KINGS BASIN WATER AUTHORITY

2015 ANNUAL REPORT

(OCTOBER 2014 – SEPTEMBER 2015)

January 20, 2016

PREPARED BY:

KINGS BASIN Water Authority

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Attachments

1 – INTRODUCTION

The Kings Basin Water Authority (KBWA) adopted an updated Integrated Regional Water Management Plan (IRWMP) in October 2012. The IRWMP established a goal of preparing an annual report (see Section 9.5 of IRWMP) to document progress and serve as a reference document for future IRWMP updates. This report includes information on current water conditions in the Kings Basin; status of IRWMP objectives and implementation projects; changes in governance, policies and membership of the Kings Basin Water Authority; and proposed IRWMP amendments.

This report discusses and documents project activities directly related to or processed through the Authority or 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, 2014 to September 30, 2015.

2 – PHYSICAL CONDITIONS IN BASIN

2.1 – Surface Water Hydrology

Kings River

2014-15 was the driest year on record with only 361,000 acre-feet of runoff. The last four years have been the driest 4-year period on record. The water supply in the Kings River is commonly reported as a measure of 'Percent Hydrologic Year' (PHY). PHY represents the percent of river runoff compared to the long-term historical average. This reflects precipitation, snowpack, and river flow, and is directly related to the volume of water available to local water users. The PHY for the 2012, 2013, 2014 and 2015 Kings River water years is shown in Table 1.

Table 1 - Kings River Percent Hydrologic Year

Kings River Water Year	Percent Hydrologic Year
2011-2012	48%
2012-2013	40%
2013-2014	32%
2014-2015	21.5%

San Joaquin River

2015 marked the second straight year of zero allocation. Water deliveries in the Friant Division of the Central Valley Project (CVP) are based on Class I and Class II allocations. Class I water is generally reliable and only restricted in very dry years. Class II water is generally only available in wet years, or when reservoir storage is temporarily unavailable. The allocations vary each year based on water supplies that are a function of precipitation, snowpack and reservoir storage. The CVP water year differs from the Kings River water year and runs from March 1 to February 28. The Class I and Class II allocations for the 2012, 2013, 2014 and 2015 water years are shown in Table 2.

Table 2 – San Joaquin River Water – Friant Division Allocations

Water Year	Class I	Class II
2012	50%	0%
2013	62%	0%
2014	0%	0%
2015	0%	0%

The long-term average Class I and Class II allocations are approximately 94% and 40%, respectively.

2.2 – Groundwater Levels

The Kings River Conservation District produces groundwater contours for the KBWA based on data collected from agencies within the area. The following maps are included as attachments:

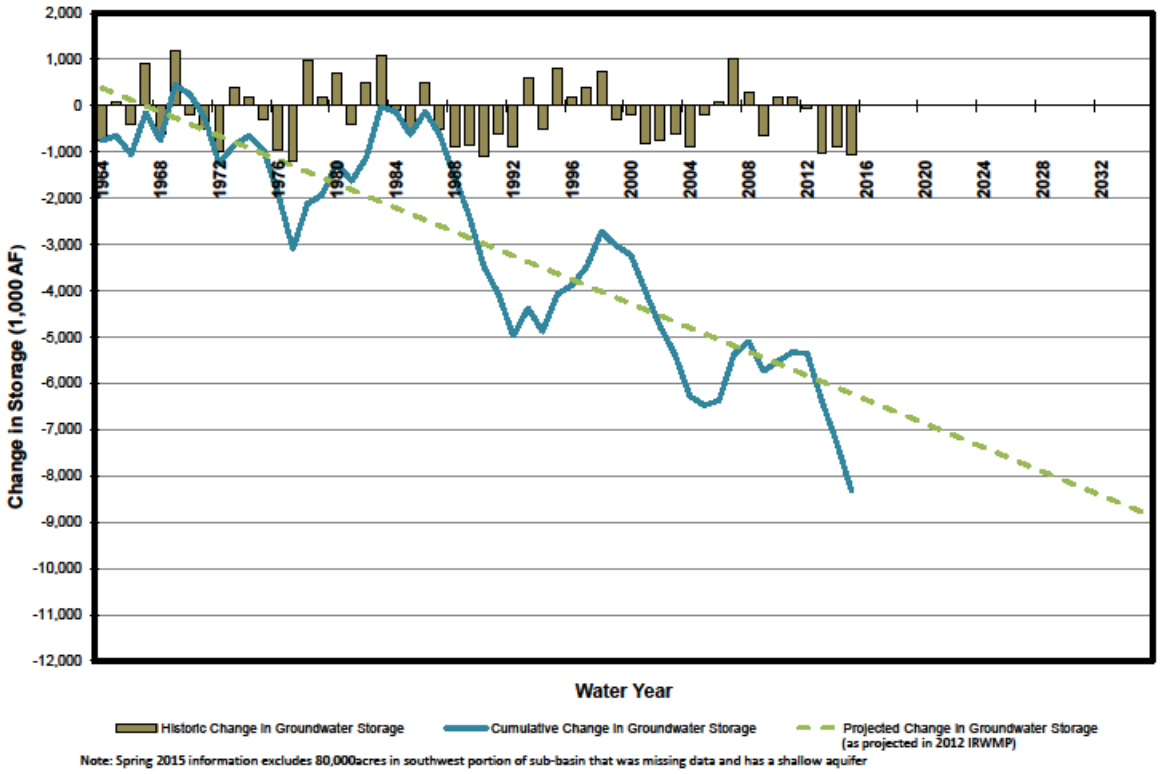
- Attachment 1 – Spring 2015 Water Surface Elevation in Wells
- Attachment 2 – Spring 2015 Depth to Water in Wells
- Attachment 3 – Change in Depth to Water from Spring 2014 to Spring 2015

