

Appendix M

Implementation Projects Added to Plan - 2010 to 2018

APPENDIX M
Projects Added to the IRWM PLAN Since 2010

WCVV IRWM Plan Project	Project Summary	Potential for Climate Change Adaptation	Potential for Greenhouse Gas Reduction
City of Oxnard (Oxnard) Ventura County Regional Urban Landscape Efficiency (VC-RULE) (R-1)	VC-RULE is a partnership of nine agencies seeking to optimize irrigation practices and systems in the region by implementing landscape water use efficiency audits and improvements. This will translate to water savings and increased water supply reliability for Ventura County.	√	√
Ventura County Farm Bureau Agricultural Water Efficiency Surveys - BMP Implementation (R-2)	This project involves conducting surveys of irrigation systems to assess distribution uniformity followed by irrigation improvements which will lead to more efficient water use and reduced irrigation runoff. Reducing agricultural runoff is a key component of the Regional Board's implementation of Total Maximum Daily Loads (TMDLs) and compliance with conditional waiver for irrigated agricultural production.	√	√
Camrosa Water District (Camrosa) Round Mountain Desalter (C-13)	Round Mountain Desalter will treat local brackish groundwater using reverse osmosis technology to provide up to 1 million gallons per day (MGD) of a new source of potable water, improve local supply reliability, and reduce Camrosa's purchases of imported water by approximately 10 percent.	√	
Calleguas Municipal Water District (Calleguas) Salinity Management Pipeline (SMP) Phase 2A (C-14)	Phase 2A of the SMP will extend the existing regional pipeline for collection and transfer of salty water by an additional 12,000 linear feet, allowing for concentrate discharge from potential future agricultural desalters and wet season discharge from the CamSan Recycled Water Interconnection.	√	
Camarillo Sanitary District (CamSan)/Camrosa Recycled Water (RW) Interconnection (C-15)	The Recycled Water Interconnection will be 9,600 feet of 24-inch pipeline to link CamSan's water reclamation plant to the Camrosa storage ponds and the Calleguas SMP. This will allow up to 6.75 MGD of recycled water to be distributed to CamSan and Camrosa's customers from both the pipeline and the storage ponds.	√	
Camrosa Expansion of Non-Potable Water System (C-16)	Expansion of Camrosa's existing non-potable distribution system easterly into Santa Rosa Valley and westerly above Potrero Road will reduce dependence on imported water	√	

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	supplies and associated salt imports. The proposed expansion is phased with an ultimate substitution of 1,000 acre-feet of potable water with non-potable supplies.		
Ventura County Waterworks District No. 1 Moorpark Desalter (C-17) Previously C-4	The Moorpark Desalter would reclaim brackish groundwater in the South Las Posas Basin to help comply with Salts TMDLs, reduce dependence on imported water supplies, reduce groundwater quality degradation threatening groundwater storage credits in the Calleguas aquifer storage and recovery facility, and as part of a coordinated water resource management plan could facilitate the capture higher quality stormwater inflows by creating groundwater storage space in the shallow unconfined aquifers recharged by the Arroyo Las Posas.	√	
Ventura County Waterworks District No. 8 West Simi Water Recycling Project (C-18)	The West Simi Water Recycling Project includes construction of operational storage, distribution pipelines and a pump station to extend recycled water service to large irrigation and industrial users in Simi Valley.	√	√
Mountains Recreation and Conservation Authority Borchard Wetlands Acquisition (C-19)	Acquisition of Borchard Wetlands property would facilitate permanent habitat protection and public educational access, water quality improvement and groundwater recharge.	√	
The Nature Conservancy (TNC) Natural Floodplain Protection Program (NFPP) (SC-7)	Implementation of the NFPP will preserve a critical section of the remaining undeveloped 500-year floodplain in the Santa Clara River Watershed by acquiring property easements to preclude development. Acquisition of these easements will provide downstream flood benefits by allowing flooding to occur upstream in the watershed.	√	
United Water Conservation District (UWCD) Seawater Barrier Pilot Well (SC-9)	The approximately 1,200 feet deep Seawater Barrier Pilot Well will be installed to gain valuable information regarding aquifer effects and benefits through injection of up to 1,000 gallons per minute of potable water for up to 5 years. Additional wells may be added in the future to provide additional barriers to seawater intrusion through injection of potable and/or recycled water treated with reverse osmosis.	√	√

