

**WATERSHEDS COALITION OF VENTURA COUNTY**  
**2014 Drought Grant Application**

**PROGRAM PREFERENCES**

The projects in this Proposal offer multiple benefits that address the Human Right to Water and IRWM Program Preferences, including CALFED objectives and Statewide Priorities. The table provided at the end of this attachment provides a summary documenting how the projects in this Proposal assist in meeting Program Preferences.

**THE HUMAN RIGHT TO WATER**

AB 685, California's Human Right to Water Bill, is intended to ensure affordable, accessible, and safe water to protect health and safety of all persons. The goal of furthering the Human Right to Water is met by any of the following:

- Addressing drinking water contamination
- Improving drinking water infrastructure needed to maintain and improve water quality
- Improving infrastructure needed to ensure an adequate drinking water supply
- Improving the affordability of drinking water delivered to disadvantaged areas
- Removing barriers to clean water in public spaces

The projects in this Proposal further the Human Right to Water in multiple ways. The Pleasant Valley (PV) Well creates drinking water infrastructure to ensure adequate drinking water supply in a cost-effective manner. Lake Casitas Aeration improves the infrastructure needed to maintain and improve water quality and to ensure an adequate drinking water supply. There are several concentrations of disadvantaged communities within the WCVS area - one of the largest concentrations is in the Casitas Municipal Water District service area (WCVS 2014 IRWM Plan p. 3-87). Lake Casitas Aeration will help maintain safe drinking water for these communities in a cost-effective manner.

**INCLUDE REGIONAL PROJECTS/PROGRAMS**

There are several regional projects in this Proposal. The Ventura County Agricultural Water Use Efficiency (WUE) Program will improve agricultural water use efficiency on a county-wide scale and across all the major watersheds of Ventura County. This project involves participation of regional organizations, including the Ventura County Watershed Protection District, Ventura County Resource Conservation District, University of California Extension, and the Ventura County Farm Bureau.

The Salinity Management Pipeline, Phase 2D (SMP 2D) provides the sole mechanism for disposal of salts in the Calleguas Creek Watershed and is a cornerstone project integral to brackish groundwater desalting as well as a critical element for overall salt management in the Watershed.

The PV Well is regional in its scope by involving the entire PV Basin - delivering non-potable water for agricultural purposes, generating credits in lieu of pumping in a stressed portion of the basin, and enabling pumping in a healthy part of the basin.

The Groundwater Replenishment and Reuse Project is broad-reaching in its scope as well. The AWP is located near the ocean, the recycled water system extends throughout the City of Oxnard and into the agricultural areas outside Oxnard, the ASR well is located in the Oxnard Forebay, and ultimately indirect potable reuse will benefit the entire Oxnard area, which includes a population of over 200,000 and nearly 40 square miles.

Finally, Lake Casitas Aeration is a regional project due to the extent of the users served by Lake Casitas. The project benefits the vast majority of the urbanized portion of the Ventura River Watershed.

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**EFFECTIVELY INTEGRATE WATER MANAGEMENT WITHIN HYDROLOGIC REGION**

Most of the projects in this Proposal integrate water management within the hydrologic region. The Ventura County Agricultural WUE Program directly relates to, and benefits, ongoing groundwater and water quality management programs operated by the Ventura County Farm Bureau to reduce agricultural runoff.

SMP 2D allows groundwater desalting by providing a mechanism for brine disposal. SMP 2D integrates water supply augmentation with improved water quality through salt management.

PV Well will deliver non-potable water to PVCWD, and in turn Camrosa receives credits that allow groundwater pumping from the northern PV Basin. The project matches water quality to use and it moves pumping from the stressed southern PV Basin to the healthier northern portion of the Basin.

Urban runoff management and groundwater recharge are often addressed separately. El Rio Retrofits for Groundwater Recharge integrates local water supply augmentation with water quality improvements by capturing and treating urban runoff in a manner that results in groundwater recharge.

Lake Casitas Aeration links the goals of water quality, water supply, ecosystem health, and recreational benefits. Aeration will improve water quality in Lake Casitas to ensure that these supplies remain available as well as to improve fish and ecosystem habitat in the lake and enhance recreational opportunities.

San Antonio Creek Arundo Removal is a prime example of integrative water management. By removing 16 acres of arundo, this project prevents water losses of 320 AFY making additional supplies available for beneficial uses in the Ventura River Watershed in addition to enhancing riparian system health, improving water quality, and restoring habitat.

