

Riverside County Stormwater Resource Plan Call for Projects

Ian Achimore, Senior Watershed Manager
OWOW Steering Committee | July 27, 2023
Item No. 5.C.



Relationship Between IRWM* and Stormwater Resource Plans

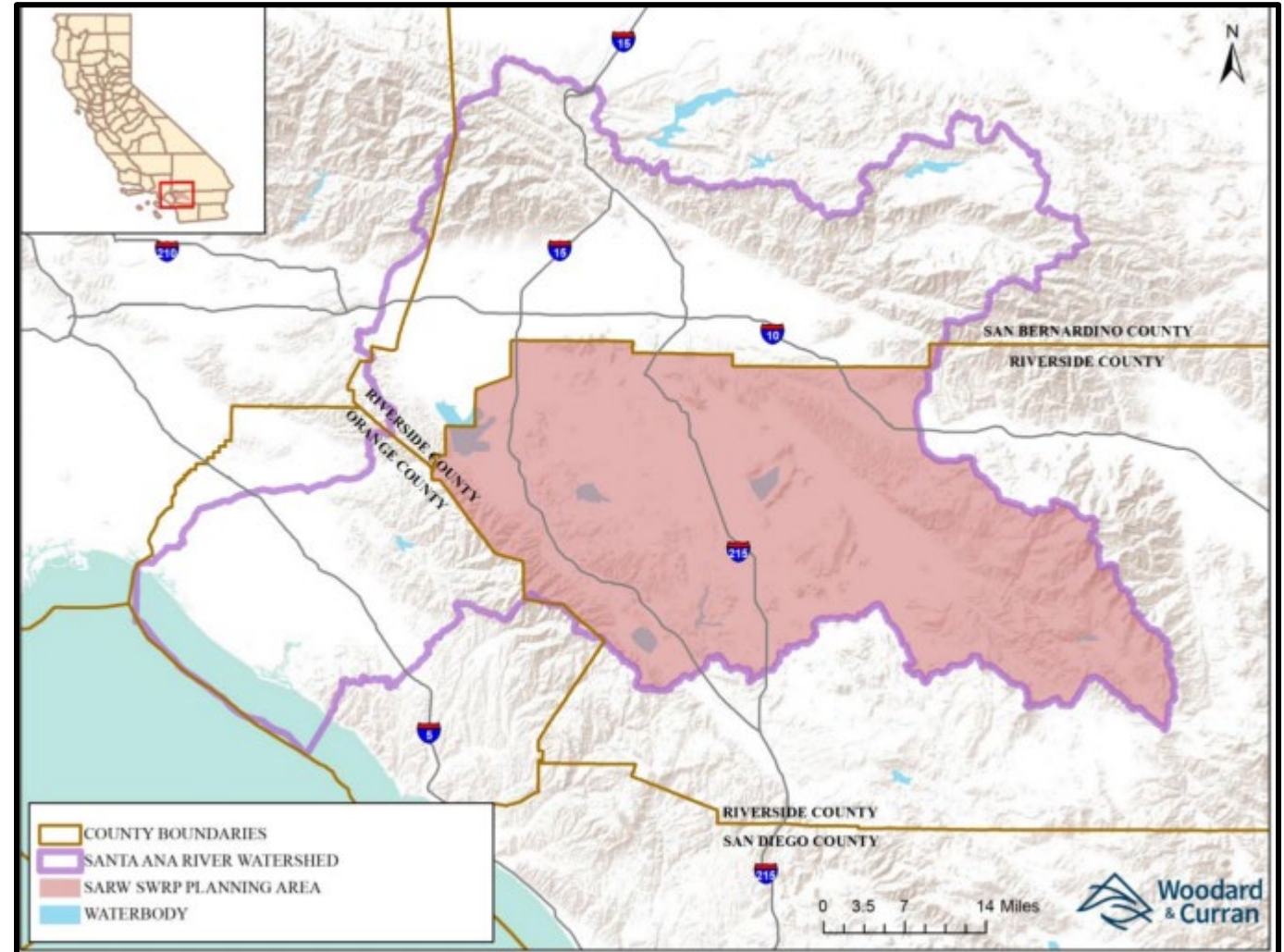
- The One Water One Watershed (OWOW) Plan Update 2018 serves many roles in the Watershed, chiefly as the approved IRWM Plan for the Santa Ana Funding Area.
- Senate Bill 985 requires a local stormwater resource plan (SWRP) to receive State grants for stormwater and dry weather runoff capture projects.
- SWRP lead agencies are often flood control districts such as Riverside County Flood Control and Water Conservation District.



