

KINGS BASIN WATER AUTHORITY

2021 ANNUAL REPORT

(OCTOBER 2020 – SEPTEMBER 2021)

April 15 2022

PREPARED BY:



TABLE OF CONTENTS

1 – INTRODUCTION	1
2 – STATUS OF MEASURABLE OBJECTIVES	2
3 – IMPLEMENTATION PROJECTS	7
3.1 – Regional Studies.....	7
3.2 – IRWM Project List	7
3.3 – Completed or On-going Projects.....	7
3.4 – Grant Funding.....	7
3.5 – Lessons Learned	7
4 – GOVERNANCE, POLICIES AND MEMBERSHIP	8
4.1 – Changes in Governance and Policies	8
4.2 – Changes in Government Regulations	8
4.3 – Changes in Members and Interested Parties	8
4.4 – Coordination with Other IRWMPs	8
5 – PROPOSED IRWMP AMENDMENTS	9
6 – SUSTAINABLE GROUNDWATER MANAGEMENT ACT	10

Attachments

Attachment 1 – IRWM Project List

Attachment 2 – Past and Present Grant Contracts

1 – INTRODUCTION

The Kings Basin Water Authority (KBWA) adopted an updated Integrated Regional Water Management Plan (IRWMP) in October 2018. The IRWMP established a goal of preparing an annual report (see Section 9.6 of IRWMP) to document progress and serve as a reference document for future IRWMP updates. This report includes information on the Sustainable Groundwater Management Act (SGMA); status of IRWMP objectives and implementation projects; changes in governance, policies and membership of the KBWA; and proposed IRWMP amendments.

This report discusses and documents project activities directly related to or processed through the KBWA or Integrated Regional Water Management (IRWM) related funding. It should be recognized that the stakeholders undertake numerous activities outside of the IRWM that may contribute to the goals and objectives of the region, however this report is not intended to document all individual stakeholder activities outside of IRWM efforts.

The annual report for the KBWA follows the Kings River water year, covering the timeframe between October 1, 2020 to September 30, 2021.

2 – STATUS OF MEASURABLE OBJECTIVES

Following is a list of Measurable Objectives (MO) from Chapter 5 of the 2018 IRWMP and progress made in meeting those objectives during the year. Progress for most objectives is documented when projects are completed, whether through funding secured by KBWA or funded through other sources. Some objectives, such as those related to public outreach or education, are not necessarily performed as part of projects on the KBWA list, and their progress is reported on an on-going basis.

Measurable Objective No. 1: Increase amount of groundwater in storage with intent to eliminate the groundwater overdraft in 20 years

Measurement: Report of change in overdraft in accordance with Section 12.2 of the IRWMP and net effect of new projects capacity/performance.

Status: This annual report does not include an estimation of the overall change in overdraft within the Kings IRWMP area; an estimation is provided in the 2018 IRWMP and will be provided in the future in subsequent updates to the IRWMP if required. The region continues to be actively engaged in the implementation of the Sustainable Groundwater Management Act (SGMA) which requires sustainability consistent with this Measurable Objective. The KBWA boundary encompasses all of the Kings Subbasin, where seven (7) Groundwater Sustainability Agencies (GSAs) have been formed but also extends past the subbasin boundaries and includes a portion of two (2) additional GSAs. The seven GSAs within the Kings Basin are Central Kings GSA, James GSA, Kings River East GSA, McMullin Area GSA, North Fork Kings GSA, North Kings GSA, and South Kings GSA. Annual groundwater storage change estimations have been developed and documented in the Groundwater Sustainability Plans (GSPs) and the Kings Basin Annual Report.

Several projects from the IRWM project list were initiated, continued, or completed in this reporting period and will help to increase groundwater storage and reduce groundwater overdraft, as follows:

- City of Sanger acquired property for its North Sanger Recharge project.
- Consolidated Irrigation District acquired additional acres of new recharge basin.
- Fresno Irrigation District completed construction of 150 acres of recharge basins at its Wagner and Central Basin projects, and initiated construction on its Savory Pond Expansion project.
- Fresno Metropolitan Flood Control District secured funding for its Basin CF intertie project that will provide recharge to benefit Malaga County Water District.

Other SGMA related activities are included in the Kings Basin annual report. All GSAs within the KBWA submitted their GSPs in January 2020. The objective of the GSPs and the legislative requirements that guide them are to achieve groundwater sustainability by 2040, which will include a mixture of efforts. All of the GSPs provide possible actions to reach sustainability, many of which include constructing new recharge projects in the Kings subbasin. Much of the IRWMs work for sustainability is shifting to GSA activities.

Measurable Objective No. 2: Identify opportunities and Projects

Measurement: List of projects and opportunities and their potential.

Status: KBWA Members and Interested Parties can submit projects for inclusion on the IRWM Project List at any time during the year. Included on the KBWA website is a link to submit a

project. New projects are considered at each Advisory Committee meeting and presented to the Board of Directors for inclusion on the IRWM Project List. A copy of the current IRWM Project List is included as **Attachment 1**.

Awarded in 2020, design work was initiated on the Fresno Metropolitan Flood Control District's (FMFCD) Basin CF intertie project that received \$1,113,033 and will provide direct recharge benefit to the Malaga County Water District (Malaga CWD) to help ensure sustainability and SGMA compliance.

Measurable Objective No. 3: Identify Disadvantaged Community (DAC) priority needs and promote/support solutions to DAC water issues

Measurement: DAC studies and project development/implementation

Status: Project efforts continue on several IRWM funded DAC projects listed in **Attachment 2** including the following:

- As noted, the FMFCD Basin CF Intertie Project was awarded funding from DWR and will directly benefit the Malaga CWD.
- The *Proposition 1 DAC Involvement Grant Program* aims to ensure involvement of DACs, Economically Disadvantaged Areas, or underrepresented communities in IRWM planning efforts, including the following activities: Needs Assessment, Project Development, DAC Engagement and Education Program, Final Report, Project Management, and Grant Administration. Funding was received in February 2018 and the Needs Assessment identified and funded three DAC projects within KBWA. A project for East Oroshi CSD is in process and nearing completion. A project for Malaga CWD was completed in May 2021, and a project for Sultana CSD was completed in October 2021, just after the reporting period of this report.

