Santa Clara River
Steelhead Coalition



Santa Clara River Restoration Areas
Fillmore Fish Hatchery Reach

N

0 125 250 500 750 1,000 Meters

Santa Clara River Steelhead Coalition

Status: Expansion of 2013 Prop 84 Round 2 UC Santa Barbara Invasive Plant Removal, Ecosystem Restoration, and Habitat Protection in the Santa Clara River (Santa Clara River Restoration.)

Overview

- Restore between 150 and 200 acres of riparian habitat over a period of four years, by removing arundo (*Arundo donax*; giant reed) and other invasive plant species.
- Part of a large-scale effort by the California Coastal Conservancy to eliminate arundo to improve water resources in the Region.
- Create a large, contiguous native riparian zone through a series of related, but stand-alone, restoration projects, and building on an existing IRWM Prop 84 Round 2 Implementation Santa Clara River Restoration project.
- Meets SCR Steelhead Coalition Strategic Objectives.
- Passive and active revegetation strategies will be used to re-establish riparian forests and a wetlands buffer to improve water quality of agricultural run-off entering the Santa Clara River and to provide wildlife habitat for riparian and wetland species.

Santa Clara River
Steelhead Coalition

- The parcels selected are important to recovery of the endangered southern steelhead and 45 other special status species on the lower Santa Clara River.
- Removal of water-intensive invasive species will conserve approximately 3,500 AFY of water.
- Water previously consumed in excess by invasive species will instead provide much needed recharge to the overdrafted groundwater basins along the Santa Clara River, including the Santa Paula and Oxnard Basins (DWR Basins 4-4.02 and 4-4.04, respectively).
- Groundwater is the largest single source of water for the cities of Fillmore and Santa Paula and is the primary source of water for agriculture in the Santa Clara River.
- Additional recharge helps resolve conflicts between groundwater users in the local basins. Improved streamflow and recharge is necessary to resolve conflicts between urban, agricultural, and environmental water (endangered southern steelhead) demands.

Santa Clara River Steelhead Coalition

Project Description:

- Removal will be consistent with methods described in the Coastal Conservancy's Santa Clara River Parkway Strategic Plan for Arundo Treatment & Post-Treatment Revegetation.
- The methods employed will vary depending on density of arundo, season, and presence of sensitive plants and wildlife.
- Revegetation will follow arundo removal. Passive revegetation is anticipated for areas that receive periodic flood flows. Where passive recovery is unlikely, active planting will occur, using plants propagated from local seeds and cuttings, and when necessary, container plants.
- All plants will be monitored for 3-4 years from the beginning of the project to track mortality and evaluate whether additional planting will be necessary.
- Maintenance activities, including controlling invasive plants and arundo resprouts, and watering plants that show signs of desiccation, will be performed regularly during this period.
- Retreatment of arundo regrowth will occur once or twice annually for at least three years to ensure that all arundo plants have been killed.

Santa Clara River Steelhead Coalition

Goals & Objectives

1) Control arundo populations and other non-native, invasive plant species to reduce impacts to native ecosystems and allow native species to reestablish.

2) Restore native plant communities using a scientifically and ecologically-based approach to promote long-term ecosystem stability and conservation benefits.

3) Design a long-term biological monitoring program to facilitate a scientific evaluation of outcomes and successes.

4) Increase groundwater recharge to overdrafted basins by replacing high water use non-native plants with native plants.

5) Create a riparian forest and wetland buffer to provide wildlife habitat and water quality benefits.

6) Reduce flood and fire threats.

7) Provide outreach, access, and natural resource information regarding local and watershed restoration.

Santa Clara River
Steelhead Coalition

IRWMP Project Elements

x	Water supply reliability, water conservation, and water use efficiency
	Stormwater capture, storage, clean-up, treatment and management
x	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
x	Groundwater recharge and management projects
	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
x	Watershed protection and management
	Drinking water treatment and distribution
x	Ecosystem and fisheries restoration and protection

Santa Clara River
Steelhead Coalition

3. Purpose and Need

- The California Invasive Plant Council (Arundo donax Distribution and Impact Report, March 2011, provided with this Work Plan) shows that arundo can use up to six times as much water as native vegetation.
- This high water consumption is undesirable in the Santa Clara River as it limits groundwater recharge of the Fillmore, Santa Paula, and Oxnard Plain groundwater basins.
- Arundo is also known to be highly flammable. The California Invasive Plant Council estimates the fuel load of arundo is three times greater than that of native vegetation.
- Large stands of arundo creates river flow obstruction and debris dams (as demonstrated in the photo below), thereby increasing risks of flooding and related damages (*Stillwater Sciences. 2011. Santa Clara River Parkway Strategic Plan for Arundo Treatment and PostTreatment Revegetation*).

Santa Clara River Steelhead Coalition

- California Invasive Plant Council evaluated arundo impacts to species listed under the federal Endangered Species Act & found that arundo changed abiotic and biological functions in a way that moderately to severely impacted amphibian species such as arroyo toad, fish species (i.e., unarmored three spine stickleback & steelhead), and bird species such as the southwestern willow flycatcher and least Bell's vireo (California Invasive Plant Council. 2011. *Arundo donax Distribution and Impact Report*).

- Improving over summer rearing habitat and sustaining in-stream flows that connect and provide fish passage from the mainstem (migration corridor) to Santa Paula and Sespe Creek tributaries (rearing and spawning habitat) is integral to recovering steelhead in the watershed. While Sespe Creek has the most diverse habitat, Santa Paula Creek has the most productive habitat, as for these reasons these subbasins as well as fish passage to these subbasins are high Coalition priorities.

- Removing arundo and restoring native riparian forests will increase groundwater recharge, enhance wildlife value of associated wetlands, reduce flooding damage caused by accumulation of arundo biomass, and diminish the risk of and impact from wildfire which have killed a substantial number of riparian dependent trees in the project area.

Santa Clara River
Steelhead Coalition

4. IRWMP Objectives Addressed by Project

1. Reduce dependence on imported water and protect, conserve and augment water supplies	By removing Arundo and restoring native vegetation the project will directly contribute to water conservation in the region (i.e., by limiting substantially higher evaptranspiration rates.)
2. Protect and improve water quality	Passive and active revegetation strategies will be used to re-establish riparian forests and a wetlands buffer to improve water quality of agricultural run-off entering the Santa Clara River and to provide wildlife habitat for riparian and wetland species (i.e., through natural ecosystem services.)
3. Protect people, property and the environment from adverse flooding impacts	Flooding damage will be reduced by removing the accumulation of arundo biomass in stream.
4. Protect and restore habitat and ecosystems in watersheds	By removing Arundo and restoring native riparian forests, this will not only provide a terrestrial habitat corridor, but also increase groundwater recharge and associated in-stream flow – this will provide over summer rearing habitat for steelhead, as well as adequate connectivity along its migration corridor to critical rearing and spawning habitat in both Santa Paula and Sespe Creeks.
5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	Goal 3 of the Santa Clara River Parkway Project is to provide public access and environmental education, including the creation of a continuous public trail system along the length of the parkway. TNC currently offers access and walks on their properties. Furthermore the Coalition has a grant in to American Waters to provide volunteer and training opportunities to volunteers interested in Arundo removal.
6. Prepare for and adapt to climate change	Climate Change trends show a decrease in precipitation, an increase in extreme rainfall events resulting in floods, and an increase in fire frequency and intensity. By removing Arundo we are integrating our response to climate change by addressing a threat that exacerbates the aforementioned climate change projections, thus building the resilience of our watershed.

Santa Clara River Steelhead Coalition

5. Program Preferences Addressed

- Regional project or program - covers multiple watersheds
- Effectively resolves significant water-related conflicts within or between regions
- Addresses critical water supply or water quality needs of disadvantaged communities within the region
- Addresses statewide priorities including climate change mitigation/adaptation

Santa Clara River Steelhead Coalition

6. Project Readiness

- **Conceptual Plans – NA**
- **Feasibility Study (or background documentation) – Done**
- **Preliminary Design (i.e., 30%, 60%, 90%, 100%) -** All design activities have been completed and are found in the Taylor Property Habitat Restoration Plan and Santa Clara River Parkway Strategic Plan for Arundo Treatment and Post-treatment Revegetation.
- **CEQA/NEPA -** The planning and design for the project is done, but minor work related to CEQA review and permitting remains to be completed in 2015. The 2013 IRWM resulted in a CEQA Exemption. USFWS Biological Opinions. **To be initiated once project is approved.**
- **Permits -** VCWPD Encroachment Permit, Land Owner Access Agreements , Streambed Alteration Agreement (depending on willing landowners – some may be new, others will be amendments.) **To be initiated once project is approved.**
- **Construction Drawings – NA**
- **Detailed Schedule -** Project go to bid by April 1, 2016 and be completed by October 31, 2020.
- **Detailed Budget -** First draft will be provided for review by May 29, 2015.
- **Funding match of 25% -** Possible 5-10% CoSC, NOAA grant May 2015, and in-kind match

Santa Clara River
Steelhead Coalition

7. Physical Benefits

- Conserve 3,500 AFY.
- Water savings will help address groundwater overdraft in the Santa Paula and Oxnard Basins, thereby helping to resolve significant waterrelated conflicts within the Region.
- Invasive species control will reduce the amount of arundo biomass that could act as flood debris and exacerbate river flooding.
- Improved habitat will attract birds and other wildlife, providing enhanced recreational opportunities for wildlife viewing from existing trails.
- Improved habitat will benefit species listed as “threatened”, “endangered”, or “special concern” under the federal and California Endangered Species Acts (“sensitive species”). The lower Santa Clara River is home to 46 sensitive species, many negatively impacted by arundo (due to lack of shading and poor foraging and nesting habitat). Sensitive species that will benefit from arundo removal include amphibians such as the arroyo toad, fish species such as the unarmored three spine stickleback and southern steelhead, and bird species such as the southwestern willow flycatcher and least Bell’s vireo.
- Invasive species control will reduce the amount of flammable biomass in the watershed and allow the river to again act as a fire break.