*Integrated
Regional Water
Management

Riverside County Santa Ana Region SWRP

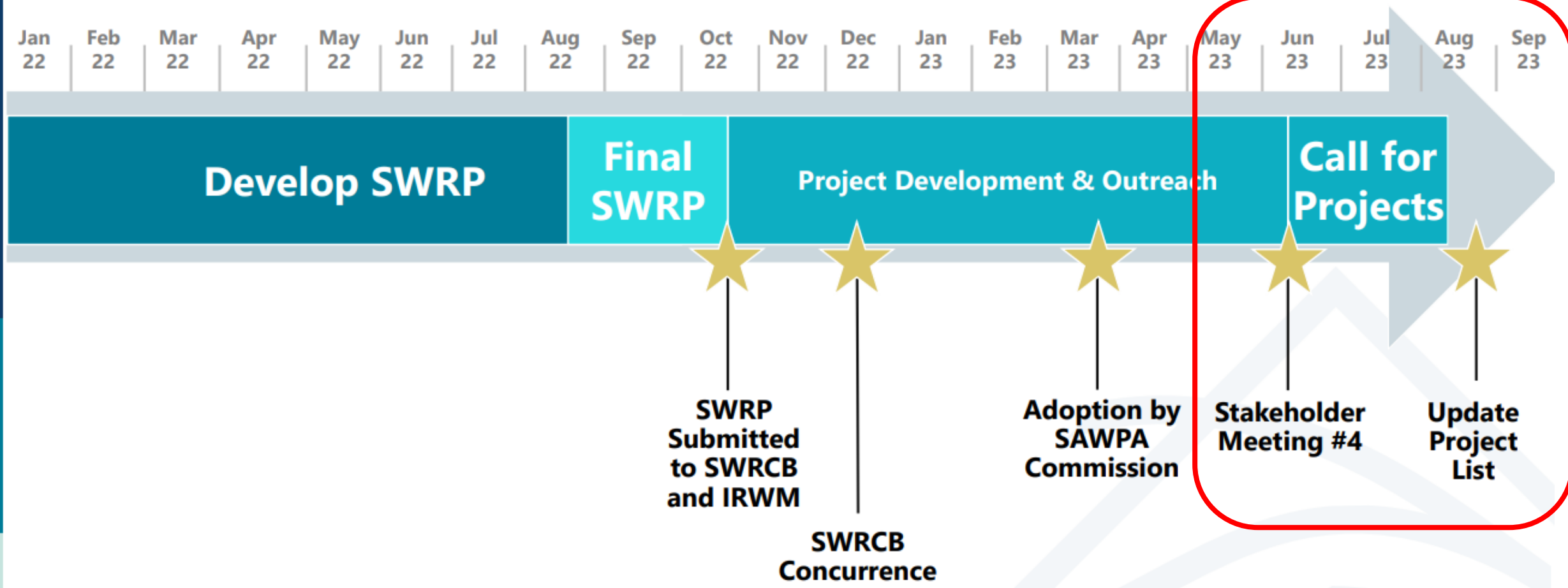
- **SWRP focus:** stormwater and dry weather runoff capture projects/studies.
- Other SWRPs in the Santa Ana River Watershed:
 - Orange County SWRP
 - Chino Basin SWRP
 - San Bernardino SWRP



Projects Currently in the Riverside County SWRP

Project Name	Project Proponent	Project Type	Benefit Categories Met
UC Riverside Gage Basin Green Infrastructure Restoration Phase I	University of California, Riverside Environmental Health & Safety	Conceptual	Water Quality, Flood Management, Environmental, Community
City of Hemet Salt Creek Mitigation Project	City of Hemet	Preliminary Design	Water Quality, Flood Management, Environmental, Community
Box Springs SD-Groundwater Rescharge at Kansas Basin	Riverside County Flood Control & Water Conservation District	Conceptual	Water Quality, Water Supply, Flood Management
Bradley Channel Enhancement Project	City of Perris	Conceptual	Water Quality, Water Supply, Flood Management, Environmental
North Norco Channel, Stage 11	Riverside County Flood Control & Water Conservation District	Ready to Implement	Water Quality, Flood Management
Lakeland Village MDP Line H	Riverside County Flood Control & Water Conservation District	Ready to Implement	Water Quality, Flood Management
Calimesa Channel Stage 3	City of Calimesa	In Design	Water Supply, Flood Management
Good Hope- Olive Avenue Storm Drain, Stages 1 and 2	Riverside County Flood Control & Water Conservation District	In Design	Water Quality, Flood Management
Eastvale Line D	Riverside County Flood Control & Water Conservation District	Conceptual	Water Quality, Water Supply
Eastvale Line E	Riverside County Flood Control & Water Conservation District	Conceptual	Water Quality, Water Supply
Lakeview Subbasin Recharge Feasibility Study	Eastern Municipal Water District	Conceptual	Water Quality, Water Supply
Day Creek Channel Water Conservation Restoration	Riverside County Flood Control & Water Conservation District	Conceptual	Water Supply, Environmental
Marshall Creek, Stage 1	Riverside County Flood Control & Water Conservation District	In Design	Water Quality, Flood Management, Community
Bedford Canyon Channel, Stage 1	Riverside County Flood Control & Water Conservation District	In Design	Flood Management
Temecula Basin Stormwater Capture and Recharge	City of Corona, Utilities Department	Conceptual	Water Quality, Water Supply
Sedco MDP Line F-2	City of Wildomar	Conceptual	Water Quality, Flood Management