In addition, during the development of GSPs in the KBWA, each GSA has conducted varying levels of DAC outreach and communication in an effort to document DAC needs and include their perspectives in the GSPs.

Measurable Objective No. 4: Increase average annual supply and reduce demand

Measurement: Documentation of amount of increase/decrease

Status: Groundwater recharge projects have been a priority project for the region to increase average annual supply to the area. The GSPs in the basin also include extensive discussion on the supply and demands of every water user in the KBWA and potential actions to increase supply and/or reduce demands. The GSAs have started implementing projects and programs to help increase the average annual supply within the basin, and a listing of these activities is included in the Kings Basin Annual Report.

Measurable Objective No. 5: Increase dry year supply

Measurement: Documentation of amount of increase

Status: Groundwater banking and water conservation efforts remain the focus of improving dry year supply within the region. Refer to **Attachment 2** for a list of currently funded projects.

Measurable Objective No. 6: Increase regional conveyance capacity and adapt operations to accommodate changes in runoff and recharge

Measurement: Total acre-feet available (both capacity and re-operation)

Status: Some of the IRWMP projects implemented have included conveyance capacity, but there are no IRWMP projects that solely increase conveyance capacity that have been initiated.

Measurable Objective No. 7: Compile baseline water quality data for ground and surface water

Measurement: Report of data collected and evaluate changes in the basin in annual report by considering population served and compliance orders from available sources such as Enforcement Compliance History Online (ECHO) and Safe Drinking Water Information System (SDWIS).

Status: All of the permitted water suppliers perform water quality testing, which is available upon request. Through development of the GSPs, documented water quality data in the KBWA has been compiled and documented for groundwater sources. This information was used in the discussion and development of sustainability criteria for water quality in groundwater. Information regarding new water quality data and/or changes to the baseline water quality characteristics will be documented in the GSA's annual reports. The Kings River Water Coalition administers the Irrigated Lands Regulatory Program (ILRP) that covers most of the KBWA boundary. Water quality information from this program is included in regular reporting to the State. The KBWA has not initiated a specific region-wide water quality data analysis for surface water sources.

Measurable Objective No. 8: Encourage Best Management Practices, policies and education that protect water quality

Measurement: Documentation of efforts/education

Status: Potential Management Actions and development of Undesirable Results, Measurable Objectives and Minimum Thresholds related to water quality in the GSPs will help to protect and potentially improve water quality throughout the region. The Fresno Metropolitan Flood Control District continued its public outreach efforts related to clean stormwater and pollution prevention, including television advertisements, mailings, and education programs. The Kings River Water Quality Coalition provides resources, outreach and reporting related to the nitrate management and the requirements of ILRP.

Measurable Objective No. 9: Identify sources of water quality problems and promote/support solutions to improve water quality

Measurement: Report of information gathered

Status: All of the permitted water suppliers perform water quality testing, which is available upon request. The Maximum Contaminant Level (MCL) for hexavalent chromium was invalidated in 2018 and a new MCL remains in development. An MCL for 1,2,3,-trichloropropane (TCP) of 5 parts per trillion (ppt) was set in 2018. Many of the agencies with TCP violations are in process of, at the conclusion of, or contemplating litigation against apparent responsible parties. Those with MCL violations and/or compliance orders are also in process of or have constructed treatment systems, typically granular activated carbon (GAC), to treat the affected water supply to meet drinking water standards.

Measurable Objective No. 10: Increase surface storage

Measurement: Documentation of amount

Status: The increase of surface storage was limited to minimal surface storage increase associated with the groundwater recharge basin or banking facilities included on the IRWM Project List. No larger or significant surface storage project has been undertaken by the KBWA within the region.

Measurable Objective No. 11: Sustain the Kings River Fisheries Program

Measurement: Report on program

Status: The Irrigation Districts continue to divert water from storage to convey down the river to maintain the Fisheries Program in accordance with the Fisheries Program Agreement. From November 2020 through April 2021, the Kings River Fisheries Management Program provided supplemental stocking of 41,312 pounds of rainbow trout into the Kings River. Additionally, the Kings River Conservation District (KRCD) separately provided 4,184 pounds of rainbow trout into the Kings River. KRCD in coordination with the Kings River Water Association and with grant funding provided through the Kings River Conservancy incubated 220,000 trout eggs and released the fry into the Kings River.

Measurable Objective No. 12: Pursue opportunities to incorporate habitat benefits into projects

Measurement: List of opportunities considered and accomplishments

Status: Habitat benefit continues to be considered as part of project development associated with grant funding pursuits including several recharge projects.

Measurable Objective No. 13: Increase public awareness of IRWM efforts

Measurement: Public relations and annual reporting

Status: The 2020-21 outreach efforts for the KBWA included websites, communication tool development, and social media. Some of the highlights include:

- **KBWA website: www.kingsbasinauthority.org**
Between July 2014 and September 2021, there were 3,803 views on the KBWA website. Popular pages that garnered the most views included the Sixty Years of Pine Flat Dam, Reports and Papers, and Map Gallery.
- **Kings Groundwater Basin Video**
Since publication of the KBWA groundwater video in April 2014, there has been 1,621 views on YouTube.
- **KBWA Twitter Account: @KingsWater**
As of September 2021, KBWA's Twitter account has 800 followers and 1,211 tweets since its inception. The goal of KBWA's Twitter account is to extend awareness of the activities of the KBWA to followers locally and outside of the Kings Basin.
- **KBWA Facebook page: @KingsBasinWaterAuthority**
Since publication of the Facebook page in October 2016, there are 41 people following the page. The most popular post was about a Prop 68 watershed health grant that the Kings River Conservation District received through the Department of Conservation.
- **Communication Tools**
No communication tools were developed during this reporting period.
- **Media**
No activity relating to media was conducted during this reporting period.