The effects of the driest 4-year period on record continue to be clearly evident in the estimated annual change in groundwater storage. The groundwater storage was estimated to decrease by more than 1,000,000 acre feet from 2014 to 2015. The calculation is performed by Kings River Conservation District staff and is based on an assumed average specific yield of 11.6% in the aquifer using a calculated difference in water surface elevation from the prior year. The average annual groundwater storage change is approximately -160,000 acre feet when averaging the total change using this method from 1964 to 2015.

Figure 1 below is the graph that the region has developed to compare the actual change in groundwater storage to the projected change in storage based on the historic trend within the region. The projected change was calculated as part of the 2012 update of the IRWMP using data through 2011. As Figure 1 shows, the effects of the current drought period have dropped the change in storage more than 2,000,000AF below the projected line.

Of particular note in this year's calculation is missing data in the southwest portion of the boundary that lies within a shallow aquifer area, which would have dramatically over-estimated the storage change. This area was not included in the calculation this year. The current method used by KRCD does not separate the shallow aquifer in this area from the rest of the region. KRCD is considering an alternative calculation method, but it will require evaluation of several prior years to provide a consistent calculation.

Figure 1 - Change in Groundwater Storage in Kings Basin
1964 to 2035



Note: Spring 2015 information excludes 80,000acres in southwest portion of sub-basin that was missing data and has a shallow aquifer

2.3 – Water Quality

Of note during this reporting period is the Rough Fire in the upper Kings River watershed that burned more than 150,000 acres. The fire damage will have an impact on both runoff hydrology and basin water quality. Water quality concerns include turbidity, Dissolved Oxygen and potentially nutrient content depending on what sediments and ash are present in the runoff. Sedimentation accumulation could be significant depending upon storm patterns and intensity. The impacts will be monitored by the Kings River Water Association.

There were no water quality investigations or projects directly initiated by the IRWM during this reporting period, however several water quality related projects continue to be implemented within the region, including IRWM funding projects identified under Section 4.4 of this report. As reported in 2014, efforts continue to assist Orange Center School District and Perry Colony as a result of the 2013 Disadvantaged Community Pilot Project Study. The IRWM will also continue efforts to put forth projects that will help in addressing the water quality contamination for these as well as other constituents.

3 – STATUS OF MEASURABLE OBJECTIVES

Following is list of Measureable Objectives (MO) from Chapter 5 of the 2012 IRWMP and progress made in meeting those objectives during the year. Progress for most objectives is documented when projects are completed that were either funded through grants secured by KBWA, or were on the KBWA projects list and 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: Annual reporting information is shown in Attachments 1-3 and described in Section 2.2. It will take several years of monitoring to determine if the long-term goal of correcting the overdraft in the basin is being accomplished.

KRCD will continue to monitor groundwater conditions annually. KRCD and its consultant are nearing completion of an update to the Kings Basin model to include more recent data and understanding of the groundwater conditions since the original basin model was developed. As described in Section 4 of this report, several projects from the IRWMP Project List have been implemented and are helping to reduce the overdraft.

The region continues to be actively engaged in the implementation of the Sustainable Groundwater Management Act of 2014 which requires sustainability consistent with this Measurable Objective. Groundwater Sustainability Agencies (GSAs) are in various stages of formation within the Kings Sub-Basin and efforts to develop four to five GSAs within the sub-basin include involvement from stakeholders to determine process and implementation of the Act. The GSAs are anticipated to be separate governing bodies from the KBWA.

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 project list at any time during the year. Included on the KBWA website is a link to submit a project for inclusion. New projects are considered at each Advisory Committee meeting, and presented to the Board of Directors for inclusion on the project list. A call for new projects was initiated in the spring of 2015, and 8 projects were added to the list at the April 15, 2015 meeting. A copy of the current Project List is available at included as Attachment 4.

Measurable Objective No. 3: Identify 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 related projects as described in Section 4.4 and listed in Attachment 5.

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

Measurement: Documentation of amount of increase/decrease

Status: In January of 2014, a state of emergency was declared in California in response to the historic drought. A 25% reduction in of water use was mandated by the State Water Resources Control Board (SWRCB) for all public water systems. Effective June 1, 2015 the SWRCB imposed targeted mandatory cuts to water use. The table below shows the conservation standard for suppliers within the IRWMP, the cumulative savings from June through September 2015, as well as the September monthly savings.