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Ventura County Waterworks District No. 16 (VCWWD No. 16) Piru Treatment Plant Tertiary Upgrade (SC-10)	The Piru Treatment Plant Tertiary Upgrade will provide additional tertiary treatment such that the recycled water is suitable for reuse for irrigation. The new system will eliminate the existing percolation ponds, eliminating a concentrated source of groundwater salinity.	√	√
Oxnard Recycled Water Backbone-Hueneme Transmission East, Phase 1 (SC-11)	The project includes construction of a recycled water transmission line from the Oxnard's Advanced Water Purification Facility, to deliver up to 5,000 acre-feet of non-potable water for agricultural use, potential seawater barrier injection, or industrial uses on the Oxnard plain. The recycled water will offset pumping from overdrafted groundwater aquifers and help address seawater intrusion into the groundwater aquifers underlying the Oxnard Plain.	√	√
Ojai Valley Land Conservancy (OVLC) Ojai Meadows Ecosystem Restoration Final Phase (V-5)	Ojai Meadows Ecosystem Restoration will remove non-native species and revegetate 41 acres of upland and transitional habitats in the Ojai Meadows Preserve for improved wildlife habitat. The restoration will also stabilize lands that drain to the wetlands that were developed in the prior phase of the project.	√	
Ventura Hillside Conservancy Lower Ventura River Habitat Restoration and Enhancement (V-7)	The Lower Ventura River Habitat Restoration project involves acquiring land and conservation easements in the 100-year floodplain along lower reaches of the river. This project will also include habitat restoration and enhancement along the lower five miles of the Ventura River up to and including the estuary.	√	
Casitas Municipal Water District Seismic Retrofit of Reservoir Tank (V-9)	This project involves retrofitting two reservoir tanks so they are earthquake safe, thus averting possible water losses and/or loss of service to customers in the event of an earthquake that damages or destroys the tanks.		
OVLC Rice Creek Realignment and Enhancement (V-10)	This project on the OVLC's Ventura River Preserve would return Rice Creek to its approximate historical location from its current channelized location. The project will add over 1,500 feet of new riparian habitat on the site and reestablish floodplain connections and buffer habitats. This project will help shade the water to keep it cool and reduce algal blooms, reduce sedimentation in the Rice Creek and the Ventura River	√	

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	via erosion control, increase the numbers and variety of wildlife, and act as infiltration areas to support water storage for the Ventura River.		
Water Wise Incentive Program	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. The program is open to both residential and commercial property owners. Rebates will pay 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 \$1600 for parcels greater than 1 acre.	v	v
Camrosa Recycled Water Pipeline	A 3000 foot 16-inch pipe will tee off of the effluent pipeline that CamSan is running to the salinity management pipeline (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 other treatment will be necessary.	v	
Pleasant Valley Mutual Water Company Desalter	The Pleasant Valley Mutual water desalter will consist of a reverse osmosis treatment and chemical feed system that will be installed downstream of the existing iron and manganese treatment plant. Construction will include an approximate 1600 square foot 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 1500 AFY of drinking water, resulting in the avoidance of approximately 1000 AFY of imported water.	v	
Moorpark Desalter Phase I	The Moorpark Desalter project will extract high salinity groundwater from a shallow aquifer at a newly constructed well field and then treat the water at a state-of-the-art desalination plant using membrane filtration technology for the removal of salts including chloride, total dissolved solids (TDS), boron, and sulfate. The well		

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	field consists of constructing approximately 20, 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. Treated water will meet Title 22 potable water quality standards and be distributed to District customers and potentially to other adjacent water agencies. Brine generated from the plant will be discharged into the SMP. Inclusion of solar array to provide a portion of the energy use, will reduce GHG by reducing use of fossil fuel energy.	√	√
Invasive Plant Removal, Ecosystem Restoration, and Habitat Protection Project	The project will remove arundo 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.	√	
Advanced Water Purification Facility – Capacity Expansion	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.	√	

Projects included in 2014 IRWM Plan – for Drought Round Prop. 84

Project Name	Project Proponent (s)	Project Description	Potential for Climate Change Adaptation	Potential for Greenhouse Gas Reduction
Efficiency Metering - Westside Ventura	City of Ventura	The City of Ventura would replace meters in the Westside Community, which is a Disadvantaged Community, with automated meter Infrastructure (AMI) installation. The area	√	√