Measurable Objective No. 14: Involve local water districts and land use agencies in generating and confirming the current and future water needs to ensure compatibility and consistency with land use and water supply plans.

Measurement: Tracking of involvement with land use planning officials and inclusion in planning documents.

Status: KBWA and its Members and Interested Parties participated in several forums, committees, workgroups and other activities associated with SGMA. The SGMA coordination workgroup meets monthly, KBWA stakeholders continue to be actively involved in SGMA and involved in how implementation will impact land use decisions.

The GSPs discuss, in detail, existing planning documents related to land use and/or water use and how the GSPs will coordinate with those existing plans, including General Plans, Urban Water Management Plans, and Groundwater Management Plans.

Measurable Objective No. 15: Comply with SBx7-7

Measurement: Review of compliance by stakeholders

Status: All Irrigation Districts that are Members of the KBWA have previously completed Agricultural Water Management Plans and submitted them to the State. The cost of compliance with SBx7-7 legislation remains significant for agricultural districts within the region, and some in the region continue to challenge whether any water conservation benefits will be obtained, particularly in a conjunctive use basin such as the Kings. The implementation of SGMA will coordinate with these efforts for both agricultural and public water purveyors.

Measurable Objective No. 16: Pursue opportunities to include project elements that reduce energy consumption, reduce greenhouse gas emissions, use renewable resources or include carbon sequestrations strategies.

Measurement: List of opportunities considered and accomplishments

Status: Water conservation projects, including water metering, and increased use of recycled water or surface water, reduce the amount of groundwater pumped, which in turn reduces the energy consumption associated with pumping. Additionally, recharge projects help raise groundwater levels, which decrease the amount of lift required and also reduced related energy consumption. Refer to **Attachment 2** for a list of currently funded projects.

3 – IMPLEMENTATION PROJECTS

3.1 – Regional Studies

The DAC Involvement Grant Program was previously completed and identified the needs of DACs within the region. No regional studies were conducted by the KBWA during this period.

3.2 – IRWM Project List

KBWA Members and Interested Parties can submit projects for inclusion on the IRWM Project List at anytime. Projects are then reviewed by the Projects Work Group and considered for approval by the Board. A copy of the IRWM Project List is included as **Attachment 1**. The current list is maintained on the KBWA website, www.kingsbasinauthority.org, which also includes an interactive map of the projects included on the IRWM Project List.

3.3 – Completed or On-going Projects

Completed and ongoing projects during this annual reporting period are listed in **Attachment 2 – Status of Planning and Implementation Contracts** and discussed throughout Section 2 – Status of Measurable Objectives. Since the initiation of IRWM efforts in the region, the cumulative funding amount awarded to the region through IRWM related efforts is almost \$54 million and the cumulative project cost is more than \$104 million.

3.4 – Grant Funding

Attachment 2 includes a list of currently funded projects.

IRWMP Planning

The KBWA was successful in its Proposition 1 IRWM Planning Grant application to update the Kings Basin IRWMP and prepare a Storm Water Resources Plan. The work under the grant was completed in early 2019; the IRWMP Update has been approved and KBWA is awaiting concurrence on the SWRP.

3.5 – Lessons Learned

No lessons learned were reported for this period.

4 – GOVERNANCE, POLICIES AND MEMBERSHIP

4.1 – Changes in Governance and Policies

The KBWA did not consider any new Policies this year.

4.2 – Changes in Government Regulations

The implementation of the SGMA is requiring significant effort by the KBWA's Members and Interested Parties. More information on SGMA can be found in Section 6.

4.3 – Changes in Members and Interested Parties

There were no changes in membership or Interested Parties.

4.4 – Coordination with Other IRWMPs

The KBWA continues to participate in several efforts to coordinate with neighboring IRWMPs, including:

- Participation in IRWMP 'Roundtable of Regions' meetings, a statewide effort to bring all IRWMPs together to discuss important issues.
- Regularly attending meetings for the Tulare Basin Integrated Regional Planning Effort, a regional collaboration by several IRWMPs to discuss inter-regional topics in the Tulare Lake Basin.

5 – PROPOSED IRWMP AMENDMENTS

The 2018 IRWMP Update was adopted by the KBWA in October 2018. No amendments are anticipated at this time.

6 – SUSTAINABLE GROUNDWATER MANAGEMENT ACT

The SGMA was passed by California legislation in 2014. SGMA will require a gradual transition to sustainable groundwater management and stabilization of groundwater levels. Groundwater management will occur by Groundwater Subbasin and newly formed GSAs. The GSAs are public agencies independent of the KBWA.

The Groundwater Sustainability Agencies that have been formed in the KBWA boundary include:

- Central Kings GSA
- James GSA
- Kings River East GSA
- McMullin GSA
- North Kings GSA
- North Fork Kings GSA
- South Kings GSA
- The KBWA boundary extends into portions of the following GSAs:
 - Mid-Kings River GSA
 - Greater Kaweah GSA

These GSAs have been formed and the GSPs adopted and submitted to the State in January 2020. The GSAs have until 2040 to reach sustainability, but each of their GSPs identify milestones along the way at 5-year increments. DWR has reviewed the GSPs and identified corrective actions that the GSAs are working to address. The DWR SGMA portal (<https://sgma.water.ca.gov/portal/>) features interactive maps that allow viewers to see GSAs and their GSPs.