Supplier Name	Cumulative Savings (June 2015 - September 2015)*		Monthly Savings (September 2015)		
	Conservation Standard	Cumulative Percent Saved (as compared to 2013)	Monthly Percent Saved (as compared to Sep-13)	Estimated Monthly R-GPCD	Total Population Served
City of Delano	24%	22.8%	18.0%	81.4	54,318
City of Reedley	24%	23.4%	22.4%	87.5	24,194
California Water Service Company Selma	32%	40.7%	39.6%	127.8	25,065
Pinedale County Water District	36%	27.6%	26.0%	128.1	16,735
City of Fresno	28%	28.0%	22.3%	137.4	520,159
City of Kerman	32%	26.0%	21.4%	155.2	14,359
City of Clovis	36%	32.0%	27.6%	180.6	108,227
Bakman Water Company	36%	31.9%	25.8%	186.9	16,756
City of Kingsburg	36%	40.1%	44.5%	194.0	11,685
City of Dinuba	32%	36.2%	26.9%	121.0	23,966
City of Sanger	28%	n/a	n/a	n/a	n/a

Data pulled 16 October 2015 from http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml

* Cumulative savings is used to assess supplier compliance with mandatory 25 percent statewide conservation.

Measurable Objective No. 5: Increase dry year supply

Measurement: Documentation of amount of increase

Status: As noted in 2014, groundwater banking and water conservation efforts remain the focus of improving dry year supply within the region. Refer to Attachment 4 for a project list. Several groundwater recharge, banking and conservation projects have

been completed or are nearing completion, including Consolidated Irrigation District's South & Highland Banking Facility, Laguna Irrigation District's recharge facility, City of Fresno metering project, and others.

Measurable Objective No. 6: Increase regional conveyance capacity
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 IRMWP 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 ECHO and SDWIS.
Status: All of the permitted water suppliers perform water quality testing, which is available upon request. The region has not initiated a specific region-wide water quality data analysis.

Measurable Objective No. 8: Encourage Best Management Practices, policies and education that protect water quality
Measurement: Documentation of efforts/education
Status: Water purveyors within the KBWA initiated drought condition policies including limiting days of landscape irrigation, public service announcements, and other Best Management Practices. 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. Also as noted under Measurable Objective 13, KBWA developed a Water Conservation Tips Handout that was published in English and Spanish. Most of the handouts have been used by KBWA agencies that represent disadvantaged communities. A General Awareness Packet and KBWA brochure was also developed and distributed at various events, presentations, and meetings with elected officials.

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. As noted in the 2014 annual report, the MCL for hexavalent chromium is of concern within portions of the basin and potable water suppliers are tracking the impacts to existing water supplies. The City of Kerman continues its efforts to identify financially feasible options to remove the contaminant.

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 IRWMP project list. No larger or significant surface storage project has been undertaken within the region.

Measurable Objective No. 11: Sustain the Kings River Fisheries Program
Measurement: Report on program
Status: During this historic drought period, the Irrigation Districts diverted water from storage to convey down the river to maintain the Fisheries Program in accordance with the Fisheries Program Agreement.

Measurable Objective No. 12: Pursue opportunities to incorporate habitat benefits into projects
Measurement: List of opportunities considered and accomplishments
Status: Basin projects that included habitat have been completed or are nearing completion such as CID's South and Highland Basin that included two island features that will serve as examples of habitat incorporation. Habitat benefit continues to be considered as part of project development associated with grant funding pursuits.

Measurable Objective No. 13: Increase public awareness of IRWM efforts
Measurement: Public relations and annual reporting
Status: For 2014-15 outreach efforts for the KBWA included speaking engagements, website improvements, communication tool development, and social media. Some of the highlights include:

- **KBWA website: www.kingbasinauthority.org**
  Since the launch of the website in July 2014, there have been 7,133 views of the site. One of the aspects of the site that has been upgraded is making the Kings Basin Project List linkable allowing a viewer to link to the project information form. In addition, a project location map also allows you to click on a project location and download information about the project.

- **Kings Groundwater Basin Video**
  Since the video was published in April 30, 2014, it has had 516 views. The video provides education on the Kings Basin, groundwater overdraft, and the value of groundwater recharge.

- **KBWA Twitter Account: @Kings Water**
  The KBWA has been very active in engaging stakeholders and the general public through its twitter account. The account has 358 followers and 898 tweets have been sent out since its inception.

- **Communication Tools**
  Water Conservation Tips Handout – A new tool developed this fiscal year was the Water Conservation Tips Handout. This handout was published in English

and Spanish. To date, 3,000 have been distributed by KBWA agencies to their constituents. Most of the handouts have been used by KBWA agencies that represent disadvantaged communities.

General Awareness Packet and KBWA brochure – Both of these communication tools that provide general education about groundwater in the Kings Basin and general information about the KBWA IRWMP, respectively, continue to be distributed at various events, presentations, and meetings with elected officials.

- **Speaking Engagements**
  Below are some of the presentations made for the year.

Event	Date	Attendance
KBWA SGMA meeting	11/12/14	50
Laguna Recharge Site Visit	1/23/15	10
Conservation Corps	3/19/15	6
ACWA Board	3/27/15	40
Water Education Foundation Tour	4/24/15	45
FCFB FAACT Class Kings River tour	5/11/15	13
CA Partnership for the San Joaquin Valley	6/19/15	45
Food Systems Leadership Institute	6/23/15	30

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 the Sustainable Groundwater Management Act (SGMA). Fresno County conducted a monthly (now quarterly) committee meeting related to SGMA that included landuse planning as a discussion topic and was attended by landuse planning stakeholders. KBWA stakeholders continue to be actively involved in SGMA and involved in how implementation will impact landuse decisions.