**EFFECTIVELY RESOLVE SIGNIFICANT WATER-RELATED CONFLICTS WITHIN OR BETWEEN REGIONS**

All projects in this Proposal ameliorate water-related conflicts in the Region. The Ventura County Agricultural WUE Program will reduce agricultural water use by up to 1,820 AFY and reduces pressure on local supplies including overdrafted groundwater basins. This eases local conflicts between urban and agricultural users and helps reduce dependence on imported water, which is already strained by drought and ecosystem conflicts.

Dischargers are in conflict with water users and regulators because the reach of Calleguas Creek which runs through the Las Posas Valley is 303(d)-listed and out of compliance with the Salts TMDL. Users of imported supplies are in conflict because the current drought has drastically reduced available supplies, and there is not enough local water to meet demands. SMP 2D will reduce conflicts by promoting development of desalters to make use of brackish groundwater, move salts out of the Watershed, provide space in the shallow aquifer for high-quality stormwater recharge, and reduce demands on imported water.

PV Well reduces pumping in a portion of the PV Basin stressed with decreasing groundwater levels. By increasing local water supplies, the project reduces demands on imported water; in particular, State Water Project (SWP) supplies are severely limited due to the drought and hence a source of conflict for all users.

El Rio Retrofits for Groundwater Recharge will result in an additional 49 AFY diluting inflows to the Oxnard Forebay. This additional recharge benefits all groundwater users in an area where agricultural groundwater deliveries (e.g., users along United's PTP Pipeline) have been curtailed to protect drinking water uses.

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The Groundwater Replenishment and Reuse Project will make it possible to store and then use 1,500 AFY of recycled water offsetting demand for Oxnard's other water sources, which include the Oxnard Plain Pressure Basin groundwater and imported water. Both the Oxnard Plain Pressure Basin and imported water supplies are stressed due to the current drought; any reduction in demand for these supplies alleviates conflict among users.

In Lake Casitas, drought conditions and resulting low lake levels and anoxic conditions are threatening reliable delivery of safe drinking water as well as recreational and habitat needs. Lake Casitas Aeration will help improve quality of lake supplies and enable lake water to continue to meet diverse needs thereby avoiding potential conflict among users.

San Antonio Creek Arundo Removal helps resolve significant water-related conflicts between municipal and environmental demands on the Ventura River. The reach of San Antonio Creek downstream is an important migration pathway for endangered steelhead; however, municipal well pumping along the Ventura River reduces stream flows needed by fish. This project will make 320 AFY more water available in the stream to support fish and wildlife and improve reliability of downstream wells thereby easing conflicts.

### **CONTRIBUTE TO ATTAINMENT OF ONE OR MORE OBJECTIVES OF CALFED**

Five of the seven projects in this Proposal occur wholly or partly in areas that can receive imported water:

- Ventura County WUE Program
- SMP 2D
- PV Well
- El Rio Retrofits for Groundwater Recharge
- Groundwater Replenishment and Reuse Project

All five of these projects benefit local water supplies and offset imported water demand. Within the County, imported water is a mix of approximately 70% SWP and 30% Colorado River water; therefore any reduction in or avoidance of imported demand will reduce demand for SWP water. By offsetting SWP demand, these projects meet the first three CALFED objectives (Water Quality, Ecosystem Quality, and Water Supply), as the offset supply improves both ecosystem and water quality in the Bay-Delta and provides additional water supply for the state.

### **ADDRESS CRITICAL WATER SUPPLY/QUALITY NEEDS OF DACS**

During development of the IRWM Plan, a variety of entities serving disadvantaged communities (DACs) were contacted to engage DACs in IRWM Plan and project development. This occurred primarily at the watershed level and included neighborhood councils and municipal advisory committees, mutual water companies, sanitary districts, and the County Planning and Environmental Health Departments. Most DACs are located within water agency service areas, therefore their drinking water quality or supply issues are being met; they receive safe drinking water through their water agency. Water resources needs are generally centered around community development and surface water quality issues rather than drinking water quality or supply issues. Projects in this proposal benefit DACs but do not meet DWR's definition of addressing a critical water supply or water quality need of a DAC.

### **EFFECTIVELY INTEGRATE WATER MANAGEMENT WITH LAND USE PLANNING**

Two projects in this Proposal have direct ties to land use and land policies. El Rio Retrofits for Groundwater Recharge is based on Low Impact Development, a stormwater and land use management strategy. The project reduces impervious surfaces by installing pervious concrete gutters in a residential area to capture, treat, and infiltrate urban runoff, thus preventing polluted runoff from discharging into local waterways while recharging

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groundwater. San Antonio Creek Arundo Removal is intrinsically tied to land use planning. Restoring the riparian system helps maintain its natural ability to control and convey storm flows. Removing invasive plants and restoring native vegetation increases bank stability and improves erosion control, which lessens the need for engineered flood control infrastructure.