Attachment 1 – IRWM Project List



KINGS BASIN IRWMP PROJECT LIST

Adopted 10-20-2021
Updated 4-12-2022

Project ID	Member/IP Organization	Project Title	Project Status	<p>Plan, and ultimately reverse, the current overdraft and provide for future groundwater storage and recharge Increase the water supply reliability, improve system efficiency, and reduce system constraints Improve and protect water quality Provide additional flood protection Protect and enhance aquatic ecosystems and riparian habitat Increase amount of groundwater in storage with intent to eliminate the groundwater overdraft in 20 years Identify opportunities and Projects Identify DAC priority needs and promote/support solutions to DAC water issues Increase average annual supply and reduce demand Increase dry year supply Increase regional conveyance capacity Complete baseline water quality data for ground & surface water Encourage Best Management Practices, policies & education that protect water quality Identify sources of water quality problems & promote/support solutions to improve water quality Increase surface storage Reclaim the Kings River Fisheries Management Program Pursue opportunities to incorporate habitat benefits into projects Increase public awareness of IRWMP efforts Revise local water districts and land use agencies in generating and confirming the current and future water needs to ensure compatibility with future water supply plans Comply with SBW-77 Pursue opportunities to include energy efficiency, water efficiency, water conservation, reduce greenhouse gas emissions, use renewable resources or include carbon sequestration strategies.</p>																				
				RG1	RG2	RG3	RG4	RG5	MO1	MO2	MO3	MO4	MO5	MO6	MO7	MO8	MO9	MO10	MO11	MO12	MO13	MO14	MO15	MO16
2	Bakman Water Company	SCADA system for wells improved groundwater management, operations, supply reliability & conservation	Planning	S	P	S																	S	
4	City of Clovis	City of Clovis, Water Intertie (North)	Preliminary Design	S	P	S				S		S	S	P										
6	City of Clovis	Clovis Harlan Recycled Water Extension	Preliminary Design	P	S																			
7	City of Clovis	Targey Village Metering Project	Planning	P	S																			
8	City of Dinuba	Dinuba Reclamation Conservation & Recreation (RCR) Project	Preliminary Design	P	S	S					S	S	S	S					S				S	
12	City of Fresno/Water Division	Three Reclamation Water Wells at the Fresno/Clovis Regional Wastewater Reclamation Facility	Preliminary Design	P	S	S				P		S	S	S										
16	City of Fresno/Water Division	Northwest Fresno Regional Recharge Facility	Planning	P	S	S	S			P		S	S	S										
17	City of Fresno/Water Division	Southeast Fresno Stormwater Detention, Greenbelt and Environmental Habitat Restoration Area	Conceptual	S	P	S	S	S		P		S	S	S	S				S					
18	City of Fresno/Water Division	Regional Groundwater Banking Facility	Planning	P	S	S	S	S		P		S	S	S										
20	City of Fresno/Water Division	Southeast Fresno Regional Recharge Facility	Conceptual	P	S	S	S	S		P		S	S	S										
21	City of Fresno/Water Division	Southwest Fresno Regional Recharge Facility	Conceptual	P	S	S	S	S		P		S	S	S										
22	City of Fresno/Water Division	Northwest Fresno Recycled Water Transmission Pipeline and Reclamation Facility Supply Pipeline	Conceptual	P	S	S	S	S		P		S	S	S										
24	City of Fresno/Water Division	Sunnyside Area Sewer Conversion	Conceptual		S	P																		
25	City of Fresno/Water Division	Fort Washington Sewer Conversion	Conceptual		S	P																		
27	City of Parlier	Parlier Water Storage Project	Planning & Preliminary Design	S	P					P														
33	City of Selma	Storm Drain Storage/Recharge Project	Conceptual		P					S	P					S								
35	Consolidated Irrigation District	Ward Drainage Canal Capacity Enlargement and Recharge Project	Conceptual	P	S	S	S	S	S	P		S	S	S									S	S
36	Consolidated Irrigation District	Recharge Pond Near Kingsburg/Selma Branch Canal Divide	Planning	P	S	S	S	S	S	P		S	S	S										
37	Consolidated Irrigation District	Fowler Switch Capacity Improvement Project	Conceptual	S	P			S		S														
38	Consolidated Irrigation District	Fowler Switch / C&K Canal Intertie Project	Planning	S	P			S		S														
39	Consolidated Irrigation District	Recharge Pond off Kingsburg Branch Canal	Planning	P	S	S	S	S	S	P		S	S	S									S	S
40	Consolidated Irrigation District	Recharge Pond off Ward Drainage Canal	Conceptual	P	S	S	S	S	S	P		S	S	S									S	S
41	Consolidated Irrigation District	Recharge Pond off Cole Slough Canal	Conceptual	P	S	S	S	S	S	P		S	S	S									S	S
42	Consolidated Irrigation District	Westside Banking Facility	Planning	P	S	S	S	S	S	P		S	S	S									S	S
43	Consolidated Irrigation District	C&K Canal Capacity Improvement Project	Conceptual	S	P			S		S														
44	Consolidated Irrigation District	Santa Fe Pond Enlargement	Conceptual	P	S	S	S	S	S	P		S	S	S									S	S
54	County of Fresno	CSA 43 Raisin City Sewer Feasibility Study	Conceptual & Planning		S	P																		
61	Easton Community Services District	Easton Safe Drinking Water Feasibility Study Project	Conceptual		S	P				S	P													
65	Fresno Irrigation District	FID Measurement and Metering Project	Preliminary Design	P	S					S		S												P
68	Fresno Irrigation District	Oleander Basin Banking Project	Planning	P	S					S		S				S								
71	Fresno Irrigation District	Eastside Streams Improvement Project	Conceptual	P	P			S	S	S		P												
72	Fresno Irrigation District	Big Dry Creek Recharge Project	Planning	P	S			S	S	P		S												
73	Fresno Metropolitan Flood Control District	Dry Creek Improvement Project	Grant awarded, project under construction	S		S	P	S	S			S	S	S										
76	Fresno State University	Developing a Model GWMP of Integrated, All-in-One Strategy for Conservation, Groundwater, and Wastewater Management	Conceptual	P	S	S						S												
77	Fresno State University	Experiment Using Non-Potable Water as an Alternative to Potable Groundwater or Surface Water in Cooling Towers and then Re-cycling that Water for Crop Production	Conceptual	S	P	S																		
100	Kings River Conservancy	The Kings Ribbon of Gems - Sanger Kings River Park and River Access	Preliminary Design		S	S		P																
106	Kings River Conservation District	Kings River Levee Evaluation	Ready For Construction		S		P			P														
107	Kings River Conservation District	Kings River Levee Critical Repairs	Planning		S		P																	
108	Kings River Conservation District	North Fork Channel Recharge Project - Site 16	Conceptual	P	S	S	S	S	P	P		S	S	S										
116	Kings River Conservation District	McMullin Recharge Project - Site #1	Planning	P	S	S	S	S	P	P		S	S	S										
117	Kings River Conservation District	Kings River North Fork Flood Protection and Wildlife Enhancement Project	Preliminary Design		S		P																	
120	London Community Services District	London Water Conservation Project	Ready For Construction	P	S	S				P		S												S
124	County of Tulare	Yettem-Button Ditch Flood Control Project	Conceptual		S		P																	
125	Sultana Community Services District	Sultana Safe Drinking Water Feasibility Study Project	Planning		S	P																		
126	County of Tulare	Juvenile Detention Facility - Cottonwood Creek (JDF Complex)	Ready For Construction	S	S	S	P	S		S	S	S	S	P	S	S	S	S	S	S	S	S	S	S
127	City of Kerman	City of Kerman Median Landscaping Renovation Project	Preliminary Design	P	S					P														
128	City of Kerman	City of Kerman Water Meter Project, Phase 4	Preliminary Design	P	S					P														
129	City of Orange Cove	City of Orange Cove Water System Feasibility Study	Planning		S																			
130	City of San Joaquin	Recycled Water Upgrade to Wastewater System	Ready For Construction		P	S						S	S	S										
131	City of San Joaquin	City of San Joaquin Water Storage Tank	Preliminary Design	S	P					P	S	S	S	S										
132	East Oroli Community Services District	East Oroli Water Conservation and Meter Project	Preliminary Design	P	S	S				P		S	S	S										
133	Fresno Metropolitan Flood Control District	Regional Groundwater Recharge and Surface Water Reuse Project	Preliminary Design	P	S	S	S	S	P	P		S	S	S										
134	Malaga County Water District	Malaga County Water District Water Supply Conservation Project	Ready For Construction	P	S	S				P	S	S	S	S										
135	Sultana Community Services District	Sultana Water Conservation and Meter Project	Preliminary Design	P	S	S				P		S	S	S										
136	Hardwick Water Company	Hardwick Water Distribution System Replacement and Hookup Project	Preliminary Design		P	S																		
137	Kings River Conservation District	Coehlo and Gragnani Wetlands Recharge Project	Planning	P	S	S	S	S	P	S		S	S	S										
138	Alta Irrigation District / City of Reedley	The Reedley Pond Project	Planning	P	S	S	S	S	P	S		S	S	S										
139	Fresno Irrigation District	Fancher Creek Storage Project	Conceptual	S	P			S	S															
140	City of Clovis	Clovis North Recharge Facility	Planning	P	S	S	S			P		S	S	S										