Measurable Objective No. 15: Comply with SBX7-7
Measurement: Review of compliance by stakeholders
Status: Both the Fresno Irrigation District and the Consolidated Irrigation District have completed Agricultural Water Management Plans that are awaiting comment from state or federal agencies prior to final revisions. The cost of compliance with the 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.

4 – IMPLEMENTATION PROJECTS

4.1 – Regional Studies

Kings Basin Water Model Update. As of the date of this annual report, KRCD and its consultant are near completion of the update to the existing Kings Basin Integrated Groundwater and Surface-water Model (IGSM) to the new Integrated Water Flow Model (IWFM). Model development is essentially complete and the draft calibration report is being reviewed. The new model will include more recent years since the completion of the IGSM. Funding for the model work is through a grant from the California Water Foundation.

4.2 – Project List

KBWA Members and Interested Parties can submit projects for inclusion on the project list at anytime. Projects are then reviewed by the Projects Work Group and considered for approval by the Board. A call for projects was initiated in the spring of 2015, and several projects were added to the list on April 15, 2015. A copy of the project list is attached to this report as Attachment 4. The current list is maintained on the KBWA website, www.kingsbasinauthority.org, which also includes an interactive map of the projects included on the project list.

4.3 – Completed or On-going Projects

Completed and ongoing projects during this annual reporting period are listed in Attachment 5 – Past and Present Grant Contracts. Since the initiation of IRWM efforts in the region, the cumulative funding amount awarded to the region through IRWM related efforts is $53,812,810, and the cumulative project cost is more than $87 million.

4.4 – Grant Funding

A DWR Grant application was submitted in the summer of 2015 as part of DWR's IRWM Implementation Round 3. After the KBWA project selection process was followed in accordance with the IRWMP requirements, an application for a single project was submitted because of the limited remaining funds available to the Tulare Lake Hydrologic Region. The application was for Consolidated Irrigation District Adams and Academy Basin that was previously submitted under DWR's Drought Solicitation. The grant application was not initially recommended as part of the DWR draft recommendations, but final recommendations are still pending.

Efforts continue on the currently funded projects. A complete list is included as Attachment 5 to this report.

4.5 – Lessons Learned

Processing of grant reimbursement requests continues to be time consuming, and reimbursement by DWR to project proponents has lagged several months for various reasons, including preparation of materials by multiple agencies, late submittals, changes to submittal requirements, delayed review, and changes to prior reimbursement requests needing to be carried forward. KBWA, DWR and the project proponents continue to work to improve the process, but project proponents are required to cash flow several months of project expenses.

5 – GOVERNANCE, POLICIES AND MEMBERSHIP

5.1 – Changes in Governance and Policies

The KBWA adopted *Resolution No. 15-01 – Authorization to File an Application for a Grant under the 2015 IRWM Implementation Grant Program Solicitation*. The resolution provided authorization to file a grant application and enter into an agreement with the DWR if the grant application is successful.

5.2 – Changes in Government Regulations

The implementation of the Sustainable Groundwater Management Act is requiring significant effort by the KBWA's Members and Interested Parties. A special workshop of the Board was held on November 7, 2014 to discuss the Sustainable Groundwater Management Act including background, components, timeline for implementation and next steps.

5.3 – Changes in Members and Interested Parties

Lanare Community Services District was approved as an Interested Party in October 2014.