Santa Clara River
Steelhead Coalition

8. Cost Estimate

- Lower estimated total capital cost ($): $1,450,000
- Upper estimated total capital cost ($): $1,950,000
- Annual Operation and Maintenance Cost ($): $450,000
- Design Life of Project (years): $100,000

Santa Clara River Steelhead Coalition

9. Additional Information

- **Have you applied for a Proposition 84 grant after January 1, 2012?** No, project partners have – i.e., UCSB Santa Clara River Restoration Project, and TNC.

- **Have you adopted the 2014 IRWM Plan Update?** No, but CalTrout has a board meeting on April 22, 2015 when a Board Resolution and Plan adoption can be tabled on the agenda.

- **Is your project currently listed in the 2014 IRWM Plan?** Yes.

- **Can you provide a high-quality map of your project location?** Yes.

- **For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?** No.

- **The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?** Unsure, this needs to be endorsed at CalTrout's upcoming board meeting. However, one of our Projects Proponents is UCSB, who have received IRWM funds before.

Santa Clara River
Steelhead Coalition

9. Additional Information Continued:

- **Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?** Yes, Candice Meneghin is hired as the Santa Clara River Steelhead Coalition Chair and her salary is covered by a California Department of Fish and Wildlife Fisheries Restoration Grant Program grant.

- **Does your project assist with the current drought, and how?** Yes, a primary benefit of this project is to remove Arundo that transpirates some six times faster that native vegetation, thus helping conserve water, recharge groundwater basins, as well as improve in stream flows.

- **Can you provide technical analysis for your project to support claimed physical benefits?** Yes.

Santa Clara River Steelhead Coalition

Thank You!

Candice Meneghin
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(310) 890 2834
cmeneghin@caltrout.org

@SCRSC - Santa Clara Steelhead
Santa Clara River Steelhead Coalition
www.caltrout.org/regions/southern-california-region/santa-clara-river/scrsc

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

IMPORTANT: **It is important you review the Implementation Grant Guidelines and Proposal Solicitation Package (PSP) documents before submitting a project for consideration. Pay particular attention to (1) project and applicant eligibility, (2) project benefits, and requirements for technical justification, budget, and schedule.**

PSP
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_PSP_2015_Draft_2015_0312_Public.pdf

GUIDELINES
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_GL_Draft_2015_0312_Public.pdf

PAST APPLICATIONS CAN BE FOUND AT
http://www.ventura.org/wcvc/prop84/submitted_implementation_grants.htm

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:
California Trout, Inc.

Agency / Organization / Individual Address:
360 Pine St. 4th Floor, San Francisco, CA 94104.

Possible Partnering Agencies:
The Nature Conservancy, UC Santa Barbara, Friends of the Santa Clara River, Hedrick Ranch Nature Area, City of Santa Clarita, City of Santa Paula, Farmers Irrigation Company, landowners.

Name:
Candice Meneghin

Title:
Conservation Manager, Southern California & Santa Clara River Steelhead Coalition Chair.

Telephone:
(805)665-6203

Fax:
(415)392-8895

Email:
cmeneghin@caltrout.org

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Part 2. Project Information

Project Name:

Santa Clara River Steelhead Coalition - Invasive Plant Removal, Ecosystem Restoration, and Habitat Protection in the Santa Clara River (Santa Clara River Restoration)

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude: 34°20'23.2" N **Project Longitude:** 119°4'5.51" W

Location Description:	Restoration will occur along the Santa Clara River floodplain, in the river reach between Sespe Creek and Santa Paula Creek (approximately 6 river miles). Flow originating in this reach provides recharge for the underlying Fillmore and Santa Paula Groundwater Basins and the Oxnard Plain. We have begun discussions, and there is interest to incorporate sites in Santa Clarita in the Upper Santa Clara River Watershed.

Watershed (Check all that apply):

Calleguas Creek ☐	**Santa Clara River** ☐	**Ventura River** ☐	**Countywide** ☐

Project Cooperating Agency(ies)/Organization(s)/Individual(s):

• The Nature Conservancy
• University of California, Santa Barbara – Marine Science Institute's Riparian Invasion Research Laboratory
• Friends of the Santa Clara River
• Hedrick Ranch Nature Area
• City of Santa Clarita (Speaking with Heather Merenda)
• City of Santa Paula
• Farmers Irrigation Company
• Private Landowners: Mike Levy, Ralph and Ann Winn, Harvey, Vintage Petroleum LLC., David and Valery Lagesse Trust, Rio Vista Citrus Co., Ventura County Transport, Linda Espanosa.

Project Status (e.g., new, ongoing, expansion, new phase):

Expansion of 2013 Prop 84 Round 2 UC Santa Barbara Invasive Plant Removal, Ecosystem Restoration, and Habitat Protection in the Santa Clara River (Santa Clara River Restoration)

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

Overview

California Trout is the Chair of the Santa Clara River Steelhead Coalition, which is an active member of the Santa Clara River Watershed Committee. The Coalition is a collaboration of non-profit organizations, government resource agencies, and interested stakeholders - that's mission is to protect and restore wild Southern California steelhead (*Oncorhynchus* mykss) and its habitat in the Santa Clara River watershed. To that end the Coalition has drafted a Strategic Plan, Work Plan and Outreach, Education and Community Engagement Plan which prioritizes the group's steelhead recovery efforts.

This project will remove arundo (*Arundo donax*; giant reed) and restore habitat in the Santa Clara River floodplain in an identified critical wildlife zone. The project is part of a large-scale effort by the California Coastal Conservancy to eliminate arundo from the watershed to improve water resources in the Region. The goal of the overall effort is to create a large, contiguous native riparian zone through a series of related, but stand-alone, restoration projects, and building on an existing IRWM Prop 84 Round 2 Implementation Santa Clara River Restoration project. Furthermore, this Project meets the Coalition's Strategic Objectives: 1: To conserve, restore, protect, and sustain the endangered Southern California steelhead and its habitat in the Santa Clara River watershed; including adult and juvenile migration, spawning, incubation and rearing habitats; 4: To control and manage invasive, non-native species, which negatively impact the Southern California steelhead's survival; and 2. To promote water conservation necessary for adequate flows to support steelhead and other species.

This project will restore between 150 and 200 acres of riparian habitat over a period of four years, by removing arundo and other invasive plant species. Passive and active revegetation strategies will be used to re-establish riparian forests and a wetlands buffer to improve water quality of agricultural run-off entering the Santa Clara River and to provide wildlife habitat for riparian and wetland species. The parcels selected are important to recovery of the endangered southern steelhead and 45 other special status species on the lower Santa Clara River. Improving over summer rearing habitat and sustaining in-stream flows that connect and provide fish passage from the mainstem (migration corridor) to Santa Paula and Sespe Creek tributaries (rearing and spawning habitat) is integral to recovering steelhead in the watershed. While Sespe Creek has the most diverse habitat, Santa Paula Creek has the most productive habitat, as for

these reasons these subbasins as well as fish passage to these subbasins are high Coalition priorities.

Removal of water-intensive invasive species will conserve approximately 3,500 AFY of water. Water previously consumed in excess by invasive species will instead provide much needed recharge to the overdrafted groundwater basins along the Santa Clara River, including the Santa Paula and Oxnard Basins (DWR Basins 4-4.02 and 4-4.04, respectively). Groundwater is the largest single source of water for the cities of Fillmore and Santa Paula and is the primary source of water for agriculture in the Santa Clara River. Additional recharge helps resolve conflicts between groundwater users in the local basins. Improved streamflow and recharge is necessary to resolve conflicts between urban, agricultural, and environmental water (endangered southern steelhead) demands.