P = Primary
S = Secondary



KINGS BASIN IRWMP PROJECT LIST

Adopted 10-20-2021
Updated 4-12-2022

Project ID	Member/IP Organization	Project Title	Project Status	Increase the water supply reliability, quantity, and reduce system constraints				Improve and protect water quality		Provide additional flood protection		Protect and enhance aquatic ecosystems and riparian habitat		Increase amount of groundwater storage with intent to eliminate the groundwater overdraft in 20 years		Identify opportunities and Projects		Identify DAC priority needs and promote/support solutions to DAC water issues		Increase average annual supply and reduce demand		Increase dry year supply		Increase regional conveyance capacity		Compile baseline water quality data for ground & surface water		Encourage Best Management Practices, policies & education that protect water quality		Identify sources of water quality problems & promote/support solutions to improve water quality		Revisit the Kings River Fisheries Management Program		Pursue opportunities to incorporate habitat benefits into projects		Increase public awareness of IRWMP efforts		Involve local user districts and land use agencies in generating and confirming the current and future water need to ensure compatibility with future land use and water supply plans		Comply with SBW-77		Pursue opportunities to include water conservation, reduce greenhouse gas emissions, use renewable resources or include carbon sequestration strategies				
				RG1	RG2	RG3	RG4	RG5	MO1	MO2	MO3	MO4	MO5	MO6	MO7	MO8	MO9	MO10	MO11	MO12	MO13	MO14	MO15	MO16																						
141	City of Fresno/Water Division	Kings River Pipeline	Preliminary Design	P	S	S					P						S																													
142	City of Fresno/Water Division	Friant-Kern Canal Pipeline	Preliminary Design	P	S																																									
143	City of Fresno/Water Division	Finished Water Transmission Mains (Phase 2)	Preliminary Design	P	S	S											S	S																												
144	Terranova Ranch / Kings River Conservation District	McMullin On-Farm Flood Capture Project, Phases 2 and 3	Planning	P	S	S	S																																							
145	James Irrigation District	Distributed Recharge Basin Project	Planning	P	S	S	S	S	S																																					
146	James Irrigation District	James Bypass Floodwater Utilization Project	Planning	P	S	S	S	S	S																																					
147	James Irrigation District	Lassen Avenue Floodwater Utilization Project	Planning	P	S	S	S	S	S																																					
148	James Irrigation District	McMullin Grade Floodwater Utilization Project	Planning	P	S	S	S	S	S																																					
149	James Irrigation District	McMullin Master Plan Project	Preliminary Design	P	S	S	S	S	S																																					
150	Raisin City Water District	Grantland Recharge Project	Planning	P	S	S	S																																							
151	City of Orange Cove	Orange Cove Storm Water Planning Study	Conceptual	S																																										
152	City of Reedley	Reedley Retention Basin Project	Preliminary Design	P	S																																									
153	City of Selma	Rockwell Pond Groundwater Recharge Project	Conceptual	P	S																																									
154	Laguna Irrigation District	Mussel Slough Ranch Recharge Project	Conceptual	P	S	S	S	S	S																																					
155	Laguna Irrigation District	Basin 11 Expansion Project	Ready for Construction	P	S	S	S	S	S																																					
156	Laguna Irrigation District	Pires Recharge Project	Planning	P	S	S	S	S	S																																					
157	North Fork Kings GSA	Terra Linda Farms Recharge Project	Ready For Construction	P	S	S	S	S	S																																					
158	Laguna Irrigation District	Beeler Recharge Project	Conceptual	P	S	S	S	S	S																																					
159	Liberty Water District	Fresno County Elkhorn Property Recharge Project	Planning	P	S	S	S	S	S																																					
160	Mid-Valley Water District	Mid-Valley Water District James Bypass Surface Water Supply and Recharge Project	Planning	P	S	S	S	S																																						
161	Raisin City Water District	Raisin City Water District Stinson North Canal Water Supply and Recharge Project	Conceptual	P	S	S	S	S																																						
162	County of Tulare	Sultana Area Stormwater Project	Conceptual	S	S																																									
163	Fresno Irrigation District	Wagner Recharge Basin	Preliminary Design	P	S	S	S	S	S																																					
164	Fresno Metropolitan Flood Control District	Basin "CE" Pump Station - Regional Groundwater Recharge Project	Preliminary Design	P	S	S	S	P	S																																					
165	Fresno Metropolitan Flood Control District	Basin "CF" Pump Station - Regional Groundwater Recharge Project	Preliminary Design	P	S	S	S	P	S																																					
166	Fresno Metropolitan Flood Control District	Basin "SS" Pump Station - Regional Groundwater Recharge Project	Preliminary Design	P	S	S	S	P	S																																					
167	Laguna Irrigation District	Laton North Recharge Project	Ready for Construction	P	S	S	S	S	S																																					
168	County of Fresno	County of Fresno Domestic Well Destruction and Sampling Program	Ready For Construction	S	P																																									
169	County of Fresno	Central Fresno County Flood Mitigation Project	Conceptual	S	S																																									
170	City of San Joaquin	Storm Drain Improvements at 9th and 6th Streets	Conceptual																																											
171	City of San Joaquin	Storm Pump Station Rehab & Basin Upgrades	Conceptual	S	S																																									
172	County of Tulare	Traver Stormwater Project	Conceptual	S	S																																									
173	James Irrigation District	Main Canal Booster Improvement Project	Planning	P	S	S	S	S																																						
174	James Irrigation District	Lake Avenue Canal Project	Planning	P	S	S	S	S																																						
175	James Irrigation District	Basin 2 Improvement Project	Planning	P	S	S	S	S																																						
176	James Irrigation District	Levee No. 3 Project	Planning	S	S	S																																								
177	James Irrigation District	Telemetry and Automation Project	Planning	S	P	S																																								
178	Riverdale Irrigation District	Blythe Avenue recharge Basins	Conceptual	P	S																																									
179	CSU Fresno	Single Portal GSP Toolbox for Small DACs - Easton and Lanare	Ready For Construction	P	S																																									
180	City of Parlier	Flood Control and Groundwater Banking Project	Planning			S																																								
181	City of Dinuba	Expansion of Existing Euclid/Saginaw Storm Drain Retention Basin Capacity	Ready For Construction		P																																									
182	Sultana Community Services District	Sultana Distribution Replacement Project	Conceptual	S	P																																									