Riverside County Stormwater Plan Schedule



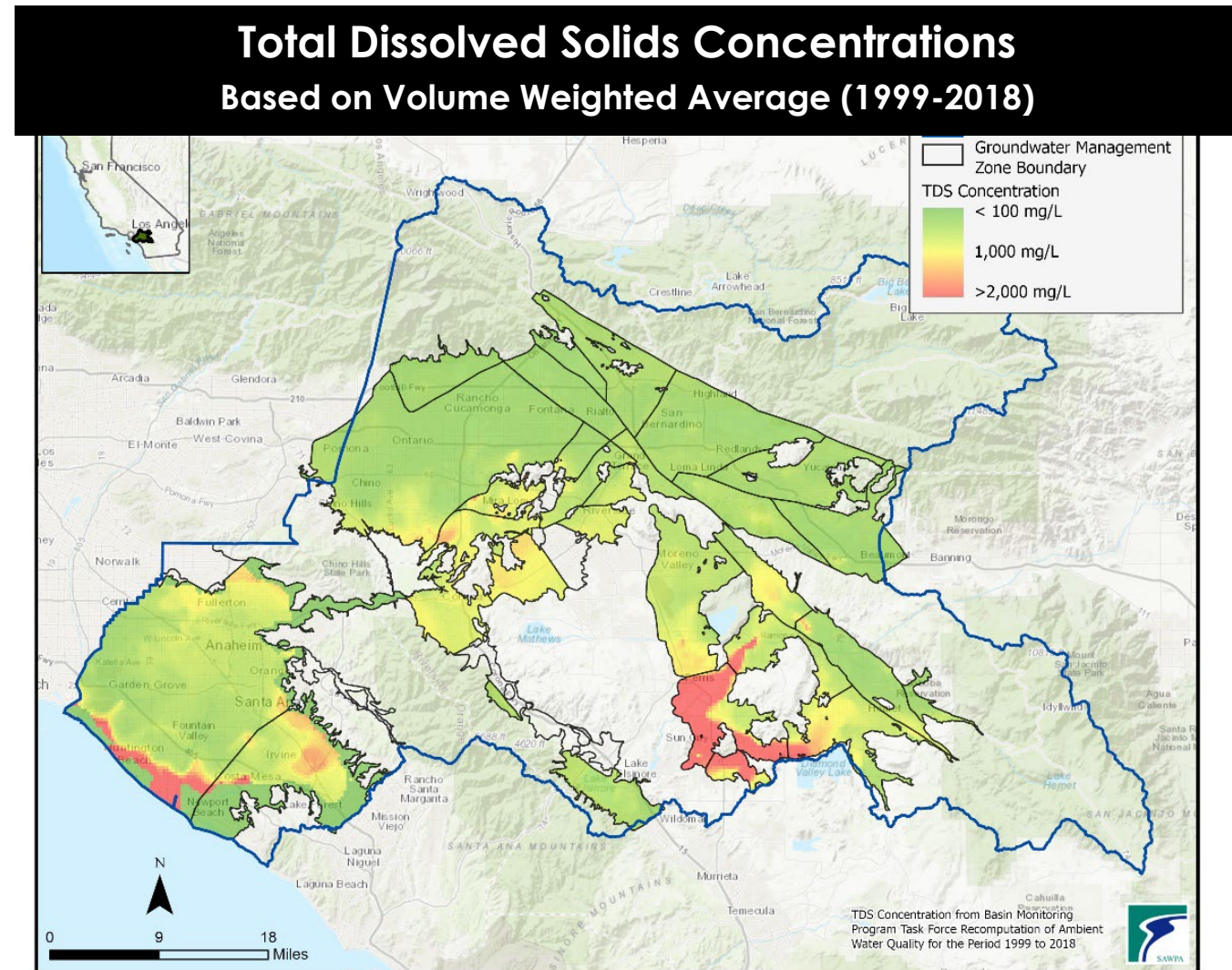
SAWPA's Feasibility Study Concepts to Submit for Call for Projects

- Distributed Stormwater Capture Feasibility Study
- Drywell Pilot Assessment



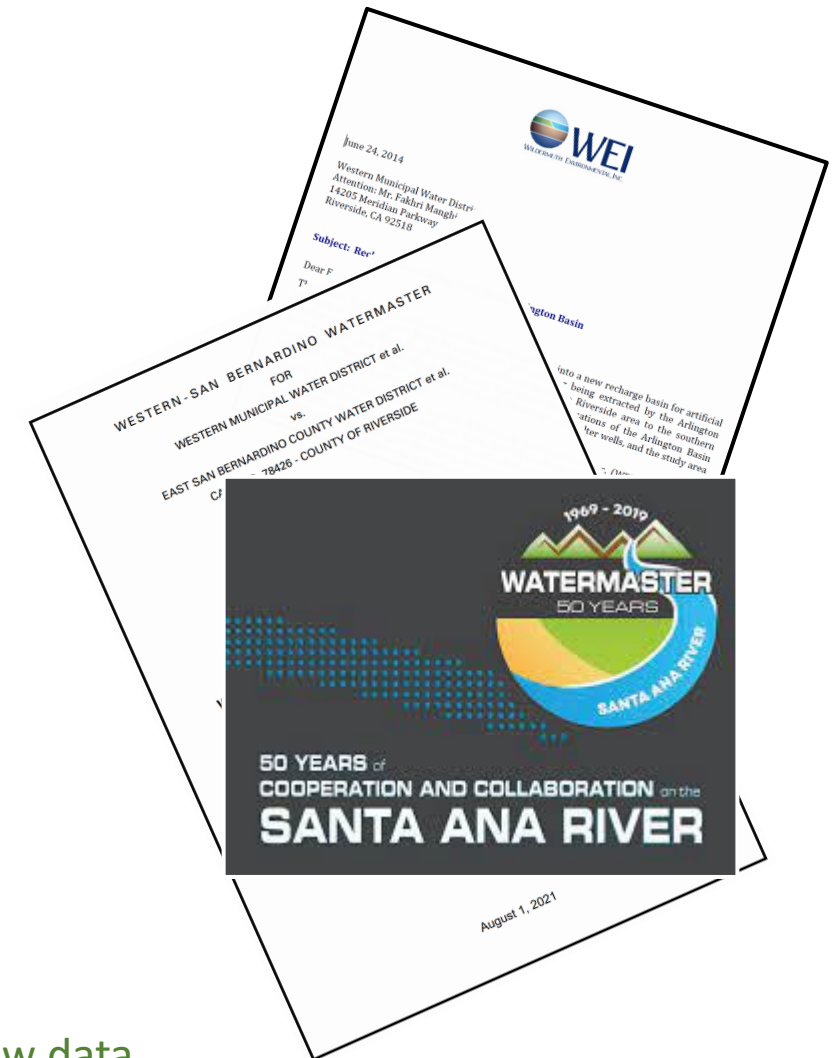
Distributed Stormwater Capture Study Concept

- Purpose is to identify general locations where distributed recharge of stormwater (for water supply benefit) is feasible
 - Water supply enhancement is feasible in zones with minimal water quality issues and maximum benefit for supply