Our Project partner, the University of California at Santa Barbara (UCSB) is involved in ongoing research to determine the effects of arundo on native biota and ecosystem properties and develop the most effective control and restoration strategies for reducing impacts to native ecosystems. Guided by science-based information, this project provides valuable hands-on application in restoration ecology practices for UCSB and other regional college students and researchers. CalTrout has teamed with Coalition members: USCB, The Nature Conservancy (TNC), and Friends of the Santa Clara River to access prioritized lands for restoration.

The project area is within a larger 1,000 acre floodplain area comprised of a mix of degraded properties targeted for restoration. The California Coastal Conservancy's strategic plan for arundo treatment and post-treatment re-vegetation for the lower watershed will guide project implementation.

Project Description This project is an arundo control and habitat restoration program in the Santa Clara River floodplain for the river reach between Sespe Creek and Santa Paula Creek (six river miles) near the City of Santa Paula. The Santa Clara River watershed drains an extensive and biologically rich region and contains a strong representation of the biodiversity of the South and Central Coast Bioregions. The Santa Clara River is one of the few major river systems in the State which retains much of its natural hydrology and provides ecosystem functions necessary to sustain more than 17 federally listed species. The river basin also supports valuable agricultural resources and diverse recreational resources. Arundo is the most problematic invasive plant in southern California coastal rivers where it causes extensive flood damage, increases fire risk, and uses substantially more water than native vegetation. The project is part of a large-scale effort by the Coastal Conservancy to eliminate arundo from the watershed to improve water resources and habitat. Furthermore, invasive non-native species have been identified as a limiting factor to steealhead recovery and removal is a key recovery action identified in the Southern California steelhead Recovery Plan (2012.)

Arundo and invasive plants will be removed consistent with methods described in the California Coastal Conservancy's Santa Clara River Parkway Strategic Plan for Arundo Treatment and Post-Treatment Revegetation. The methods employed will vary depending on density of arundo, season, and presence of sensitive plants and wildlife.

Revegetation will follow arundo removal. Passive revegetation is anticipated for areas that receive periodic flood flows. Where passive recovery is unlikely, active planting will occur, using plants propagated from local seeds and cuttings, and when necessary, container plants.

All plants will be monitored for 3-4 years from the beginning of the project to track mortality and evaluate whether additional planting will be necessary. Maintenance activities, including controlling invasive plants and arundo resprouts, and watering plants that show signs of desiccation, will be performed regularly during this period. If survival of cuttings is below 80 percent after each of the first two years, new cuttings will be planted. Observational methods will be used to determine potential causes of plant mortality, including inspecting plants for signs of herbivory or pathogen growth, and evaluating soil moisture at base of plantings. Retreatment of arundo regrowth will occur once or twice annually for at least three years to ensure that all arundo plants have been killed.

Project Timing and Phasing

The overall restoration area covers over 1,000 acres within the floodplain. The goal is to create a large, contiguous riparian zone through a series of related, but stand-alone, restoration projects.

This project will restore between 150 and 200 acres of riparian habitat by removing arundo and other invasive plant species, and using passive and active revegetation strategies to re-establish riparian forests. Priority will be given to properties with the largest arundo populations, with high habitat value, and where invasive plants pose the greatest risk to public safety (through floods and fires).

Work will occur in locations where arundo removal and restoration have not yet occurred. This includes:

- 20 acres TNC's Taylor property.
- 40 acres Friends of the Santa Clara River's Hedrick Ranch Nature Area property.
- Friends of the Santa Clara River's Hedrick Property.
- 60 acres on TNC's Peto/McConica property.
- 79 acres Ralph and Anne Winn Family Trust
- Harvey
- Vintage Petroleum, LLC.
- 33 Acres David and Valery Lagesse Trust
- 19 Acres Rio Vista Citrus Co.
- 24 Acres Farmers Irrigation
- Ventura County Transport
- Mike Levy
- Linda Espanosa

(We have initiated landowner willingness to participate in the project, of which 120 acres are secured and 80 acres in negotiation.)

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Goals and Objectives The overall project goal is to use scientifically based methods to restore water and biological resources to the floodplain for the benefit of human and natural systems. Specific objectives include:

1) Control arundo populations and other non-native, invasive plant species to reduce impacts to native ecosystems and allow native species to reestablish.
2) Restore native plant communities using a scientifically and ecologically-based approach to promote long-term ecosystem stability and conservation benefits.
3) Design a long-term biological monitoring program to facilitate a scientific evaluation of outcomes and successes.
4) Increase groundwater recharge to overdrafted basins by replacing high water use non-native plants with native plants.
5) Create a riparian forest and wetland buffer to provide wildlife habitat and water quality benefits.
6) Reduce flood and fire threats.
7) Provide outreach, access, and natural resource information regarding local and watershed restoration.

Purpose and Need The Santa Clara River Parkway Project (funded by the State Coastal Conservancy) has identified this river reach as a critical wildlife zone due to its size, natural resources, and potential wildlife habitat. However, man-made alterations have led to habitat degradation and invasion by non-native species. Arundo is the primary invasive species of concern and forms large, monotypic stands throughout the project area. A recent study by the California Invasive Plant Council (Arundo donax Distribution and Impact Report, March 2011, provided with this Work Plan) shows that arundo can use up to six times as much water as native vegetation.

Please describe how the project does or could integrate with other projects in the Region.

Integrated Elements of Projects
This project, as well as the 2014 IRWM Drought Solicitation Ventura River Restoration Project, and the existing 2013 Round 2 Prop 84 Santa Clara River Restoration Project work toward the common goals of: (1) improved habitat and (2) provision of water-related public access, recreation and educational opportunities. This project, the Santa Clara River Restoration project, and the Ventura River Restoration project improve habitat by supporting native vegetation that improve the biological and chemical properties of the floodplain. This project, the Ventura River Restoration Project, and the existing Santa Clara River Restoration Project each contribute to the preservation of hiking opportunities, enhancement of plant and wildlife viewing, and creation of outdoor classrooms.

The Santa Clara River Restoration and Ventura River Restoration projects create a framework whereby public agencies, non-profit organizations, and academic institutions act in concert to benefit the Region. These projects create a synergy where such coordination becomes the

norm rather than the exception. Some of the parcels identified for Arundo removal are on Farmers Irrigation property, and lie adjacent to the City of Santa Paula's settling ponds. There may be an opportunity to partner with the Farmers Irrigation on their proposed Santa Paula Basin Groundwater Sustainability Project.

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

• Santa Clara River
• Santa Paula Creek
• Santa Paula Basin 4-4.02
• Oxnard Basin 4-4.04

Please identify up to three available documents which contain information specific to the proposed project:

Lambert, A.M. and T.L. Dudley. 2011. Taylor Property Habitat Restoration Plan. Submitted to California Department of Fish and Wildlife (CDFW) and Santa Clara River Trustee Council. This document provides specifics on techniques and methods and locations for habitat restoration on the Taylor property (one of the properties in this project). This document along with the Santa Clara River Parkway Strategic Plan constitute all the design documents needed for the project. This plan has been adapted to the remaining properties.
Beller, E.E., R.M. Grossinger, et al, 2011. Historical Ecology of the Lower Santa Clara River, Ventura River, and Oxnard Plain: An Analysis of Terrestrial, Riverine, and Coastal Habitats. Prepared for the State Coastal Conservancy. This document provides information on the various invasive species communities, vegetation density, native plant coverage, and flood frequency/water availability for restoration activities.
Stillwater Sciences. 2011. Santa Clara River Parkway Strategic Plan for Arundo Treatment And Post-Treatment Revegetation. Prepared for the California State Coastal Conservancy. Oakland, CA. This document provides a comprehensive look at the arundo problem in the Santa Clara River Parkway, describes effective and appropriate arundo treatment and restoration approaches, identifies permits associated with the different restoration methods, and pinpoints specific areas for the application of treatment methods and priorities for treatment based on watershed scale processes and ecological conditions. Unit costs and strategies for reducing costs are provided. The document also provides best management practices for invasive species removal and habitat restoration.

Is the proposed project an element or

phase of a regional or larger program? Yes.
If yes, please identify the program The State Coastal Conservancy's Strategic Arundo Treatment and Post Treatment Revegetation.

Required IRWM Project Elements – Please select at least one

x	Water supply reliability, water conservation, and water use efficiency
	Stormwater capture, storage, clean-up, treatment and management
x	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
x	Groundwater recharge and management projects
	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
x	Watershed protection and management
	Drinking water treatment and distribution
x	Ecosystem and fisheries restoration and protection

Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

The Santa Clara River Parkway Project (funded by the State Coastal Conservancy) and Santa Clara River Steelhead Coalition have identified this river reach as a critical wildlife zone due to its size, natural resources, and potential wildlife habitat. However, man-made alterations have led to habitat degradation and invasion by non-native species. Arundo is the primary invasive species of concern and forms large, monotypic stands throughout the project area.