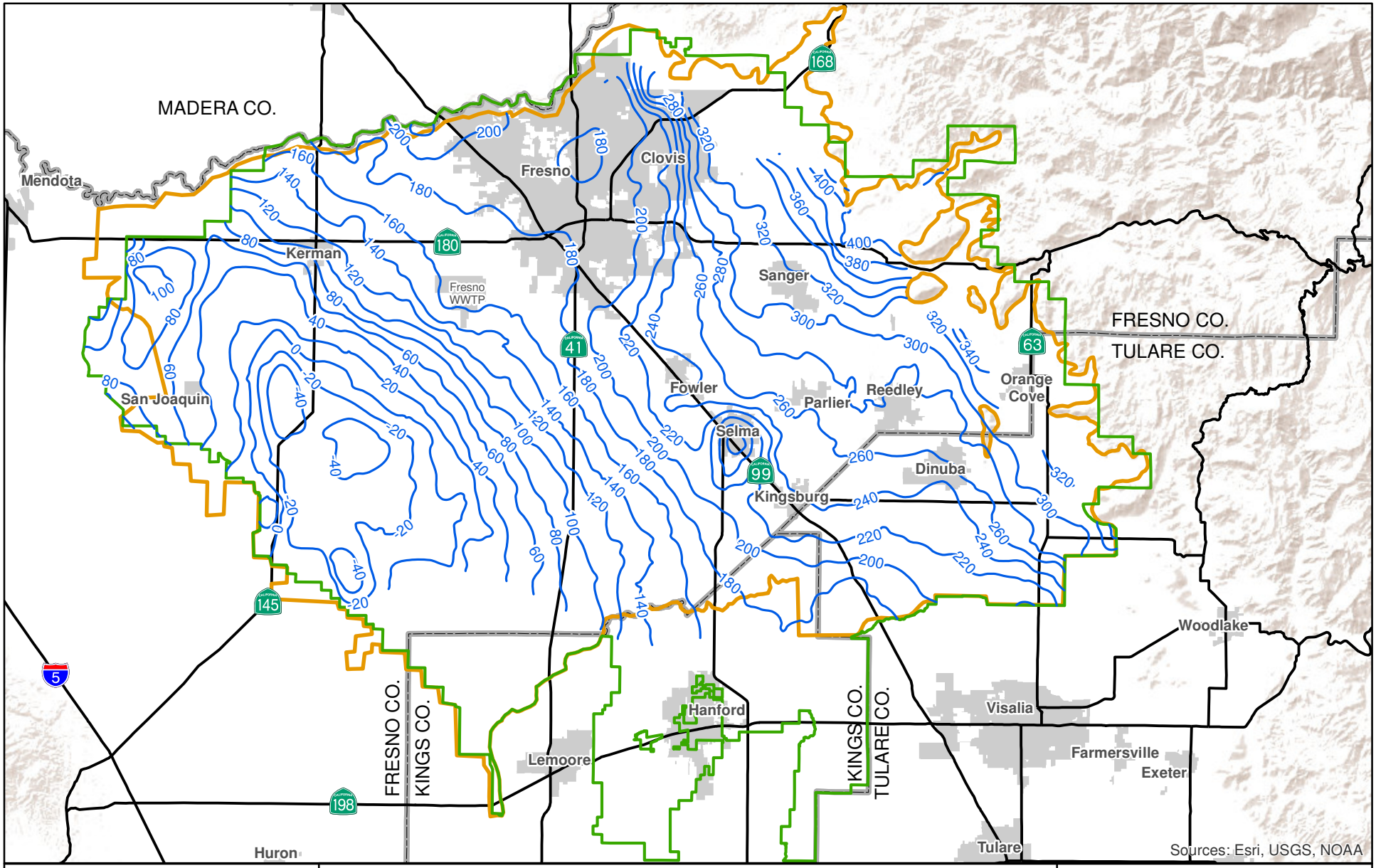
5.4 – Coordination with Other IRWMPs

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

- Participation in IRWMP 'Round Table 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.
- Attendance at the IRWM Stakeholder Capacity Building Workshop in November 2014.

6 – PROPOSED IRWMP AMENDMENTS

There are no proposed IRWM Amendments as of the time of this report.



KINGS BASIN Water Authority

0 2 4 6 Miles

Legend

- Line of Equal Water Elevation (20ft Interval)
- City
- UKBIRWMA
- Kings Groundwater Subbasin (CA DWR Bulletin 118)

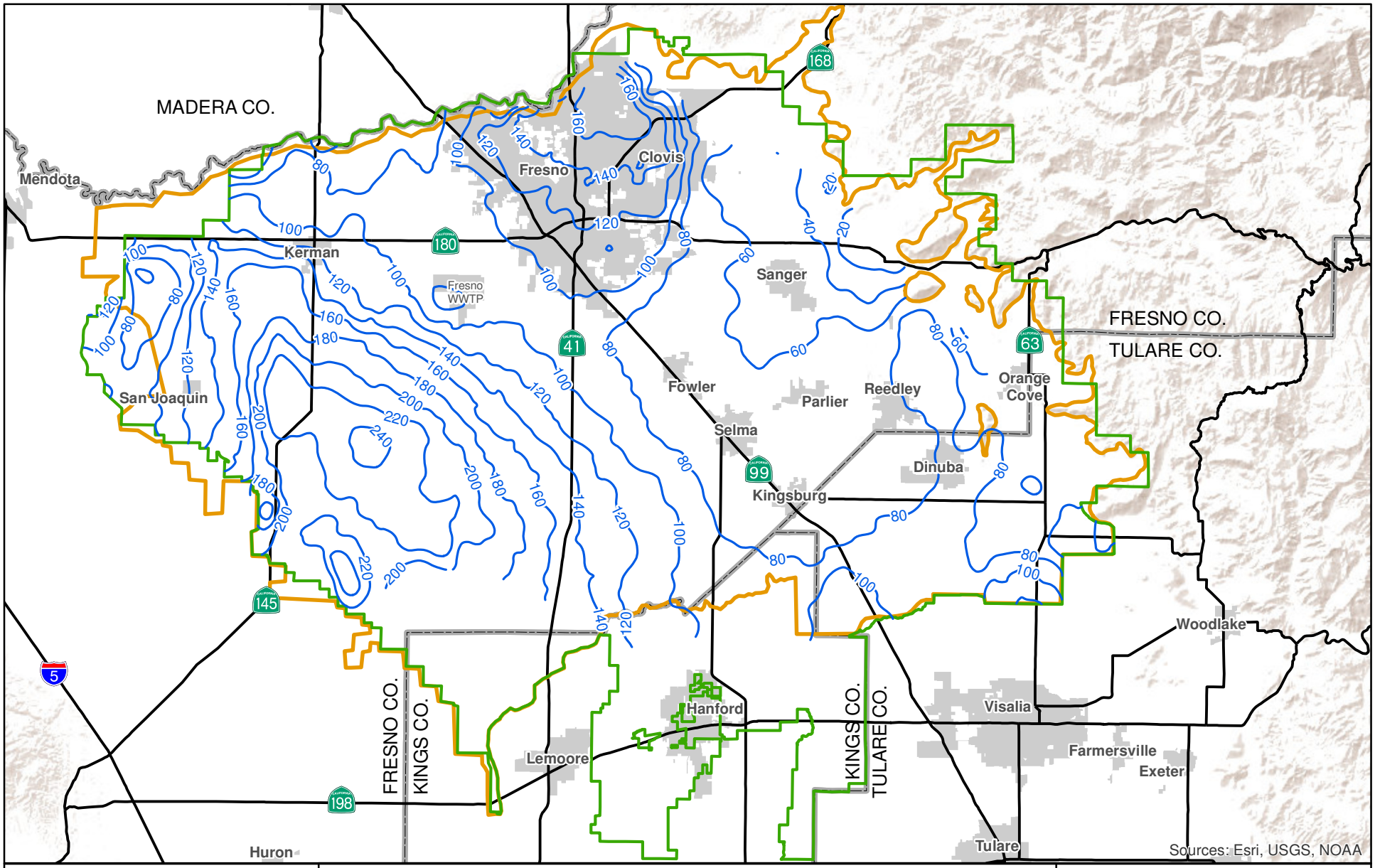
**Southwest portion of region excluded from contours becasue of missing or erroneous data in that area*