Information To Be Used to Identify Locations

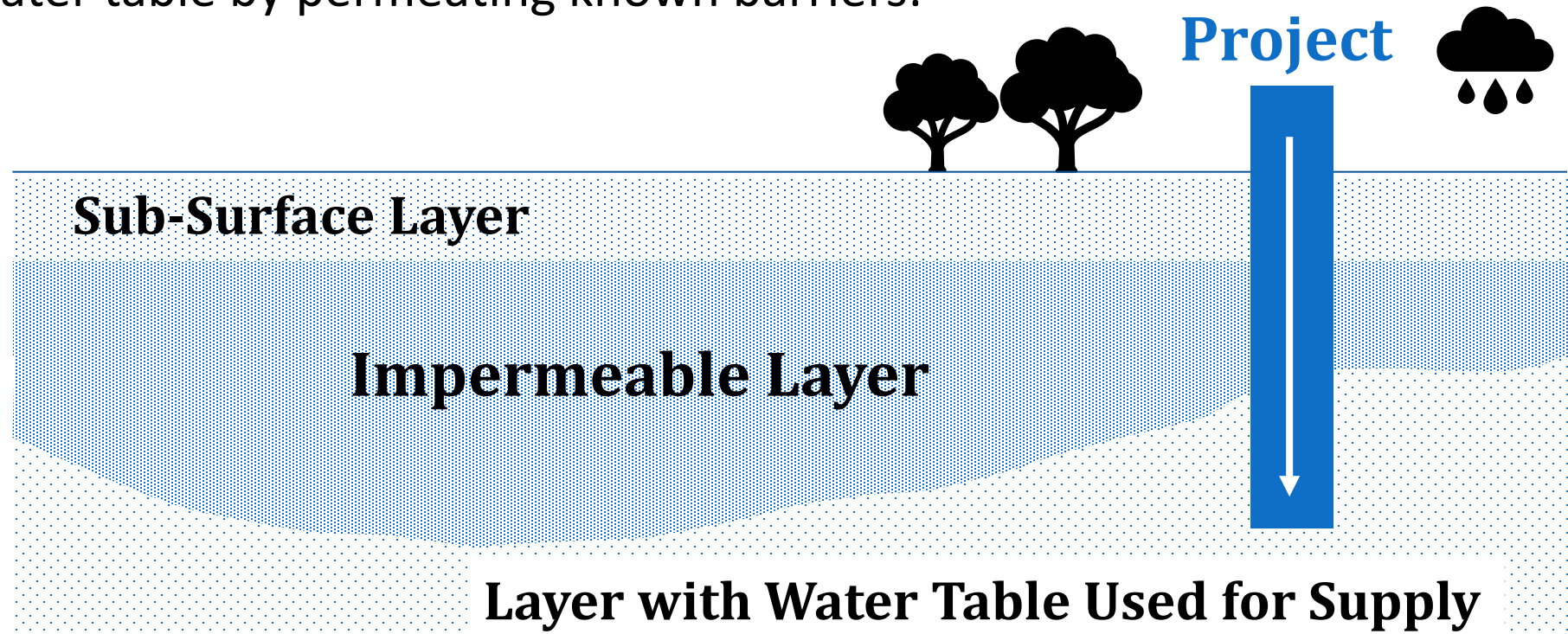
- Existing studies.
- Ambient Water Quality Re-computations and Groundwater Sustainability Agency data.
- Land use information from the county assessors and Southern California Association of Governments.



Note: Information used is a compilation of existing information rather than a new data collection effort.

Drywell Pilot Assessment Concept

- Purpose is to understand conditions where recharge of stormwater (for water supply benefit) is feasible
 - Water supply enhancement is feasible (for example) when a drywell can recharge water table by permeating known barriers:



Next Steps

- Submit concepts by August 3, 2023.
- Coordinate with Riverside County Flood Control if they plan to submit a coordinated grant application for future stormwater-related funding.
 - There may be some funding available if a resource bond is approved by the legislature/governor, and the general electorate on the March or November 2024 ballots.
- Monitor if other flood control districts have similar Call for Projects and consider applying under their processes if so.

Proposition 1 Status Update

Steering Committee Meeting | July 27, 2023


Marie Jauregui, Project Manager

Item No. 5.D



Proposition 1 Update

Round	Number of Projects	Projects Complete	Grant Amount	Grant Invoiced	Total Project Cost	% Grant Billed
Round 1 Implementation	9	2	\$ 19,934,428	\$ 11,728,401	\$ 118,349,259	59%
Round 2 Implementation	13	0	\$ 27,705,642	\$ 0	\$ 103,083,983	0%