A recent study by the California Invasive Plant Council (*Arundo donax Distribution and Impact Report*, March 2011, provided with this Work Plan) shows that arundo can use up to six times as much water as native vegetation.

This high water consumption is undesirable in the Santa Clara River as it limits groundwater recharge of the Fillmore, Santa Paula, and Oxnard Plain groundwater basins. The City of Fillmore's sole water supply is groundwater from the Fillmore Basin. Likewise the sole source of water for the City of Santa Paula is Santa Paula Basin groundwater. Additionally, local agriculture is heavily dependent on groundwater. A long-term decline in groundwater levels has been observed in the adjudicated Santa Paula Basin (*United Water Conservation District. 2012. Groundwater and Surface Water Conditions Report 2011*). In the Oxnard Plain, overdraft has existed for more than 50 years. It is estimated that the annual overdraft is 20,000 to 25,000 AFY (*United Water Conservation District. 2012. Groundwater and Surface Water Conditions Report 2011*).

Arundo is also known to be highly flammable. The California Invasive Plant Council estimates the fuel load of arundo is three times greater than that of native vegetation. Despite being highly flammable, arundo is able to recover rapidly from fire. By contrast, cottonwoods, willows, and other native woody plants are much less tolerant of direct exposure to fire and are outcompeted by arundo after a fire. Recent studies suggest that arundo is making riparian systems fire prone. Arundo in the project area has caused a decline in native species by facilitating fire, but also through direct competition for resources (*California Invasive Plant Council. 2011. Arundo donax Distribution and Impact Report*). At the same time, with its large stands, arundo creates river flow obstruction and debris dams (as demonstrated in the photo below), thereby increasing risks of flooding and related damages (*Stillwater Sciences. 2011. Santa Clara River Parkway Strategic Plan for Arundo Treatment and PostTreatment Revegetation*).

Arundo also provides little to no habitat for wildlife. The California Invasive Plant Council evaluated arundo impacts to species listed under the federal Endangered Species Act. This evaluation found that arundo changed abiotic and biological functions in a way that moderately to severely impacted amphibian species such as arroyo toad, fish species such as the unarmored three spine stickleback and southern steelhead, and bird species such as the southwestern willow flycatcher and least Bell's vireo (California Invasive Plant Council. 2011. *Arundo donax Distribution and Impact Report*). Removal and restoration activities on 15 acres at the nearby Hedrick Ranch Natural Area has resulted in a significant increase in wildlife, especially the endangered least Bell's vireo (Hedrick Ranch Bird Survey conducted by the Western Foundation for Vertebrate Zoology, 2011).

Removing arundo and restoring native riparian forests will increase groundwater recharge, enhance wildlife value of associated wetlands, reduce flooding damage caused by accumulation of arundo biomass, and diminish the risk of and impact from wildfire which have killed a substantial number of riparian dependent trees in the project area.

Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

1. Reduce dependence on imported water and protect, conserve and augment water supplies	By removing Arundo and restoring native vegetation the project will directly contribute to water conservation in the region (i.e., by limiting substantially higher evaptranspiration rates.)
2. Protect and improve water quality	Passive and active revegetation strategies will be used to re-establish riparian forests and a wetlands buffer to improve water quality of agricultural run-off entering the Santa Clara River and to provide wildlife habitat for riparian and wetland species (i.e., through natural ecosystem services.)
3. Protect people, property and the environment from adverse flooding impacts	Flooding damage will be reduced by removing the accumulation of arundo biomass in stream.
4. Protect and restore habitat and ecosystems in watersheds	By removing Arundo and restoring native riparian forests, this will not only provide a terrestrial habitat corridor, but also increase groundwater recharge and associated in-stream flow – this will provide over summer rearing habitat for steelhead, as well as adequate connectivity along its migration corridor to critical rearing and spawning habitat in both Santa Paula and Sespe Creeks.
5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	Goal 3 of the Santa Clara River Parkway Project is to provide public access and environmental education, including the creation of a continuous public trail system along the length of the parkway. TNC currently offers access and walks on their properties. Furthermore the Coalition has a grant in to American Waters to provide volunteer and training opportunities to volunteers interested in Arundo removal.

6. Prepare for and adapt to climate change	Climate Change trends show a decrease in precipitation, an increase in extreme rainfall events resulting in floods, and an increase in fire frequency and intensity. By removing Arundo we are integrating our response to climate change by addressing a threat that exacerbates the aforementioned climate change projections, thus building the resilience of our watershed.

Part 5. Program Preferences Addressed by the Project – Check all that Apply

x	Regional project or program - covers multiple watersheds Upper and Lower SCR, and complements Ventura, possible link to Los Angeles IRWM (?)
	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
x	Effectively resolves significant water-related conflicts within or between regions
	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
x	Addresses critical water supply or water quality needs of disadvantaged communities within the region
	Effectively integrate water management with land use planning
	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
x	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	NA	**(mm/dd/yyyy)**

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Feasibility Study (or background documentation)	Done.	**(mm/dd/yyyy)**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)	All design activities have been completed and are found in the Taylor Property Habitat Restoration Plan and Santa Clara River Parkway Strategic Plan for Arundo Treatment and Post-treatment Revegetation.	**(mm/dd/yyyy)**
CEQA/NEPA	The planning and design for the project is done, but minor work related to CEQA review and permitting remains to be completed in 2015. The 2013 IRWM resulted in a CEQA Exemption. USFWS Biological Opinions.	**(mm/dd/yyyy) To be initiated once project is approved.**
Permits	VCWPD Encroachment Permit Land Owner Access Agreements Streambed Alteration Agreement (depending on willing landowners – some may be new, others will be amendments.)	**(mm/dd/yyyy)** **To be initiated once project is approved.**
Construction Drawings	NA	**(mm/dd/yyyy)**
Detailed Schedule		Will project go to bid by April 1, 2016? Yes_____ yes/no Will project by completed by October 31, 2020? Yes_____ yes/no

Detailed Budget Available	No (yes/no)	If no, indicate when will be provided: May 29, 2015.
Funding match of 25% or more. Please indicate	No (>5-10%) (yes/no)	Source of match: NOAA Federal Funding Opportunity, Coastal Resiliency May 2015 (20%), City of Santa Clarita (5-10%), In-kind match (contribute to 20%)

For projects that do not include construction, please briefly describe the project readiness-to proceed.

Besides securing the match funding, a CalTrout Board Resolution, and permits – this project is shovel ready.

We will use Best Management Practices described in the Santa Clara River Parkway Strategic Plan for Arundo Treatment and Post-Treatment Revegetation and all permit documents will be followed. Best Management Practices will include pre-construction surveys, training of project personnel on safe use of pesticides, and limiting the amount of cuttings from a native plant.

Arundo and invasive plants will be removed consistent with methods described in the Santa Clara River Parkway Strategic Plan for Arundo Treatment and Post-Treatment Revegetation. 150 to 200 acres of Arundo will be removed. Revegetation will follow arundo removal. All plants will be monitored for 3-4 years from the beginning of the project to track mortality and evaluate if additional planting will be necessary. Retreatment of arundo regrowth will occur once or twice annually for at least three years to ensure that all arundo plants have been eliminated.

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

Project Benefits:
Invasive species removal and habitat restoration will have a number of significant benefits for the Santa Clara River ecosystem:

- Removal of invasive species, which consume excessive water volumes compared to native vegetation, will reduce water consumption and conserve local water supplies. Assuming each acre of arundo uses approximately 20 AFY more water than an acre of native vegetation (Arundo donax Distribution and Impact Report. 2011. California Invasive Plant Council. 2011), the project will conserve 3,500 AFY.
- Water savings will help address groundwater overdraft in the Santa Paula and Oxnard Basins, thereby helping to resolve significant waterrelated conflicts within the Region.
- Invasive species control will reduce the amount of arundo biomass that could act as flood debris and exacerbate river flooding.
- Improved habitat will attract birds and other wildlife, providing enhanced recreational opportunities for wildlife viewing from existing trails. ttachment 3 - Work Plan, Santa Clara River Restoration 3-63
- Improved habitat will benefit species listed as “threatened”, “endangered”, or “special concern” under the federal and California Endangered Species Acts (“sensitive species”). The lower Santa Clara River is home to 46 sensitive species, many negatively impacted by arundo (due to lack of shading and poor foraging and nesting habitat). Sensitive species that will benefit from arundo removal include amphibians such as the arroyo toad, fish species such as the unarmored three spine stickleback and southern steelhead, and bird species such as the southwestern willow flycatcher and least Bell’s vireo.
- Invasive species control will reduce the amount of flammable biomass in the watershed and allow the river to again act as a fire break.