ATTACHMENT 1

Spring 2015 - Groundwater

Water Surface Elevation

1/21/2016 : G:\Upper Kings Basin IRWMA - 2048\2015 KBWA IRWMP Annual Report\GIS\Map\groundwater2015_WSE.mxd



KINGS BASIN Water Authority

0 2 4 6 Miles

Legend

- Line of Equal Depth to Water (20ft Interval)
- City
- UKBIRWMA
- Kings Groundwater Subbasin (CA DWR Bulletin 118)

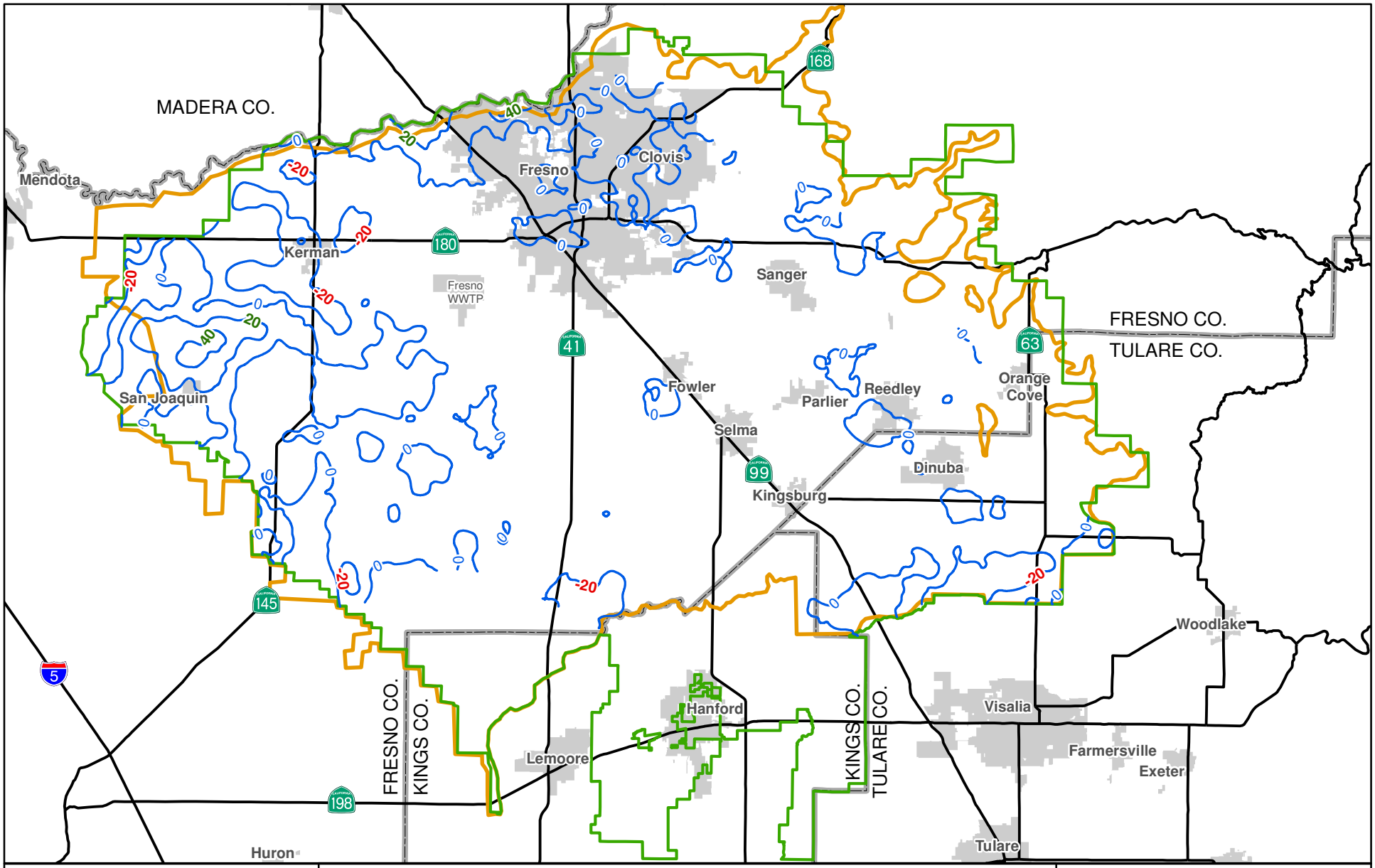
**Southwest portion of region excluded from contours becasue of missing or erroneous data in that area*