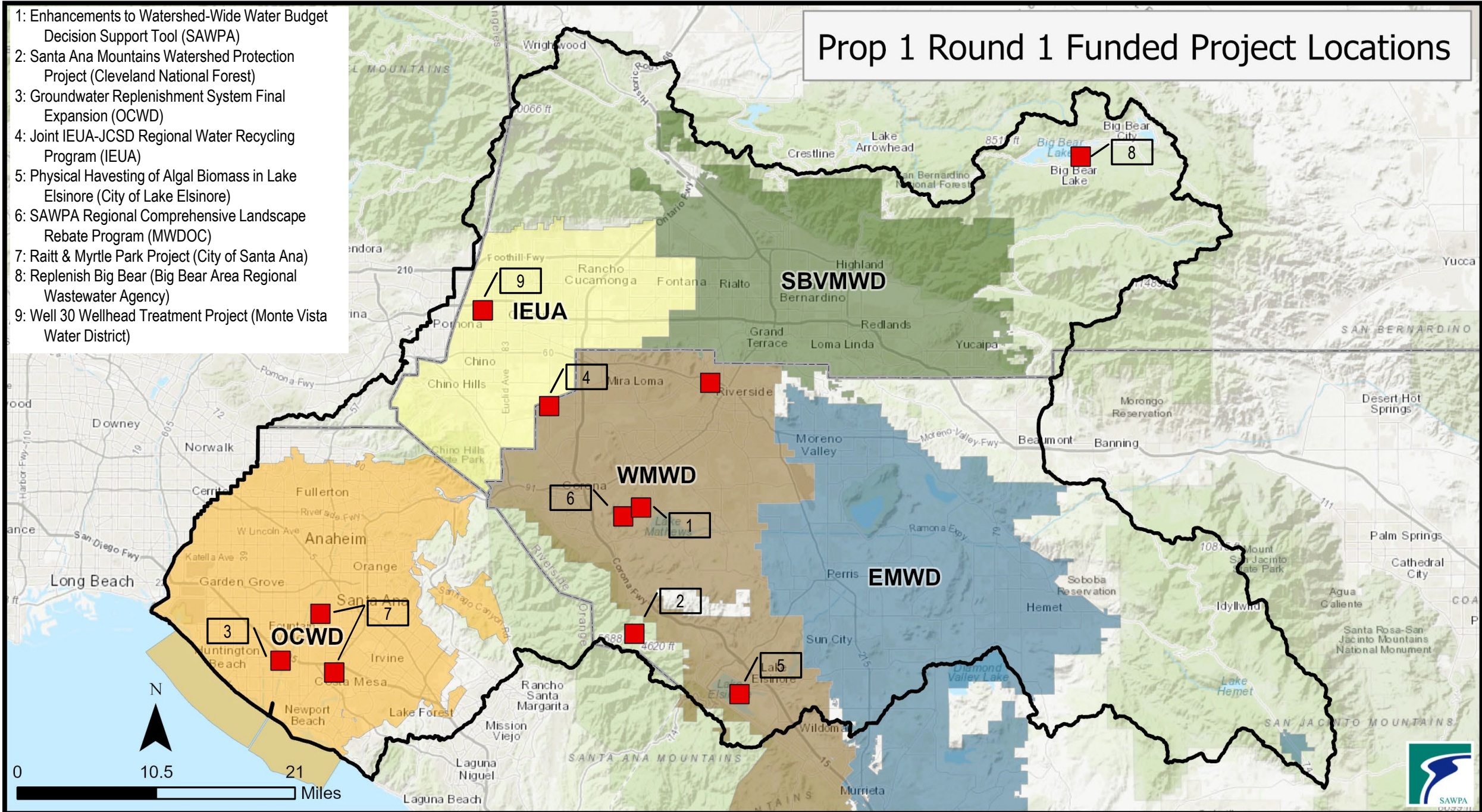


Proposition 1 Round 1 Projects

(January 2015 – December 2025)

Prop 1 Round 1 Funded Project Locations

- 1: Enhancements to Watershed-Wide Water Budget Decision Support Tool (SAWPA)
- 2: Santa Ana Mountains Watershed Protection Project (Cleveland National Forest)
- 3: Groundwater Replenishment System Final Expansion (OCWD)
- 4: Joint IEUA-JCSD Regional Water Recycling Program (IEUA)
- 5: Physical Harvesting of Algal Biomass in Lake Elsinore (City of Lake Elsinore)
- 6: SAWPA Regional Comprehensive Landscape Rebate Program (MWDOC)
- 7: Raitt & Myrtle Park Project (City of Santa Ana)
- 8: Replenish Big Bear (Big Bear Area Regional Wastewater Agency)
- 9: Well 30 Wellhead Treatment Project (Monte Vista Water District)



Proposition 1 Round 1 Update

Project Name	Project Description	Water Supply Reliability	Groundwater Recharge	Treat / Convey Wastewater	Multipurpose Flood & Stormwater	Ecosystem / Wetland Protection / Restoration	DAC	Benefits Large Area of Watershed	Drinking Water Treatment	Public Education Component	Non-point Source Pollution	Fisheries Restoration / Protection	Removal of Invasive Non-Native Species
Enhancements to Watershed-Wide Water Budget Decision Support Tool (SAWPA)	The project (decision support tool) will create water budgets based on efficiency at the customer and retail water agency scale through the collection of aerial imagery, weather data, and other information.	x						x		x			
Santa Ana Mountains Watershed Protection Project (Cleveland National Forest)	The project will establish approximately 650 acres of strategically located topographic and roadside fuel breaks on National Forest System lands along North Main Divide Road and the Trabuco Community Defense within the Santa Ana Mountains and watershed.				x	x	x	x				x	

Proposition 1 Round 1 Update

Project Name	Project Description	Water Supply Reliability	Groundwater Recharge	Treat / Convey Wastewater	Multipurpose Flood & Stormwater	Ecosystem / Wetland Protection / Restoration	DAC	Benefits Large Area of Watershed	Drinking Water Treatment	Public Education Component	Non-point Source Pollution	Fisheries Restoration / Protection	Removal of Invasive Non-Native Species
Joint IEUA-JCSD Regional Water Recycling Program (IEUA)	This project is a collaborative effort between the Inland Empire Utilities Agency and the Jurupa Community Services District to increase recycled water use and groundwater recharge in the Chino Basin.	x	x	x				x					
Physical Harvesting of Algal Biomass in Lake Elsinore – Pilot Study (City of Lake Elsinore)	This decision support tool is designed to determine the feasibility of improving water quality in Lake Elsinore through physical removal of algal biomass. The feasibility and cost-effectiveness of potential removal strategies will be evaluated.			x		x	x	x		x	x	x	