Does the project address any known environmental justice issues?
☐ **Yes** ☐ **No** ☒ **Not Sure**

Is the project located within or adjacent to a disadvantaged community?
☒ **Yes** ☐ **No** ☐ **Not Sure**

Does the project include disadvantaged community participation?
☒ **Yes** ☐ **No** ☐ **Not Sure**
If yes, please identify the group or organization: California Conservation Corps_____

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($): $1,450,000_____

Upper estimated total capital cost ($): $1,950,000_____

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($): _$0_____

Annual Operation and Maintenance Cost ($):_$450,000_____

Design Life of Project (years): _$100,000_____

PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	No, project partners have – i.e., UCSB Santa Clara River Restoration Project.
Have you adopted the 2014 IRWM Plan Update?	No, but CalTrout has a board meeting on April 22, 2015 when a Board Resolution and Plan adoption can be tabled on the agenda.
Is your project currently listed in the 2014 IRWM Plan?	Yes.
Can you provide a high-quality map of your project location?	Yes.
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	No.
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	Unsure, this needs to be endorsed at CalTrout's upcoming board meeting. However, one of our Projects Proponents is UCSB, who have received IRWM funds before.
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	Yes, Candice Meneghin is hired as the Santa Clara River Steelhead Coalition Chair and her salary is covered by a California Department of Fish and Wildlife Fisheries Restoration Grant Program grant.

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Does your project assist with the current drought, and how?	Yes, a primary benefit of this project is to remove Arundo that evapotranspirates some six times faster that native vegetation, thus helping conserve water, recharge groundwater basins, as well as improve in stream flows.
Can you provide technical analysis for your project to support claimed physical benefits?	Yes.

NOTE: Your agency must be willing to accept all of the terms of the Grant Agreement executed by the Department of Water Resources. Boilerplate language that was used in Round 2 can be found at:
http://www.water.ca.gov/irwm/grants/docs/Resources/ContractTemplates/GrantAgreement_Template_P84R2__FINAL.pdf

City of Oxnard
AWPF

Advanced Water Purification Facility(AWPF) Expansion Project

Mary Vorissis, PE
City of Oxnard, Interim Technical Services/Water Quality Manager
April 17, 2015

Advanced Water Purification Facility (AWPF) Expansion Project

- GREAT Program
- What is the AWPF?
- Need for Expansion
- Project Details
- Multiple Benefits
- IRWM Plan Integration
- Questions

Oxnard's state-of-the-art recycled water facility

Oxnard GREAT Program

Groundwater Recovery Enhancement and Treatment Program Goals

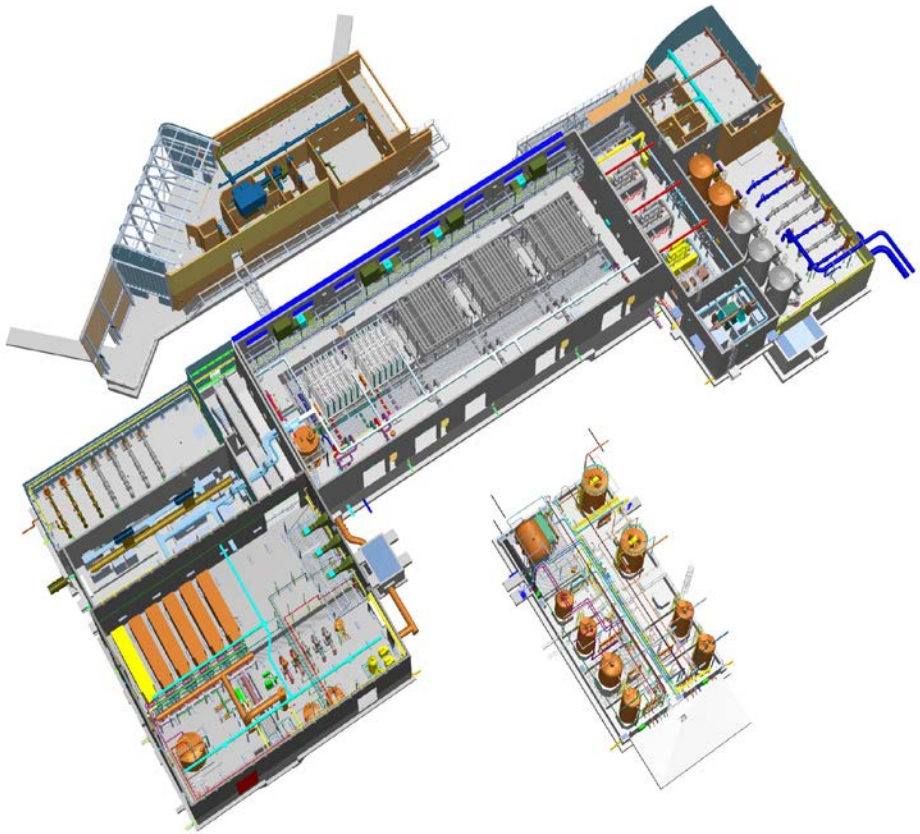
- improve water supply reliability and water quality for our future
- reduce the reliance on additional imported water

Components

- Brackish Groundwater Desalter, Phase I completed in 2008
- AWPF, Phase I completed in September 2012
- Effluent Sampling Station completed in September 2014
- Infrastructure and construction projects to conserve water

A roadmap toward sustainable water supplies

What is the AWPF?



- Multi-barrier treatment Train
- Current production capacity 6.25 million gallons of water per day (MGD)
- Infrastructure designed for expansion to 25 MGD
- Interpretive Learning Center (future)

Recycles water that would otherwise be discharged to the ocean

Need for Expansion

- Demand exceeds capacity
- Reduces unit costs for recycled water
- OTHER

Produces high-quality water for many uses

Project Details

Increases Capacity

- Doubles production capacity from 6.25 to 12.5 MGD of Full Advanced Treatment Water

Readiness to Proceed

- No construction necessary = Requires new pumps & equipment only
- Housed within existing facility

Produces high-quality water for many uses

Project Details

Increases Public Awareness

- Explains AWPF technology to visitors

Costs

- Expected costs: $22-$26 million
- Expected completion date: Spring 2017

Multiple Project Benefits

Economic

- Reduces overall unit costs of recycled water by 30%
- Reduces reliance on imported water
- Improves water supply reliability
- Stabilizes rates

Sustainability

- Improves groundwater management
- Facilitates regional water recycling for irrigation, indirect potable reuse and eventually direct potable reuse and groundwater recharge affecting multiple watersheds.

Meets the Following WCVC IRWM Plan Objectives:

- Reduce dependence on imported water; protect, conserve, & augment water supplies
- Protect and restore habitat & ecosystems in watersheds
- Provide water related recreational, educational, and public access opportunities

Meets the Following Statewide Priorities:

- Drought preparedness
- Use and reuse water more efficiently
- Climate change response actions
- Expand environmental stewardship
- Protect groundwater quality
- Reduce reliance on delta water
- Improve regional self reliance

AWPF Expansion Summary

- Produces high-quality water for many uses
- Project provides multiple benefits
- Meets WCVC IRWM Plan Objectives
- Meets Statewide Priorities
- Is a regionally significant project for both the Santa Clara River and Calleguas Watersheds

QUESTIONS?

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
PROJECT INPUT FORM
Watersheds Coalition of Ventura County

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IMPORTANT: **It is important you review the Implementation Grant Guidelines and Proposal Solicitation Package (PSP) documents before submitting a project for consideration. Pay particular attention to (1) project and applicant eligibility, (2) project benefits, and requirements for technical justification, budget, and schedule.**

PSP
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_PSP_2015_Draft_2015_0312_Public.pdf

GUIDELINES
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_GL_Draft_2015_0312_Public.pdf

PAST APPLICATIONS CAN BE FOUND AT
http://www.ventura.org/wcvc/prop84/submitted_implementation_grants.htm

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:
City of Oxnard, California

Agency / Organization / Individual Address:
City of Oxnard Utilities Division
305 West Third St., 3rd Flr. E. Wing
Oxnard, CA 93030

Possible Partnering Agencies:

Name:
Marsha Eubanks

Title:
Financial and Admin Services Manager

Telephone:
1-805-385-7835

Fax:
1-805-385-7907

Email:
marsha.eubanks@ci.oxnard.ca.us

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PROJECT INPUT FORM
Watersheds Coalition of Ventura County

Part 2. Project Information

Project Name:

Advanced Water Purification Facility - Capacity Expansion

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude:	34.145578	**Project Longitude:**	-119.183110

Location Description:	5700 South Perkins Road Oxnard, CA 93033

Watershed (Check all that apply):

Calleguas Creek and Santa Clara River	**Santa Clara River**	**Ventura River**	**Countywide**
☐	☐	☐	☐

Calleguas Creek
☐

Project Cooperating Agency(ies)/Organization(s)/Individual(s):

•
•
•

Project Status (e.g., new, ongoing, expansion, new phase):

Plant expansion from 6.25 mgd to 12.5 mgd

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

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Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

City of Oxnard proposes to double the production capacity of the Advanced Water Purification Facility (AWPF) from 6.25 to 12.5 MGD. This will require additional pumps and equipment, and expansion of the innovative wetland system, which treats effluent from the recycled water process. The recycled water can be used for agriculture, landscaping, manufacturing and industry, indirect potable reuse and potentially direct potable reuse.