P = Primary
S = Secondary

Attachment 2 – Past and Present Grant Contracts

Kings Basin Water Authority – Past & Present Grant Contracts

Updated April 14, 2022

Program & Agency	Project Title	Project Proponents	Project Description	Grant Award/Request	Status
Prop 13 Groundwater Storage Construction Grant Program (CDWR)	Alta Irrigation District Coordinated Groundwater Storage Project	KRCD Alta ID City of Dinuba	Dinuba project is a twenty-eight acre, three-cell stormwater retention and recharge basin located within the City of Dinuba*. AID's Traver Pond project is the enlargement of an existing five-acre recharge basin to a size of sixteen-acres.	Grant: \$2,737,753 Project Cost: \$2,974,651 Contract executed with CDWR, June 2006	Completed in 2011
Prop 13 Groundwater Storage Construction Grant Program (CDWR)	Fresno Irrigation District Waldron Pond Banking Facility Expansion	FID	The Waldron Pond Banking Facility is a groundwater recharge and recovery project that provides water to urban suppliers, agriculture suppliers, and facilitates the environmental benefits of improving the Kings River fishery. The project constructed eight recovery wells, five monitoring wells, and thirteen new recharge basins expanding the existing facility to 270 aggregate acres of recharge area.	Grant: \$4,615,072 Project Cost: \$10,500,000	Completed in 2008
Prop 50 IRWM Planning Grant Program (CDWR)	Upper Kings Basin Water Forum Integrated Regional Water Management Plan	KRCD/Water Forum	Initial development of the Upper Kings Basin IRWMP.	Grant: \$500,000 Project Cost: \$1,000,000	Completed July 2007
Prop 50 IRWM – Discretionary Funds – Integrated Regional Groundwater Model Demonstration (CDWR)	Kings Basin Integrated Groundwater Surface-water Model (Kings IGSM)	KRCD/Water Forum	The Kings IGSM was developed to support the planning analysis required for the Upper Kings Basin IRWMP project. It provides an analytical tool for the region that can represent the groundwater and surface water flow systems and their interactions; and can provide quantitative information on a comparative basis to help evaluate alternative conjunctive water management strategies.	Grant: \$500,000 Project Cost: \$1,000,000	Completed model development Spring 2007; calibration report published November 2007