Proposition 1 Round 1 Update

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Regional Comprehensive Landscape Rebate Program (MWDOC)	This Project targets public agency, residential, commercial, industrial, and institutional landscapes throughout the entire Santa Ana River Watershed.	x			x		x	x		x	x		
Raitt & Myrtle Park ¹ (City of Santa Ana)	This project features the construction of a 1,600-square-foot bioretention basin with no underdrain and a large subsurface infiltration gallery in a new 1.18-acre park.	x	x		x	x	x			x	x		

Proposition 1 Round 1 Update

Project Name	Project Description	Water Supply Reliability	Groundwater Recharge	Treat / Convey Wastewater	Multipurpose Flood & Stormwater	Ecosystem / Wetland Protection / Restoration	DAC	Benefits Large Area of Watershed	Drinking Water Treatment	Public Education Component	Non-point Source Pollution	Fisheries Restoration / Protection	Removal of Invasive Non-Native Species
Replenish Big Bear (BBARWA)	The project will add approximately 1,870 AFY of water to Stanfield Marsh Wildlife and Waterfowl Preserve, providing a consistent water source to sustain habitat and increase educational opportunities for the community and visitors.	x	x	x	x	x	x	x		x			
Well 30 Wellhead Treatment Project (MVWD)	The Project involves constructing an ion exchange and a granular activated carbon wellhead treatment system to remove nitrates, perchlorate, and 1,2,3-trichloropropane present in the groundwater supply.	x	x				x	x	x				

Proposition 1 Round 1 Update


Project Name	Agency	Grant Amount	Required Funding Match	Additional Cost Share	Total Project Cost	% Grant Billed
Project 1 Enhancements to Watershed-Wide Water Budget Decision Support Tool	SAWPA	\$ 500,000	\$ 864,354	\$ 364,354	\$ 1,728,708	38%
Project 2 Santa Ana Mountains Watershed Protection Project	Cleveland National Forest	\$ 497,998	\$ 0	\$ 732,144	\$ 1,230,142	46%
Project 3 Groundwater Replenishment System Final Expansion	OCWD	\$ 3,589,553	\$ 10,000,000	\$ 2,694,545	\$ 16,284,098	100%

Proposition 1 Round 1 Update

Project Name	Agency	Grant Amount	Required Funding Match	Additional Cost Share	Total Project Cost	% Grant Billed
Project 4 Joint IEUA-JCSD Regional Water Recycling Program	IEUA	\$ 2,617,970	\$ 16,555,000	\$ 13,937,030	\$ 33,110,000	0%
Project 5 Physical Harvesting of Algal Biomass in Lake Elsinore – Pilot Program	City of Lake Elsinore	\$ 297,000	\$ 0	\$ 0	\$ 297,000	3%
Project 6 Regional Comprehensive Landscape Rebate Program	MWDOC	\$ 2,767,344	\$ 2,787,218	\$ 0	\$ 5,554,562	99%
Project 7 Raitt & Myrtle Park	City of Santa Ana	\$ 1,670,000	\$ 0	\$ 246,500	\$ 1,916,500	36%