ATTACHMENT 2

Spring 2015 - Groundwater

Depth to Water

1/21/2016 : G:\Upper Kings Basin IRWMA - 2048\2015 KBWA IRWMP Annual Report\GIS\Map\groundwater2015_DTW.mxd



KINGS BASIN Water Authority

0 2 4 6 Miles

Legend

- Line of Equal Change in Depth to Water (20ft Interval)
- City
- UKBIRWMA
- Kings Groundwater Subbasin (CA DWR Bulletin 118)

**Southwest portion of region excluded from contours becasue of missing or erroneous data in that area*

ATTACHMENT 3

Spring 2015 - Groundwater

Change of Groundwater Surface
2014 - 2015

1/21/2016 : G:\Upper Kings Basin IRWMA - 2048\2015 KBWA IRWMP Annual Report\GIS\Map\groundwater2015_delta14_15.mxd

KINGS BASIN IRWMP PROJECT LIST

Adopted 4-15-2015

Project ID	Member/IP Organization	Project Title	Project Status	RG1	RG2	RG3	RG4	RG5	MO1	MO2	MO3	MO4	MO5	MO6	MO7	MO8	MO9	MO10	MO11	MO12	MO13	MO14	MO15
				Halt, and ultimately reverse, the current overdraft and provide for sustainable management of surface and groundwater	Increase the water supply reliability, enhance operational flexibility, and reduce system constraints	Improve and protect water quality	Provide additional flood protection	Protect and enhance aquatic ecosystems and wildlife 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	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	Increase surface storage	Sustain the Kings River Fisheries Management Program	Pursue opportunities to incorporate habitat benefits into projects	Increase public awareness of IRWM Efforts	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	Comply with SBx7-7
138	Alta Irrigation District / City of Reedley	The Reedley Pond Project	Planning	P	S	S	S	S	P		S	S	S	S		S	S		S	S	S	S	S
1	Bakman Water Company	Bakman Water Company Water Meter Installation	Ready For Construction	P	S	S			S		S	S	S			S							P
2	Bakman Water Company	SCADA system for wells improved groundwater management, operations, supply reliabilty & conservation	Planning	S	P	S			S		P	S	S				S						S
3	Biola Community Services District	Biola CSD Drinking Water Improvement Project	Preliminary Design	S	P	S					P	S				S					S		
4	City of Clovis	City of Clovis, Water Intertie (North)	Preliminary Design	S	P				S			S	S	P									
6	City of Clovis	Clovis Harlan Recycled Water Extension	Preliminary Design	P	S				P			S	S										
140	City of Clovis	Clovis North Recharge Facility	Planning	P	S	S	S		P			S	S					S					
7	City of Clovis	Tarpey Village Metering Project	Planning	P	S				P			S	S								S		
8	City of Dinuba	Dinuba Reclamation Conservation & Recreation (RCR) Project	Preliminary Design	P	S	S		S	P			S			S	S	S	S		S		S	
11	City of Fresno/Water Division	Nielsen Recharge Facility	Preliminary Design	P	S	S	S		P		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										
15	City of Fresno/Water Division	Tertiary Treatment at Fresno/Clovis Regional Reclamation Facility	Ready For Construction	P	S	S			P		S	S	S										
16	City of Fresno/Water Division	Northwest Fresno Regional Recharge Facility	Preliminary Design	P	S	S	S		P		S	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		S		S			
18	City of Fresno/Water Division	Regional Groundwater Banking Facility	Planning	P	S	S	S		P		S	S	S										
19	City of Fresno/Water Division	Southeast Surface Water Treatment Facility	Preliminary Design	P	S	S			P		S	S	S	S		S							
20	City of Fresno/Water Division	Southeast Fresno Regional Recharge Facility	Planning	P	S	S	S		P		S	S	S					S					
21	City of Fresno/Water Division	Southwest Fresno Regional Recharge Facility	Planning	P	S	S	S		P		S	S	S					S					
22	City of Fresno/Water Division	Northeast Fresno Recycled Water Transmission Pipeline and Reclamation Facility Supply Pipeline	Conceptual	P	S	S			P			S	S										
24	City of Fresno/Water Division	Sunnyside Area Sewer Conversion	Conceptual		S	P							S				P						
25	City of Fresno/Water Division	Fort Washington Sewer Conversion	Conceptual		S	P							S				P						
141	City of Fresno/Water Division	Kings River Pipeline	Preliminary Desgin	P	S	S			P			S	S										
142	City of Fresno/Water Division	Friant-Kern Canal Pipeline	Preliminary Design		P	S			P														
143	City of Fresno/Water Division	Finished Water Transmission Mains (Phase 2)	Preliminary Design	P	S	S			P			S	S										
26	City of Kerman	City of Kerman Water Meter Project	Preliminary Design	P	S				P			S	S										
127	City of Kerman	City of Kerman Median Landscaping Renovation Project	Preliminary Design	P	S				P			S											S
128	City of Kerman	City of Kerman Water Meter Project, Phase 4	Preliminary Design	P	S				P			S				S							S
129	City of Orange Cove	City of Orange Cove Water System Feasibility Study	Planning		P						P							S					
27	City of Parlier	Parlier Water Storage Project	Planning & Preliminary Design	S	P				P									S					
29	City of San Joaquin	City of San Joaquin Water Meter Project	Conceptual	P					P		S	S									S		
130	City of San Joaquin	Recycled Water Upgrade to Wastewater System	Ready For Construction		P	S					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		S			S		S
32	City of Selma	Storm Drain Upgrade	Ready For Construction				P							P									
33	City of Selma	Storm Drain Storage/Recharge Project	Planning				P							P									
34	Consolidated Irrigation District	Recharge Basin near South and Highland	Preliminary Design	P	S	S	S	S	P			S	S		S			S	S		S		
35	Consolidated Irrigation District	Ward Drainage Canal Capacity Enlargement and Recharge Project	Conceptual	P	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	P			S	S					S	S				
37	Consolidated Irrigation District	Fowler Switch Capacity Improvement Project	Conceptual	S	P		S		S					P									
38	Consolidated Irrigation District	Fowler Switch / C&K Canal Intertie Project	Planning	S	P		S		S					P									
39	Consolidated Irrigation District	Rechange Pond off Kingsburg Branch Canal	Planning	P	S	S	S	S	P			S	S					S	S				
40	Consolidated Irrigation District	Recharge Pond off Ward Drainage Canal	Conceptual	P	S	S	S	S	P			S	S					S	S				
41	Consolidated Irrigation District	Recharge Pond off Cole Slough Canal	Conceptual	P	S	S	S	S	P			S	S					S	S				
42	Consolidated Irrigation District	Westside Banking Facility	Planning	P	S	S	S	S	P			S	S					S	S				
43	Consolidated Irrigation District	C&K Canal Capacity Improvement Project	Conceptual	S	P		S		S					P									
44	Consolidated Irrigation District	Santa Fe Pond Enlargement	Conceptual	P	S	S	S	S	P			S	S					S	S				
54	County of Fresno	CSA 43 Raisin City Sewer Feasibility Study	Conceptual & Planning			P					P						S						
123	County of Tulare	Seville Sontag Ditch Flood Control Project	Preliminary Design				P			S	P			S									