Please describe how the project does or could integrate with other projects in the Region.

The project reduces reliance on imported water and improves regional water supply sustainability. Facilitates regional water recycling, Indirect Potable Reuse, and potentially Direct Potable Reuse. Potentially create a wetland habitat that may assist with Ormond Beach Wetlands Restoration, and may provide an opportunity to treat stormwater in the near future.

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

- Lower Santa Clara River
- Calleguas Creek
- Oxnard Plane Groundwater Basin
-

Please identify up to three available documents which contain information specific to the proposed project:

- Recycled Water Master Plan 2014
-
-

Is the proposed project an element or phase of a regional or larger program? Yes

If yes, please identify the program

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
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The ability to produce and use high-quality recycled water water is a cornerstone of Oxnard's long-term, regional water supply reliability strategy known as the Groundwater Recovery, Enhancement and Treatment Program "GREAT" Program. Oxnard's GREAT program is recognized as a high priority in the WCVC IRWM Plan.

Required IRWM Project Elements – Please select at least one

X	Water supply reliability, water conservation, and water use efficiency
	Stormwater capture, storage, clean-up, treatment and management
	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
X	Groundwater recharge and management projects
X	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
X	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
X	Watershed protection and management
	Drinking water treatment and distribution
	Ecosystem and fisheries restoration and protection

Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

Regional water supplies are in crisis; imported water is not reliable and the future is uncertain, local groundwater pumping is mandated to be reduced because the Oxnard Plain Groundwater Basin has been over-pumped and is in a state of overdraft, diversions of surface water from the Santa Clara River are threatened due to sensitive environmental issues, and the State of California is facing one of the most severe droughts on record. The AWPF provides a new source of water to the region that otherwise would have been discharged to the Ocean. Expansion of the AWPF would double the current production capacity of the facility and increase water supply in the region. The proposed expansion project would provide an additional 6.25 million gallons per day of fully advanced treated water that can be used for irrigation, indirect potable reuse and potentially direct potable reuse.

Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

1. Reduce dependence on imported water and protect, conserve and augment water supplies	The AWPF provides a new source of water to the region that otherwise would have been discharged to the Ocean.
2. Protect and improve water quality	The water quality produced by the AWPF is very low in total dissolved solids and other constituents. And when blended with groundwater has the potential to improve the quality of water supply in the region
3. Protect people, property and the environment from adverse flooding impacts	
4. Protect and restore habitat and ecosystems in watersheds	

5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	The AWPF includes a Visitors Center intended to provide educational opportunities through the use of interpretive exhibits about water resources. A demonstration wetland on the project site is available for research on the fate of contaminants in reject water from the reverse osmosis process.
6. Prepare for and adapt to climate change	The AWPF provides a new source of water to the region to provide drought relief.

Part 5. Program Preferences Addressed by the Project – Check all that Apply

X	Regional project or program - covers multiple watersheds
	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
	Effectively resolves significant water-related conflicts within or between regions
	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
X	Addresses critical water supply or water quality needs of disadvantaged communities within the region
	Effectively integrate water management with land use planning
X	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
X	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date

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Conceptual Plans		**(10/31/2015)**
Feasibility Study (or background documentation)		**(May, 2002)**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)		**AWPF infrastructure complete for expansion, Project includes equipment purchase and installation**
CEQA/NEPA		**(April, 2004)**
Permits		**(01/01/2016)**
Construction Drawings		**(01/01/2016)**
Detailed Schedule		Will project go to bid by April 1, 2016? __Yes___ yes/no Will project by completed by October 31, 2020? __Yes___ yes/no
Detailed Budget Available	No (yes/no)	If no, indicate when will be provided: 10/2015
Funding match of 25% or more. Please indicate	Yes (yes/no)	Source of match: City Bonding/Rate Increases

For projects that do not include construction, please briefly describe the project readiness-to proceed.

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

Project Benefits

- Adds 6.25 million gallons per day of water to the region for irrigation, IPR and Potentially DPR
- Reduces unit costs for full advance treatment water by 30% by doubling production capacity
- Reduces reliance on imported water, improve water supply reliability and stabilizes rates
- Improves groundwater management, providing resilience for climate change effects
- Facilitates regional water recycling and groundwater recharge projects

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Does the project address any known environmental justice issues?		
☐ **Yes**	☐ **No X**	☐ **Not Sure**
Is the project located within or adjacent to a disadvantaged community?		
☐ **Yes X**	☐ **No**	☐ **Not Sure**
Does the project include disadvantaged community participation?		
☐ **Yes**	☐ **No**	☐ **Not Sure X**
If yes, please identify the group or organization: City Corps		

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($):_____22,000,000_____

Upper estimated total capital cost ($): _____26,000,000_____

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($):
_____N/A_____

Annual Operation and Maintenance Cost ($):__4,500,000_____

Design Life of Project (years): __30+_____

PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	Yes

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Have you adopted the 2014 IRWM Plan Update?	**No**
Is your project currently listed in the 2014 IRWM Plan?	**No**
Can you provide a high-quality map of your project location?	Yes
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	No
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	No
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	Yes
Does your project assist with the current drought, and how?	Yes, provides additional water supply
Can you provide technical analysis for your project to support claimed physical benefits?	Yes

NOTE: Your agency must be willing to accept all of the terms of the Grant Agreement executed by the Department of Water Resources. Boilerplate language that was used in Round 2 can be found at:
http://www.water.ca.gov/irwm/grants/docs/Resources/ContractTemplates/GrantAgreement_Template_P84R2__FINAL.pdf

City of Santa Paula
Water Softener Buyback

SANTA PAULA
SANTA PAULA PUBLIC WORKS

CITY OF SANTA PAULA
WATER SOFTENER BUYBACK PROGRAM

Background

1) Original City wastewater plant built in 1939 did not comply with Discharge Requirements set for forth by the LARWQCB
2) In 2008, City selects Design-Build-Operate-Finance plan for Water Recycling Facility
3) New City Water Recycling Facility (4.2 MGD) online in May 2010
4) The WRF is Public-Private funded facility
5) City percolates effluent into 3 percolation ponds and no longer discharges treated wastewater into the Santa Clara River

Background, continued

6) New Waste Discharge Requirements (WDR) Permit in 2007, includes chloride limit of 110 mg/L

7) City WRF effluent chloride = 140-150 mg/L

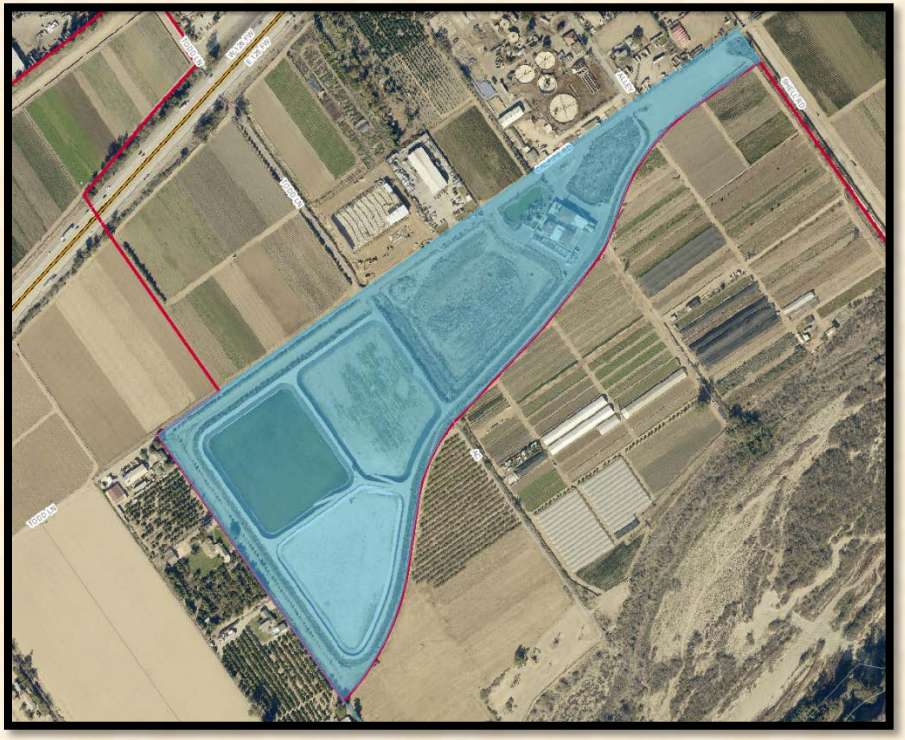
8) City drinking water source (local ground water) is naturally high in minerals (chloride = 40-48 mg/L).