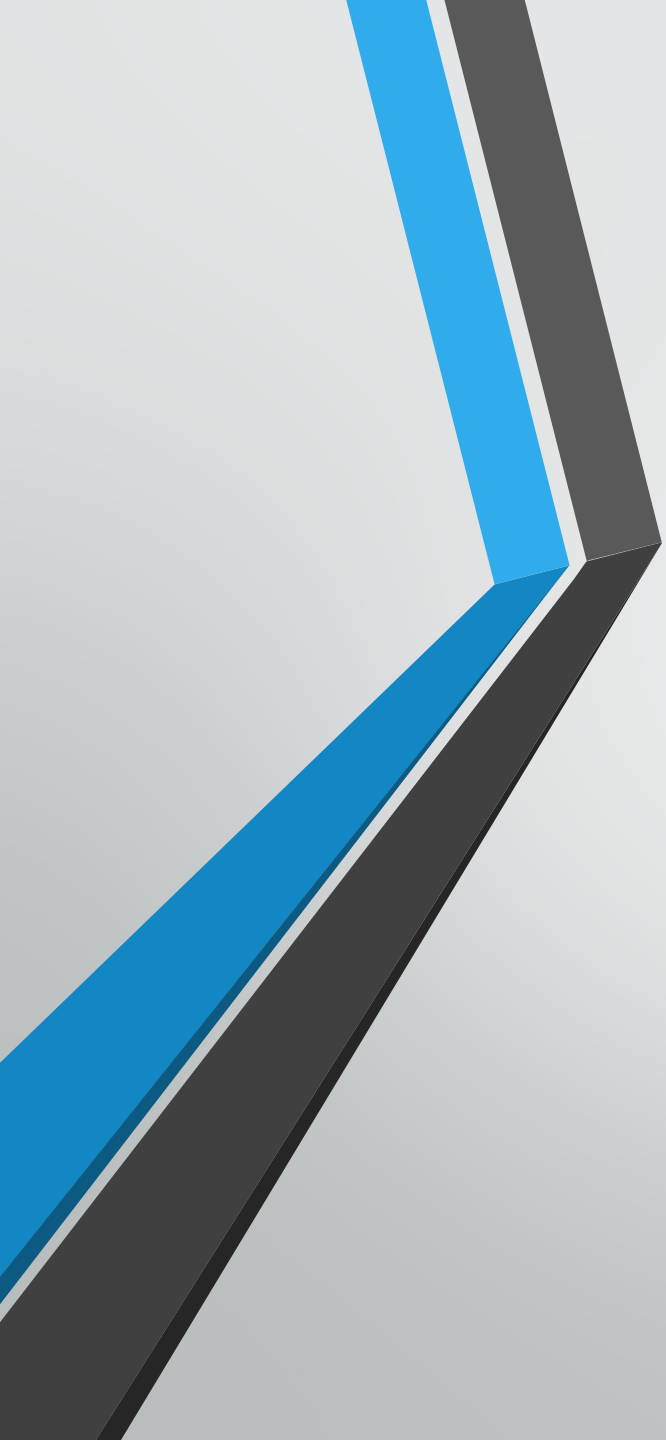
Proposition 1 Round 1 Update

Project Name	Agency	Grant Amount	Required Funding Match	Additional Cost Share	Total Project Cost	% Grant Billed
Project 8 Replenish Big Bear	BBARWA	\$ 4,563,338	\$ 0	\$ 36,853,662	\$ 41,417,000	21%
Project 9 Well 30 Wellhead Treatment	MVWD	\$ 3,431,225	\$ 9,980,024	\$ 3,400,000	\$ 16,811,249	100%



Proposition 1 Round 2 Projects

(May 2022 – December 2027)

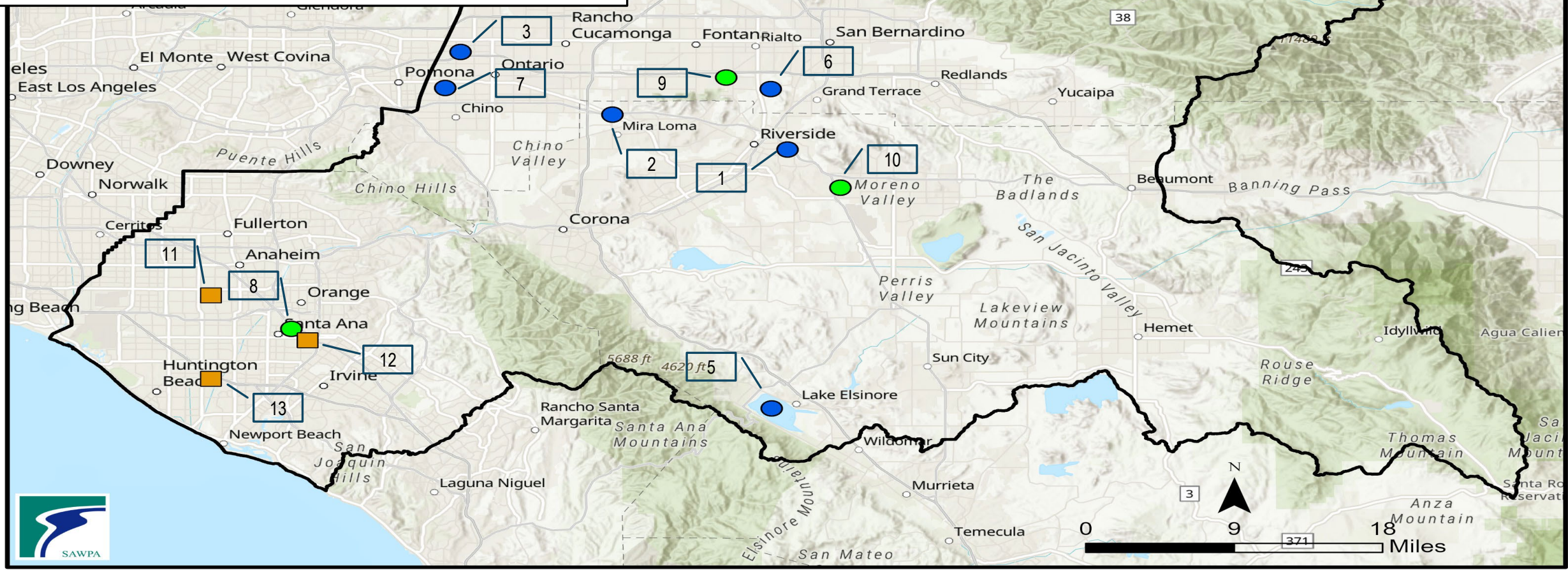


Proposition 1 Round 2 Update

- Grant Award acceptance letter sent to DWR on June 1, 2023
- Awaiting Grant Agreement from DWR

- 1: Santa Ana River Watershed Weather Modification Pilot Project Santa Ana River Watershed Weather Modification Pilot Project (SAWPA)
- 2: Etiwanda Intervalley Water Quality and Water Resiliency Project Phase-1A (JCSD)
- 3: Wellhead Nitrate Treatment for Wells 4 & 27 (MVWD)
- 4: Cable Creek Basin (Upper) (SBCFCD)
- 5: Lake Elsinore Algae Harvesting and Nutrient Removal Pilot Project (LESJWA)
- 6: Lake Rialto Habitat Management and Community Open Space Project (City of Rialto)
- 7: Well 2 Replacement (MVWD)
- 8: New Washington Well Project (City of Santa Ana)
- 9: Water Quality: Lead Service Line Replacements in the Bloomington DAC (WVWD)
- 10: Box Springs Mutual Water Company Well Improvement Project (Box Springs MWC)
- 11: Orange County Regional PFAS Groundwater Treatment Program (OCWD)
- 12: Santa Ana Zoo Stormwater Capture and Diversion Project (City of Santa Ana)
- 13: Making Conservation an Orange County Way of Life (MWDOC)

Prop 1 Round 2 Recommended Projects



Proposition 1 Round 2 Update

Project Name	Project Description	Water Supply	Water Quality	Greenhouse Gas	Habitat	Flood Protection	DAC	Watershed Wide
Santa Ana River Watershed Weather Modification Pilot Project (SAWPA)	Decision support tools to model regional water management strategies to account for climate change and other changes in regional demand and supply projections	x	x	x				x
Etiwanda Intervalley Water Quality and Water Resiliency Project Phase-1A (JCSD)	The goal of the project is to establish reliable local groundwater sources and to meet CVWD's and JCSD's projected water demands. The project will provide greater water supply, higher water quality and resilience, and reduced greenhouse gases	x	x	x				
Wellhead Nitrate Treatment for Wells 4 & 27 (MVWD)	This project would provide wellhead 1,2,3-Trichloroporpene (TCP) treatment for Well 4 and Well 27 in MVWD's pressure Zone 1	x	x					