<p>Prop 84 River Parkways and Urban Streams Restoration Grant Programs (CA Resources Agency)</p>	<p>Kings Ribbon of Gems – North Riverside Park</p>	<p>Kings River Conservancy KRCD/Water Forum</p>	<p>Implementation of a project identified in the “Kings Ribbon of Gems” plan. 38-acre river parkway located below Pine Flat on the north bank of the Kings River upstream of Choinumni Park. Two components: 1) 1.5-mile river access trail with 0.5-mile ADA compliant section plus picnic areas, 2) ADA restroom, with adjacent ADA parking area.</p>	<p>Grant: \$284,674 Project Cost: 298,374 Contract executed with Resources Agency Summer 2011</p>	<p>Project is complete. Ribbon cutting ceremony occurred in Spring 2013</p>
<p>Prop 50 Round 2 IRWM Implementation Grant Program (SWRCB)</p>	<p>Upper Kings Basin Water Forum Project</p>	<p>KRCD/Water Forum Alta ID City of Fresno Fresno ID</p>	<p>AID Traver Pond Project provides dry year supply and is a component of a surface water exchange agreement w/ Cutler & Orosi PUDs. City of Fresno project installs 10k of a planned 110k residential water meters*. FID Jameson Pond Expansion adds sixty additional acres to an existing forty-acre recharge facility.</p>	<p>Grant: \$6,064,375 Project Cost: \$18,112,895 Contract executed with SWRCB, December 2008</p>	<p>Completed September 2013</p>
<p>Prop 50 Supplemental – AKA Mini 50 – Grant Program (CDWR)</p>	<p>The Fresno Irrigation District Jameson Pond Expansion Project Phase II The City of Fresno Residential Water Meter Project Phase II</p>	<p>UKBIRWMA City of Fresno Fresno ID</p>	<p>Fresno ID’s Jameson Pond Phase II Expansion enhances water supply capacity by constructing an addition recovery well. The City of Fresno Phase II meter project installs an additional 5k meters (of planned 110k) complete with AMR devices and software*.</p>	<p>Grant: \$2,099,868 Project Cost: \$4,661,500 Contract executed with CDWR, September 2011</p>	<p>Completed December 2015</p>
<p>Prop 84 IRWM Disadvantaged Communities Pilot Program (CDWR)</p>	<p>UKBIRWMA – Disadvantaged Communities (DAC) Outreach & Planning Pilot</p>	<p>UKBIRWMA</p>	<p>Project seeks to map DACs and their water needs; develop mechanisms to effectively engage and integrate DACs into the IRWM planning process; develop conceptual project descriptions and cost estimates to include in the IRWMP project list; and identify/facilitate partnerships between member agencies and DACs*.</p>	<p>Grant: \$500,000 Project Cost: \$500,000 Contract executed with CDWR, January 2012</p>	<p>Completed June 2014</p>

<p>Prop 84 Round 1 IRWM Planning Grant Program (CDWR)</p>	<p>UKBIRWMA – Integrated Regional Water Management Plan Update</p>	<p>UKBIRWMA</p>	<p>The objective of the project is to update the 2007 Upper Kings Basin IRWMP to: 1) Satisfy new State guidelines for IRWMPs; 2) More thoroughly address Statewide Priorities and Program Preferences; 3) Update the plan to include recent information; 4) Address inadequacies in the existing IRWMP; 5) Expand the focus on Disadvantaged Communities; 6) Document successes and lessons learned since the original plan was drafted; 7) Document governance and policy improvements since the original plan was drafted; 8) Engage more stakeholders; and 9) Improve the overall regional planning process.</p>	<p>Grant: \$236,890 Project Cost: \$336,850</p> <p>Contract executed with CDWR, September 2011</p>	<p>Completed April 2014</p>
<p>Prop 1E Round 1 IRWM Stormwater Flood Management Grant Program (CDWR)</p>	<p>Fancher Creek Flood Control Improvement Project</p>	<p>City of Fresno w/ Fresno Metropolitan FCD (project is included in the Kings Basin IRWMP project list)</p>	<p>The Fancher Creek Detention Basin removes 682 acres from the 100-year floodplain, redirects runoff that may contain pollutants into stormwater management basins, and result in approximately 740 acre feet of additional surface water recharge per year. Once complete, the basin will have sufficient capacity to provide the 100-year control of the Fancher Creek flows.</p>	<p>Grant: \$2,231,086 Project Cost: \$4,613,734</p> <p>Contract executed with CDWR, Sept. 5, 2012</p>	<p>Completed June 2020</p>
<p>Prop 84 Round 1 IRWM Implementation Grant Program (CDWR)</p>	<p>UKBIRWMA – Groundwater Overdraft Reduction and Disadvantaged Community Water Supply Reliability Projects</p>	<p>UKBIRWMA Bakman WC w/ FID Consolidated ID County of Fresno City of Clovis City of Fresno East Orosi CSD w/ AID</p>	<p>Bakman WC's project entails installation of 2,453 residential water meters (This project was not awarded). Consolidated ID's project develops a 75-acre groundwater banking facility. County of Fresno Drummond Jensen project removes an unincorporated neighborhood from septic by connecting to City of Fresno*. City of Clovis' project entails expansion of its surface water treatment facility to reduce groundwater pumping. City of</p>	<p>Grant: \$8,496,000 Project Cost: \$15,404,340</p> <p>Contract executed with CDWR, July 2012</p>	<p>Grant completion date: 6/30/18</p>

			Fresno's project would install an additional 10k residential water meters*. And East Orosi CSD's project rehabilitates two existing municipal wells in a DAC to extract from a higher quality zone of the aquifer*.		
Prop 84 Local Levee Grant Program (CDWR)	Kings River Levee Evaluation Project	KRCD (project is included in the Kings Basin IRWMP project list)	The objective of this project is to reduce flood risk on the Kings River by evaluating flood project levees, identifying deficiencies, and recommending appropriate management actions.	Grant: \$2,000,000 Project Cost: \$2,292,922 Contact executed with CDWR, February 2013	Completion December 2020
Prop 1E Round 1 Flood Corridor Grant Program (CDWR)	McMullin On-Farm Flood Capture and Recharge Project	KRCD Terranova Ranch McMullin Recharge Group Raisin City WD James ID (project is included in the Kings Basin IRWMP project list)	Project is Phase 1 in a multi-phase project to capture North Fork Kings flood flows for on-farm recharge activities (direct/in-lieu recharge, irrigation). Objectives will be achieved through flood easements on 250 acres; upgrade to turnout along Kings River, McMullin Grade Crossing, Terranova Canal, and implementation of Flood Flow Capture on 1250 acres. Project will divert flood flows up to 500 CFS.	Grant: \$5,039,950 Project Cost: \$14,551,689.13 Contract executed with CDWR, February 2013	DWR provided an additional \$39,950 for flow meter and telemetry. Agreement extended to June 30, 2023
California Water Foundation	Kings Basin Remote Groundwater Monitoring Project	KRCD	Installation of satellite-based remote groundwater monitoring equipment on nine existing wells located on or near Manning Avenue between James ID and Alta ID.	Grant \$44,763 Project Cost ~\$55,000 Contract executed with CWF, Summer 2012	Completed May 2013
California Water Foundation	Implementation of Interlinked Groundwater Management Strategies in the Kings Basin	KRCD	Installation of constructed monitoring wells within Management Areas A & B, update of the Kings IGSM and model run of IRWMP projects, and land use outreach.	Grant \$1,000,000 Project Cost ~\$1,080,000 Contract executed with CWF, February 2013	Completed April 2016