9) The WRF is not designed to treat chlorides

10) The WDR Permit expires in 2017

City of Santa Paula - Santa Paula Water Recycling Facility

Location: Santa Paula, California
Project Type: Design-Build-Operate-Finance
Capacity: 4.2 MGD
Footprint: 1.5 acres
Process Design: Membrane Bio-Reactor (MBR)
Operational: May 2010



Methods to Reduce Chloride Levels

1) The City prohibits the installation of new Self-Regenerating Water Softeners (SRWS).
2) All new water accounts must submit a signed affidavit that no SRWS exist in the dwelling unit.
3) The City has proposed a buyback program for Self-Regenerating Water Softeners (SRWS) that a includes a rebate.

Reduction of Chlorides in the Wastewater Stream

1) Recycled water system for use of treated wastewater as a source of supply for parks and school playgrounds
2) Install reverse osmosis system at WRF
3) Deep well injection.
4) Regional brine line project
5) Treating water for agricultural use
6) The City is participating in the Salt and Nutrient Management Plan (SNMP) for the Lower Santa Clara River

Elements of the Water Softener Buyback Program

- Approximately 1,250 SRWS residential units within the City*
- Anticipate 12.5% to 25% (100-312 units) participation rate in buyback program
- City to conduct Technical Study to estimate chloride removal due to buyback program
- Anticipate starting program in third quarter 2015
- Buyback will be in form of rebate following confirmed removal
- Rebate will be in range of $300-$700 per unit
- Anticipate 1 to 2 year buyback program
- City allows non-brine discharging units including point-of-use, under-counter, and commercial canister (non-brine discharging type)

* Based on 2005 study by Boyle Engineering

Project Cost Estimate

Lower estimate:

- 100 units (12.5%) removed @ $500 each (midpoint) = $50,000
- Administrative costs @ $100 each = $10,000
- Total = $60,000

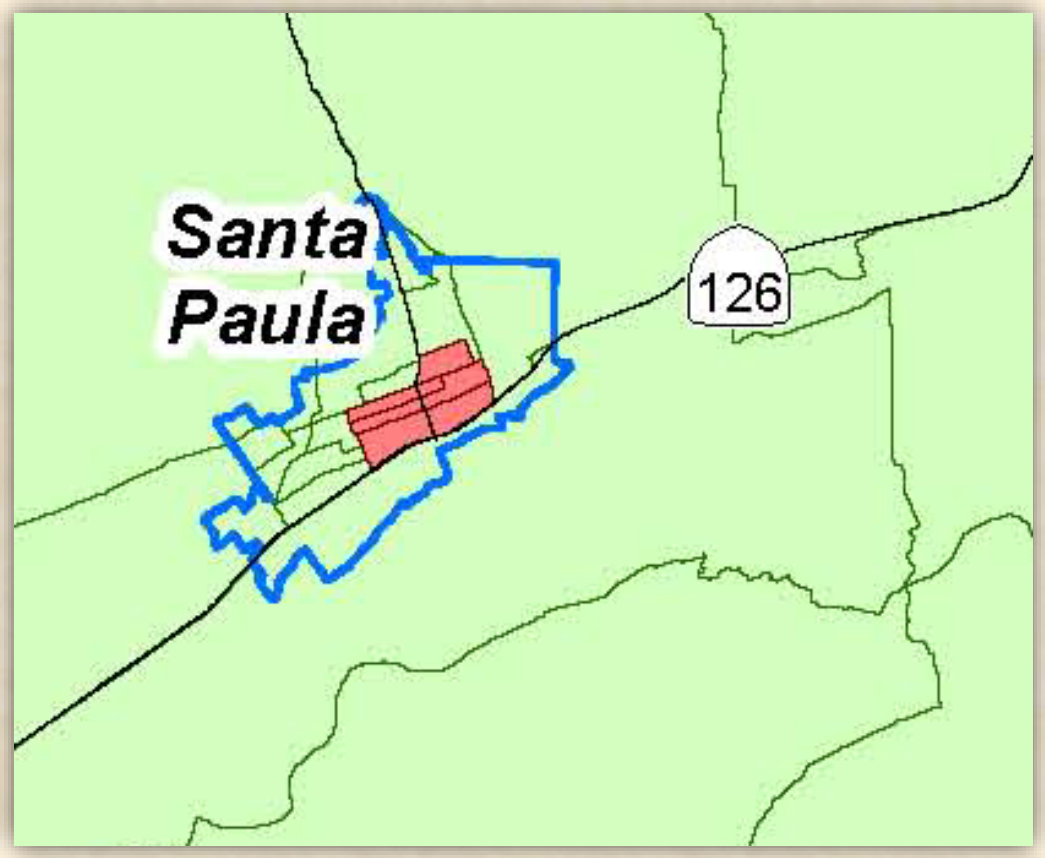
Upper estimate:

- 312 units (25%) removed @ $500 each (midpoint) = $156,000
- Administrative costs @ $100 each = $31,200
- Total = $187,200.

Project Benefits

- The SRWS buyback program is the first step towards a multiple element program to reduce chlorides from the City's wastewater stream.
- Reducing chlorides in the WRF wastewater will allow the City to utilize the treated effluent for the following:
  - Recycled water
  - Treat the water for agricultural use
  - Treated enough the water to recharge into potable use
- **City's immediate goal is to comply with LARWQCB chloride limit and other requirements**

Disadvantaged Community



Source: WCVC, IRWMP, 2014, Figure 3-17

Contact Information

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Regulatory Compliance Specialist
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chernandez@spcity.org

Questions?

2015 PROPOSITION 84 FINAL ROUND IMPLEMENTATION GRANT
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IMPORTANT: **It is important you review the Implementation Grant Guidelines and Proposal Solicitation Package (PSP) documents before submitting a project for consideration. Pay particular attention to (1) project and applicant eligibility, (2) project benefits, and requirements for technical justification, budget, and schedule.**

PSP
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_PSP_2015_Draft_2015_0312_Public.pdf

GUIDELINES
http://www.water.ca.gov/irwm/grants/docs/p84_implementation/P84_IRWM_GL_Draft_2015_0312_Public.pdf

PAST APPLICATIONS CAN BE FOUND AT
http://www.ventura.org/wcvc/prop84/submitted_implementation_grants.htm

Part 1. Lead Implementing Agency/Organizational Information

Please provide the following information regarding the project sponsor and proposed project.

Implementing Agency/ Organization / Individual:
City of Santa Paula

Agency / Organization / Individual Address:
970 Ventura Street, Santa Paula, CA, 93061-0569

Possible Partnering Agencies:
None at this time

Name:
Brian Yanez

Title:
Interim Public Works Director

Telephone:
805-933-4212

Fax:
805-933-8794

Email:
byanez@spcity.org

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Part 2. Project Information

Project Name:

Water Softener Buyback Program

Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.

Project Latitude: 34.353423 **Project Longitude:** -119.060453

Location Description:	Project will occur within City of Santa Paula.

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Project Cooperating Agency(ies)/Organization(s)/Individual(s):

• Recology Los Angeles, City's Franchise Hauler
•
•

Project Status (e.g., new, ongoing, expansion, new phase):

New

Project Description

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

The City of Santa Paula is obligated to reduce the amount of chloride discharged from the City's Water Recycling Facility (WRF). The Los Angeles Regional Water Quality Control Board (LARWQCB) limits the WRF to an average daily influent flow of 4.2 million gallons per day (MGD), while treated discharge to the percolation ponds is capped at 2.6 MGD. Annual average discharge from WRF to the percolation ponds was 1.9 MGD in 2014. The LARWQCB established a water quality limit for chloride of 110 milligrams per liter (mg/L) because high chlorides can be harmful to the local groundwater basin and the Santa Clara River. However,

the City's Water Recycling Facility was not designed nor constructed to eliminate chlorides. As a result, the LARWQCB has notified the City about exceedance levels and provided the City with Notices of Violation addressing exceedances of chloride levels. The City water supply (local groundwater) is naturally high in hardness. Some City residents use individual self-regenerating water softeners to make the water less objectionable. Unfortunately, this practice has contributed to the high chloride values in the wastewater. Brine discharging water softeners include products such as salt (sodium chloride) and potassium (potassium chloride) pellets thus periodically discharging these contaminants into the sewer system. In order to reduce the impact of brine discharging softeners, the City adopted an Ordinance which makes it unlawful for any person to install or replace or cause to be installed or replaced a Self-Regenerating Water Softening Appliance (SRWS) in a residence located within the City's jurisdiction. City Code also includes administrative policies and procedures designed to implement and establish a "buy-back" program to help reduce the number of existing SRWS within the City's jurisdiction. The City proposes a program to encourage residents to voluntarily remove SRWS by offering a rebate to residents that participate in the program. The City anticipates that removal of the SRWS appliances will be part of a multiple element program to reduce chlorides from the City's wastewater stream. Reducing chlorides in the WRF wastewater would allow the City to potentially utilize the treated effluent for a groundwater recharge program and recycled water program within the City. The City anticipates initiating the project in the third quarter of 2015.