Proposition 1 Round 2 Update

Project Name	Project Description	Water Supply	Water Quality	Greenhouse Gas	Habitat	Flood Protection	DAC	Watershed Wide
Cable Creek Basin (Upper) (SBCFCD)	The Project includes a proposed debris detention basin at the existing Cable Creek Spreading Grounds that will reduce the 100-year peak discharge from Cable Creek. The project will also serve as a sedimentation basin and stormwater recharge/detention basin.	x				x		
Lake Elsinore Algae Harvesting and Nutrient Removal Pilot Project (LESJWA)	The Project will demonstrate the use of algae harvesting using HFT to treat water in Lake Elsinore.		x		x			
Lake Rialto Habitat Management and Community Open Space Project (City of Rialto)	The Project will involve construction of Lake Rialto, which will provide an estimated 41 acre-feet of seasonal storage. The surrounding area will be public open space, and the project will provide opportunities for passive recreation, educational programming, and public outreach.		x	x	x			

Proposition 1 Round 2 Update

Project Name	Project Description	Water Supply	Water Quality	Greenhouse Gas	Habitat	Flood Protection	DAC	Watershed Wide
Well 2 Replacement (MVWD)	MVWD will install a replacement well for Well #2. The associated tank will be recoated and the booster station will be upgraded. MVWD will also install a packaged ion exchange system to reduce nitrate contamination.	x	x					
New Washington Well Project (City of Santa Ana)	The Project will involve drilling a new well and installing the well to distribution system mechanical piping and electrical equipment.	x	x				x	
Water Quality: Lead Service Line Replacements in the Bloomington DAC (WVWD)	The Project will address water quality directly by eliminating sources of lead by removing lead service lines and fittings.	x	x				x	

Proposition 1 Round 2 Update

Project Name	Project Description	Water Supply	Water Quality	Greenhouse Gas	Habitat	Flood Protection	DAC	Watershed Wide
Box Springs Mutual Water Company Well Improvement Project (Box Springs MWC)	The project will involve constructing a test well to identify high-quality water zones.	x	x				x	
Orange County Regional PFAS Groundwater Treatment Program (OCWD)	The project will alleviate the negative impact of drought on Orange County water supplies through an advanced treatment process of ion exchange to remove PFAS. Two ion exchange well-head treatments will be implemented at Garden Grove Well 19 and Santa Ana Well 31. The treated groundwater from Wells 19 and 31 will be disinfected and delivered to the existing drinking water distribution systems.	x	x	x				

Proposition 1 Round 2 Update

Project Name	Project Description	Water Supply	Water Quality	Greenhouse Gas	Habitat	Flood Protection	DAC	Watershed Wide
Santa Ana Zoo Stormwater Capture and Diversion Project (City of Santa Ana)	The Project will involve construction of subsurface stormwater infiltration systems at the Santa Ana Zoo.	x	x	x	x	x		
Making Conservation an Orange County Way of Life (MWDOC)	This project incentivizes residential, commercial, industrial, and institutional water users to increase water efficiency indoors and outdoors	x	x	x	x			

Proposition 1 Round 2 Update (from application)

Project Name	Agency	Grant Amount	Funding Match	Total Project Cost	% Grant Billed
Santa Ana River Watershed Weather Modification Pilot Project	SAWPA	\$ 861,400	\$ 861,400	\$ 1,722,800	0%
Etiwanda Intervalley Water Quality and Water Resiliency Project Phase-1A	JCSD	\$ 2,954,213	\$ 40,337,402	\$ 43,291,615	0%
Wellhead Nitrate Treatment for Wells 4 & 27	MVWD	\$ 2,533,492	\$ 4,416,508	\$ 6,950,000	0%
Cable Creek Basin (Upper)	SBCFCD	\$ 2,521,678	\$ 11,086,993	\$ 13,608,671	0%
Lake Elsinore Algae Harvesting and Nutrient Removal Pilot Project	LESJWA	\$ 1,500,000	\$ 1,645,632	\$ 3,145,632	0%
Lake Rialto Habitat Management and Community Open Space Project	City of Rialto	\$ 2,149,748	\$ 2,403,566	\$ 4,553,314	0%
Well 2 Replacement	MVWD	\$ 2,006,311	\$ 5,388,765	\$ 7,395,076	0%
New Washington Well Project	City of Santa Ana	\$ 3,394,743	\$ 0	\$ 3,394,743	0%
Water Quality: Lead Service Line Replacements in the Bloomington DAC	WVWD	\$ 315,000	\$ 0	\$ 315,000	0%

Proposition 1 Round 2 Update (from application)

Project Name	Agency	Grant Amount	Funding Match	Total Project Cost	% Grant Billed
Box Springs Mutual Water Company Well Improvement Project	Box Springs MWD	\$ 1,885,257	\$ 0	\$ 1,885,257	0%
Orange County Regional PFAS Groundwater Treatment Program	OCWD	\$ 4,200,000	\$ 6,700,000	\$ 10,900,000	0%
Santa Ana Zoo Stormwater Capture and Diversion Project	City of Santa Ana	\$ 2,603,525	\$ 1,146,475	\$ 3,750,000	0%
Making Conservation an Orange County Way of Life	MWDOC	\$780,275	\$ 1,391,600	\$ 2,171,875	0%



Questions?