### **PART OF AN IRWM PLAN THAT HELPS THE REGION REDUCE RELIANCE ON THE DELTA FOR WATER SUPPLIES**

The first objective of the WCV C IRWM Plan is to reduce dependence on imported water and protect, conserve, and augment water supplies. As described in greater detail above, five of the seven projects in this Proposal occur in areas that can receive imported water (approximately 70% of imported water delivered to Ventura County is SWP water), benefit local water supplies, and therefore offset or avoid SWP demand. All seven projects are in an IRWM Plan that helps the Region reduce reliance on the Delta.

### **ADDRESS STATEWIDE PRIORITIES**

#### **Drought Preparedness**

All projects in this Proposal improve short- and long-term drought preparedness. All projects in this Proposal do one or more of the following.

- Promote water conservation, conjunctive use, reuse, and recycling
- Improve landscape and agricultural irrigation efficiencies
- Achieve long-term reduction of water use
- Improve efficiency of groundwater basin management

The Ventura County Agricultural WUE Program is estimated to conserve 1,820 AFY and contributes to sustainable local supplies better able to meet demands even under drought conditions.

SMP 2D promotes brackish groundwater desalting to increase availability and reliability of local water supplies and reduced dependence on imported water supplies. SMP 2D effectively increases the Region's water supply portfolio.

PV Well improves the efficiency of groundwater basin management by shifting pumping from a stressed portion of the PV Basin to a healthier area of the Basin.

El Rio Retrofits for Groundwater Recharge enables groundwater recharge of 49 AFY by capturing and treating urban runoff to percolate into the groundwater basin.

The Groundwater Replenishment and Reuse Project promotes expansion of reuse and recycling by injecting highly treated recycled water when recycled water demand is low and extracting it later for recycled water supply. Ultimately, these facilities will be used for indirect potable reuse. Both the short- and long-term use provide a drought-proof water supply.

Lake Casitas Aeration will address the immediate threats to drinking water supplies in western Ventura County. The system that will be put in place will benefit water users during not only this drought but future droughts as well.

San Antonio Creek Arundo Removal provides 320 AFY in long-term water savings and increased local water supply availability by removing arundo that consumes excessive water compared to native vegetation. This project improves sustainability and reliability of supplies for various beneficial uses during water shortages.

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### **Use and Reuse Water More Efficiently**

Ventura County Agricultural WUE Program, El Rio Retrofits for Groundwater Recharge, and Oxnard's Groundwater Replenishment and Reuse Project all meet the statewide preference to use and reuse water more efficiently. The Ventura County Agricultural WUE Program will improve irrigation efficiency and decrease agricultural demands by an estimated 1,820 AFY. El Rio Retrofits for Groundwater Recharge uses low impact development techniques to capture, treat, and infiltrate what is normally considered a nuisance, urban runoff. The Groundwater Replenishment and Reuse Project enables expanded use of water recycling to increase local water supply reliability and facilitates the use of 1,500 AFY of recycled water. Ultimately, this project will also enable indirect potable reuse.

### **Climate Change Response Actions**

All projects in this Proposal will augment or protect local water supplies thereby increasing local water supply reliability; five projects in this Proposal directly reduce or avoid demand for imported water. This will result in reduced water-related energy demands and greenhouse gas emissions, as the delivery of imported water requires significantly more energy than that of local water supplies including treated brackish and recycled water. This Proposal will allow for the expanded use of recycled water and ultimately indirect potable reuse, supplies that will be reliable even given predicted climate change. Additionally, it can be anticipated that imported supplies will become increasingly unreliable as a result of climate change so that improving local water supply reliability achieved by this Proposal will become an increasingly important climate change response strategy.

By protecting regional water sources and improving water quality, this Proposal will improve the Region's ability to adapt to climate change.

### **Expand Environmental Stewardship**

Projects in this Proposal have multiple benefits including ecosystem benefits. Because it results in better irrigation efficiency, the Ventura County Agricultural WUE Program will result in less runoff from agricultural fields. This will help improve surface water quality and watershed quality.

The five projects that reduce demand for imported water (Ventura County Agricultural WUE Program, SMP 2D, PV Well, El Rio Retrofits for Groundwater Recharge, and the Groundwater Replenishment and Reuse Project) reduce the amount of imported water and associated salts imported to the watershed, improving local watershed quality.