<p>Prop 1E Round 2 IRWM Stormwater Flood Management Grant Program (CDWR)</p>	<p>Dry Creek Flood Control Improvement Project</p>	<p>Fresno Metropolitan FCD (project is included in the Kings Basin IRWMP project list)</p>	<p>The project consists of modifications to FMFCD's flood control facilities in the Big Dry Creek and Pup Creek watersheds. The project's primary goal is to provide better flood protection for the Cities of Fresno and Clovis, and surrounding areas. The project includes improving the structural integrity of the Big Dry Creek Dam, and channel improvements to allow more effective and flexible routing of flood waters at three points downstream of the Dam along the Dry Creek system. In addition, the project includes construction of one floodwater detention basin and expansion of an existing flood water detention basin in order to increase stormwater storage capacity, increase groundwater recharge, and improve groundwater quality.</p>	<p>Grant: \$6,891,010 Project Cost: \$13,782,020 Contract executed May 12, 2014</p>	<p>Completed September 2021</p>
<p>Prop 84 Round 2 IRWM Implementation Grant Program (CDWR)</p>	<p>KBWA IRWM Implementation Grant Projects</p>	<p>UKBIRWMA City of San Joaquin Fresno ID Bakman Water Co. Laguna ID City of Kerman</p>	<p>The City of San Joaquin's project provides drinking water supply and quality benefits to DAC residents through well rehabilitation and installation of residential water meters*. Fresno ID's project partners with James ID to utilize flood water for banking and recharge in the lower Kings Basin. Bakman's project provides drinking water supply and quality benefits to DAC residents through well head treatment of DBCP and installation of residential water meters*. Laguna's project involves construction of a 52-acre recharge and banking facility between Laton and Riverdale. City of Kerman's project installs 665 residential water meters of the City's planned program to meter all residential users*.</p>	<p>Grant: \$8,734,000 Project Cost: \$11,105,913 Contract executed July 2014</p>	<p>Grant completion date: 6/30/2018</p>

<p>Prop 1 IRWM Planning Grant Program (CDWR)</p>	<p>2016 KBWA IRWM Plan Update</p>	<p>KBWA</p>	<p>Update of the Kings Basin IRWM Plan to meet 2016 IRWM Plan Standards. Update will include the development of a Stormwater Resources Plan.</p>	<p>Grant: \$202,817 (only used \$201,402.26) Project Cost: \$257,162.40</p> <p>Contract executed June 2017</p>	<p>Completed December 31, 2018</p>
<p>Prop 1 DAC Involvement Grant Program (CDWR)</p>	<p>Tulare-Kern Funding Area DACI Program</p>	<p>KBWA Southern Sierra IRWM Kaweah River Basin IRWM Poso-Creek IRWM Kern County IRWM Westside-San Joaquin IRWM Tule River Basin IRWM County of Tulare is applicant on behalf of IRWMS</p>	<p>The purpose of this grant is to engage DAC/SDACS/EDA in the IRWM planning process. Project activities include: Needs Assessment web portal, DAC Engagement and Education Program, and DAC project development.</p>	<p>Grant: \$3,400,000 to the Tulare-Kern FA (of which \$392,000 directly allocated to KBWA for DAC projects) Project Cost: \$392,000</p> <p>Contract executed February 13, 2018</p>	<p>Administered by County of Tulare on behalf of the Tulare-Kern Funding Area.</p> <p>KBWA DAC planning projects awarded/completed:</p> <ul style="list-style-type: none"> • East Orosi CSD: \$159,144, in progress • Malaga CWD: \$90,856, completed May 2021 • Sultana CSD: \$142,000, completed October 2021
<p>Prop 1 IRWM Implementation Grant, Round 1 (CDWR)</p>	<p>KBWA IRWM Implementation Grant Projects</p>	<p>Fresno ID Consolidated ID Laguna ID Fresno Metropolitan Flood Control District (Only FMFCD Project Funded)</p>	<p>Six projects were submitted for this grant solicitation, but only the Fresno Metropolitan Flood Control District (FMFCD) Basin "CF" Stormwater Recharge and Flood Protection Project was awarded funding. FMFCD's project will construct basin improvements to FMFCD's existing Basin "CF". The basin improvements include a basin pump station, telemetry system, internal basin pipeline, basin relief pipeline, canal intertie structure and appurtenant facilities. The basin's primary purpose is to capture stormwater and prevent localized flooding. This project will</p>	<p>Grant: \$1,113,033 Project Cost: \$1,113,033</p> <p>Contract executed January 26, 2021</p>	<p>Project designs in progress.</p>

			provide a direct benefit to the disadvantaged community of Malaga*.		
Prop 1 Round 2 Storm Water Grant Program (SWRCB)	McMullin On-Farm Flood Capture Project, Phase 2	McMullin Area Groundwater Sustainability Agency	Building upon Phase 1, this Phase 2 project will bring surface water supplies into a "groundwater only" area to dedicated recharge basins, on-farm in-field recharge or in-lieu recharge, which will greatly increase the water supply reliability for the area.	Grant \$10,000,00 Contract execution in progress	Grant contracting in progress.

Cumulative Grant Award: **\$63,683,291**
Cumulative Local Match: **\$50,348,793.53**
Cumulative Project Costs: **\$114,032,084.53**