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		has very old pipes and meters with many leaks. AMI systems allow for continuous monitoring of leaks so the leaks can be detected and repaired more quickly. The current bi-monthly billing cycle means that many leaks go undetected for several months, therefore wasting water.		
Lake Casitas Aeration Project	Casitas Municipal Water District	Lack of inflow to Lake Casitas has resulted in lowered dissolved oxygen levels, may result in algal blooms and threatens potable water quality, fish, and aquatic habitat. This project consists of installing an oxygenation system in Lake Casitas to help assure that low lake levels will not pose a risk to the delivery of water supplies for the 70,000 persons and 5,600 acres of planted agriculture in the Casitas Municipal Water District service area.	√	
Stormwater Capture Drying Bed Capacity Improvement	Ojai Valley Sanitary District	The Ojai Valley Sanitary District proposes to develop a "Stormwater Capture and Recharge" project which will divert and temporarily store stormwater from the nearby Weldon Canyon drainage channel for reuse by others offsite or to delay a portion of stormwater peak flows in the Ventura River Watershed by using proposed expanded drying beds for capture.	√	
San Antonio Creek Arundo Removal Project	Ojai Valley Land Conservancy	The Project will complete the ongoing effort to remove Arundo donax from the San Antonio Creek basin of the greater Ventura River Watershed, focusing on the lower 5 miles of Creek. The project will make approximately 320 acre feet per year of additional water available for fish, wildlife and municipal uses by reducing water loss from this invasive weed.	√	

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Ventura County Agricultural Water Use Efficiency Program	1. Ventura Co. Watershed Protection District 2. Ventura County Resource Conservation District 3. Farm Bureau of Ventura County 4. Fox Canyon Groundwater Management Agency	This program is a county-wide effort to work with growers to analyze irrigation methods then implement system improvements for increased agricultural water use efficiencies. The project will result in savings of up to 10,000 acre feet per year, will help bring groundwater basins into balance, and will reduce agricultural runoff.	√	√
County Stormwater Retrofits for Groundwater Recharge – El Rio	County of Ventura	This project will implement groundwater infiltration improvements along the County’s road Right-of-Way in the unincorporated area of El Rio. Dry-weather runoff and stormwater from 64 acres of residential area will be captured, treated, and infiltrated for groundwater recharge using pervious concrete gutters. Besides long-term and sustainable groundwater recharge, this retrofit project will contribute to improvement of surface water and groundwater quality and floodplain mitigation.	√	
Pilot ASR Well for Groundwater Reuse Replenishment	City of Oxnard	This project consists of the construction of an aquifer storage and recovery (ASR) well and monitoring wells to replenish groundwater with recycled water from Oxnard’s Advanced Water Purification Facility. In the near term the project will result in indirect potable reuse of 1,500 acre-feet per year; in the long-term the project will result in reuse of 7,000 acre-feet per year.	√	

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Salinity Management Pipeline, Phase 2D	Calleguas Municipal Water District	The Calleguas Regional Salinity Management Project (SMP) is a regional pipeline that provides a disposal mechanism for brine, thereby enabling operation of groundwater desalting facilities in the Calleguas Creek Watershed. Phase 2D facilitates groundwater desalting in the Pleasant Valley and East Las Posas groundwater basins and is anticipated to allow up to 3,400 acre-feet per year of high-quality agricultural irrigation water supplies to be brought online.	√	√
PV Well Project	Camrosa Water District	This project consists of drilling a new well in the northern portion of the Pleasant Valley Basin where water levels are high and no water quality impairments exist. The new well will provide 1,000 acre feet of water annually. Water extracted from the new well will be in-lieu of pumping from the southern portion of the Pleasant Valley Basin where groundwater levels are in severe decline and there is a threat of seawater intrusion.	√	
West Simi Valley Recycled Water Project, Phase 3	(Ventura County Waterworks District No. 8)	The West Simi Valley Water Recycling Project (Phase 3) will extend the recycled water distribution system operated by the Ventura County Waterworks District No. 8 to deliver an estimated 320 acre-feet per year of recycled water to the Sunset Hills Golf Course and other nearby customers with large irrigation demands in the City of Thousand Oaks	√	√
Meter Station No. 7 and Penny Well	(Camrosa Water District) Projects combined	Distribution infrastructure modifications in both the potable and non-potable systems to allow Camrosa Water District to increase its use of local resource water and decrease its dependence on SWP water by 350 acre-feet per year.	√	√

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Moorpark Wastewater Treatment Plant Tertiary Facility Optimization (Ventura County Waterworks District No. 1) and Pancho Road Reclaimed Water Pipeline	(Ventura County Waterworks District No. 1 and City of Camarillo) Projects tied in ranking.	The project will consist of optimizing the sand filters at the Moorpark Wastewater Treatment Plant by converting the backwash process from continuous to intermittent backwashing, thereby reducing the reject/backwash rate and increase reclaimed water production up to 15% while improving filtration quality.	√	