El Rio Retrofits for Groundwater Recharge further improves local watershed health by capturing, treating, and recharging urban runoff, thus preventing runoff from polluting surface waters and improving groundwater quality. Lake Casitas Aeration improves fish and ecosystem habitat in the lake through improved water quality.

San Antonio Creek Arundo Removal has the direct benefit of removing invasive plant species to save substantial volumes of water. Removal of the invasive weed will also enhance instream functions and improve riparian habitats to support fish and wildlife including endangered steelhead and least Bell's vireo.

### **Practice Integrated Flood Management**

The low impact development improvements of El Rio Retrofits for Groundwater Recharge will capture and infiltrate urban runoff, protect surface water quality, enhance groundwater supplies, and protect the basin from seawater intrusion.



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### **Protect Surface Water and Groundwater Quality**

Agricultural non-point pollution is considered a major contributor to water quality impacts. The Ventura County Agricultural WUE Program will decrease runoff from agricultural fields resulting in less pollution entering surface water and groundwater.

By removing up to 3,250 tons per year of salt from the Watershed, SMP 2D will improve the quality of the Watershed. PV Well helps improve water quality in the southern Pleasant Valley Basin by improving groundwater basin management.

El Rio Retrofits for Groundwater Recharge helps meet surface water TMDLs by preventing runoff from polluting surface waters. The filtration approach also provides treatment that will improve the quality of the water before it recharges groundwater.

Lake Casitas Aeration will improve and protect water quality conditions in Lake Casitas from deteriorating with the drought. Arundo can negatively impact water temperatures, nutrient flows, and erosion. San Antonio Creek Arundo Removal will provide significant improvements to surface water quality.

### **Improve Tribal Water and Natural Resources**

This statewide priority does not apply as there are no Native American tribes recognized by the Bureau of Indian Affairs (BIA) in Ventura County as described on the BIA website at [www.bia.gov/WhoWeAre/RegionalOffices/Pacific/WeAre/SouthernCalifornia/index.htm](http://www.bia.gov/WhoWeAre/RegionalOffices/Pacific/WeAre/SouthernCalifornia/index.htm).

### **Ensure Equitable Distribution of Benefits**

Benefits resulting from this Proposal will be region-wide and will benefit DACs as well as non-DACs. While it is difficult to quantify, the emphasis on protecting groundwater and reducing costly importation of water will directly benefit the agricultural industry. Crop values for the County were greater than \$1.2 billion in 2012.<sup>1</sup> The economic multiplier for agriculture in Ventura County is 1.86.<sup>2</sup> This means that for every dollar of agricultural value in the County, there is an additional \$0.86 in indirect and induced economic activity. It is likely that many of the DACs in Ventura County are associated with the agricultural industry. These DACs will benefit from actions that support agriculture in Ventura County.

### **CERTAINTY OF ACHIEVING CLAIMED BENEFITS**

The certainty that the projects will collectively meet the respective Program Preferences as discussed above is high. Studies documenting the feasibility of all projects have been completed. WCVC and all project proponents are fully committed to successfully implementing the projects. The breadth and magnitude of meeting Preferences varies slightly by Preference but is high overall. The Proposal addresses nearly all Program Preferences, and in most cases, all projects meet the Program Preference through integration of multiple benefits as described previously.



































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<sup>1</sup> Ventura County Office of the Agricultural Commissioner. 2012. Ventura County's Crop and Livestock Report: Changing Tastes.

<sup>2</sup> Ken Kambara, Dan Hamilton, Kirk Lesh, Chuck Maxey, Bill Watkins, and Susan Weaver, 2008. Ventura County's Agricultural Future: Challenges and Opportunities. Prepared for Ventura County Resource Conservation District.

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**Summary of Proposal Projects**

Program Preferences	PROPOSAL PROJECTS						
	Ventura County Agricultural Water Use Efficiency Program	Salinity Management Pipeline, Phase 2D	Pleasant Valley Well	El Rio Retrofits for Groundwater Recharge	Groundwater Replenishment and Reuse Project	Lake Casitas Aeration	San Antonio Creek Arundo Removal
Furthers goals of Human Right to Water							
Regional Project							
Integrates Water Management within Hydrologic Region							
Resolves Significant Water- Related Conflicts							
Contributes to Attainment of CALFED Objectives							
Integrates Water and Land Use Planning							
Part of an IRWM Plan that Helps Region Reduce Reliance on the Delta							
Address one or more Statewide Priorities	