Please describe how the project does or could integrate with other projects in the Region.

None at this time

If applicable, list surface water bodies and groundwater basins associated with the proposed project:

• Santa Clara River
• Santa Paula Groundwater Basin
•

Please identify up to three available documents which contain information specific to the proposed project:

• Draft Staff Report, February 26, 2015, City of Santa Paula
• Municipal Code 57.03, City of Santa Paula
• Municipal Code 57.05, City of Santa Paula

Is the proposed project an element or	No

phase of a regional or larger program?	
If yes, please identify the program	NA

Required IRWM Project Elements – Please select at least one

X	Water supply reliability, water conservation, and water use efficiency
	Stormwater capture, storage, clean-up, treatment and management
	Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
	Non-point source pollution reduction, management and monitoring
X	Groundwater recharge and management projects
X	Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users
X	Water banking, exchange, reclamation, and improvement of water quality
	Planning and implementation of multipurpose flood management programs
X	Watershed protection and management
	Drinking water treatment and distribution
	Ecosystem and fisheries restoration and protection

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Part 3. Project Need

Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.

The City of Santa Paula is obligated to reduce the amount of chloride discharged from the City's Water Recycling Facility (WRF). The current water quality limit for chloride within the local reach of the Santa Clara River is 110 milligrams per liter (mg/L), while current WRF effluent is approximately 150 mg/L. However, the City's Water Recycling Facility was not designed nor constructed to eliminate chlorides. As a result, the LARWQCB has notified the City about exceedance levels and provided the City with Notices of Violation addressing exceedances of chloride levels.

Some City residents use individual self-regenerating water softeners to make the water less objectionable due to naturally high hardness. Unfortunately, this practice has contributed to the high chloride values in the wastewater. Brine discharging water softeners include products such as salt (sodium chloride) and potassium (potassium chloride) pellets thus periodically discharging these contaminants into the sewer system. The City adopted an Ordinance which makes it unlawful for any person to install or replace or cause to be installed or replaced a Self-Regenerating Water Softening Appliance (SRWS) in a residence located within the City's jurisdiction. City Code also includes administrative policies and procedures designed to implement and establish a "buy-back" program to help reduce the number of existing SRWS within the City's jurisdiction. The City proposes a program to encourage residents to voluntarily remove SRWS by offering a rebate to residents that participate in the program. The City anticipates that removal of the SRWS appliances will be part of a multiple element program to reduce chlorides from the City's wastewater stream. Reducing chlorides in the WRF wastewater would allow the City to potentially utilize the treated effluent for a groundwater recharge program and recycled water program within the City.

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Part 4. IRWMP Objectives Addressed by Project

Describe how the project meets any of the following IRWMP objectives:

1. Reduce dependence on imported water and protect, conserve and augment water supplies	Project will improve water quality of City WRF effluent. Effluent from City WRF impacts water quality and quantity within Santa Paula Groundwater Basin. Reducing chlorides in the WRF wastewater would allow the City to potentially utilize the WRF effluent for a groundwater recharge program and recycled water program within the City.
2. Protect and improve water quality	Project will improve water quality of City WRF effluent. Effluent from City WRF impacts water quality and quantity within Santa Paula Groundwater Basin. Reducing chlorides in the WRF wastewater will allow the City to utilize the WRF effluent for a groundwater recharge program and recycled water program within the City.
3. Protect people, property and the environment from adverse flooding impacts	NA
4. Protect and restore habitat and ecosystems in watersheds	NA
5. Provide water-related recreational, public access, stewardship, engagement and educational opportunities	NA
6. Prepare for and adapt to climate change	Reducing chlorides in the WRF wastewater would allow the City to potentially utilize the WRF effluent for a groundwater recharge program and recycled water program within the City. Both the groundwater recharge and recycled water programs will provide the City with sustainable water resources to reduce the local impacts due to climate change.

Part 5. Program Preferences Addressed by the Project – Check all that Apply

	Regional project or program - covers multiple watersheds
	Effectively integrates water management programs and projects with a hydrologic region identified in the California Water Plan; the Regional Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR

	Effectively resolves significant water-related conflicts within or between regions
	Contributes to attainment of one or more of the objectives of the CALFED Bay-Delta Program
X	Addresses critical water supply or water quality needs of disadvantaged communities within the region
	Effectively integrate water management with land use planning
	Are part of an IRWM Plan that helps the region reduce reliance on Sacramento-San Joaquin Delta for water supply
X	Addresses statewide priorities including climate change mitigation/adaptation (See PSP for detailed list)

Part 6. Project Readiness

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	In complete, Draft Status Report	**(02/26/2015)**
Feasibility Study (or background documentation)	In progress, Chloride Removal Technical Study	**(06/30/2015)**
Preliminary Design (i.e., 30%, 60%, 90%, 100%)	NA	**(mm/dd/yyyy)**
CEQA/NEPA	Exempt from CEQA	**(mm/dd/yyyy)**
Permits	NA	**(mm/dd/yyyy)**
Construction Drawings	NA	**(mm/dd/yyyy)**
Detailed Schedule		Will project go to bid by April 1, 2016? YES_____ yes/no Will project by completed by October 31, 2020? YES_____ yes/no

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Detailed Budget Available	YES _____ (yes/no)	If no, indicate when will be provided:
Funding match of 25% or more. Please indicate	YES _____ (yes/no)	Source of match: City Wastewater Fund

For projects that do not include construction, please briefly describe the project readiness-to proceed.

The City anticipates initiating the project during the third quarter 2015.

Part 7. Project Physical Benefits

Please provide a 1-2 paragraph description of the measurable physical benefits of the project. Quantify benefits to the extent possible (e.g., project will result in x acre-feet of water savings, project will benefit x acres of habitat) IMPORTANT: Must be able to identify at least 2 quantifiable physical benefits.

The City anticipates that removal of the self regenerating water softeners (SRWS) will be part of a multiple element program to reduce chlorides from the City's wastewater stream. Reducing chlorides in the WRF wastewater would allow the City to potentially utilize the treated effluent for a groundwater recharge program and recycled water program within the City. The City's wastewater treatment permit allows for an average daily influent flow of 4.2 million gallons per day (MGD), while treated discharge to the percolation ponds was capped at 2.6 MGD. Annual average discharge to the percolation ponds was 1.9 MGD in 2014.

Reducing chlorides in the WRF wastewater will allow the City to utilize the treated effluent for the following:

1. Recycled water
2. Treat the water for agricultural use
3. Treat the water enough to recharge into potable use

In addition, once the City reduces chlorides in the wastewater, the City will discontinue receiving Notices of Violation from LARWQCB addressing exceedances of chloride levels. This effort will save the City potentially incalculable dollars in fines and penalties due to past, current, and future exceedances.

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Does the project address any known environmental justice issues? ☐ **Yes** ★ **No** ☐ **Not Sure**
Is the project located within or adjacent to a disadvantaged community? ★ **Yes** ☐ **No** ☐ **Not Sure**
Does the project include disadvantaged community participation? ★ **Yes** ☐ **No** ☐ **Not Sure** **If yes, please identify the group or organization:** City of Santa Paula

Part 8. Project Cost Estimate

Project cost information is needed to assist in comparing benefits and costs. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated total capital cost for project implementation. These costs include land purchase/easement, planning/design/engineering, construction/ implementation, environmental compliance, administration, and contingency.

Lower estimated total capital cost ($): 60,000.00

Upper estimated total capital cost ($): 187,000.00

Of the total capital cost, please indicate the estimated cost for land purchase / easement ($): $00.00

Annual Operation and Maintenance Cost ($): 0

Design Life of Project (years): 1 year (Administrative Program)

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PART 9. Additional Information

Please provide answers to the following questions:

Have you applied for a Proposition 84 grant after January 1, 2012?	No
Have you adopted the 2014 IRWM Plan Update?	No. Will be adopted by June 2015.
Is your project currently listed in the 2014 IRWM Plan?	No
Can you provide a high-quality map of your project location?	YES
For this final round of Prop 84 funding, project costs must be incurred after January 1, 2011 and eligible costs incurred after January 1, 2015. Is this a problem?	NO
The Prop 84 grant is a reimbursable grant, meaning, you pay for costs up front and receive reimbursement at a later date. Is this a problem?	NO
Can you provide staff to support the development of the application (eg., staff time and high level of understanding of the project?	YES
Does your project assist with the current drought, and how?	YES; creates opportunity for local water recycling and groundwater recharge
Can you provide technical analysis for your project to support claimed physical benefits?	YES

NOTE: Your agency must be willing to accept all of the terms of the Grant Agreement executed by the Department of Water Resources. Boilerplate language that was used in Round 2 can be found at:
http://www.water.ca.gov/irwm/grants/docs/Resources/ContractTemplates/GrantAgreement_Template_P84R2__FINAL.pdf