P = Primary
S = Secondary

KINGS BASIN IRWMP PROJECT LIST

Adopted 4-15-2015

Project ID	Member/IP Organization	Project Title	Project Status	Halt, and ultimately reverse, the current overdraft and provide for sustainable management of surface and groundwater	Increase the water supply reliability, enhance operational flexibility, and reduce system constraints	Improve and protect water quality	Provide additional flood protection	Protect and enhance aquatic ecosystems and wildlife 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	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	Increase surface storage	Sustain the Kings River Fisheries Management Program	Pursue opportunities to incorporate habitat benefits into projects	Increase public awareness of IRWM Efforts	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	Comply with SBx7-7
				RG1	RG2	RG3	RG4	RG5	MO1	MO2	MO3	MO4	MO5	MO6	MO7	MO8	MO9	MO10	MO11	MO12	MO13	MO14	MO15
124	County of Tulare	Yettem-Button Ditch Flood Control Project	Conceptual				P			S	P			S									
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
132	East Orosi CSD	East Orosi Water Conservation and Meter Project	Preliminary Design	P	S	S			P		S	S					S						S
61	Easton CSD	Easton Safe Drinking Water Feasibility Study Project	Conceptual		S	P				S	P						S	S				S		
65	Fresno Irrigation District	FID Measurement and Metering Project	Preliminary Design	P	S				S			S					S					S		P
66	Fresno Irrigation District	Southwest Flood Water Protection and Utilization Project	Planning	P	S	S	S	S	P			S	S	S	S			S	S			S		
67	Fresno Irrigation District	Jameson Pond	Preliminary Design	P	S				S			S	P		S									
68	Fresno Irrigation District	Oleander Basin Banking Project	Planning	P	S				S			S	P		S									
71	Fresno Irrigation District	Eastside Streams Improvement Project	Conceptual		P		S	S	S				P											
72	Fresno Irrigation District	Big Dry Creek Recharge Project	Planning	P	S		S	S	P			S		S				S						
139	Fresno Irrigation District	Fancher Creek Storage Project	Conceptual	S	P		S	S	S			S						P						
73	Fresno Metropolitan Flood Control District	Dry Creek Improvement Project	Conceptual, Planning, Preliminary Design, Ready for Construction	S		S	P	S	S			S	S	S			S	P		S				
133	Fresno Metropolitan Flood Control Disttrict	Regional Groundwater Recharge and Surface Water Reuse Project	Preliminary Design	P	S	S	S	S	P			S	S	S			S	S		S				
74	Fresno State University	Recycling Well Water with Nitrates for Crop Production	Conceptual		P	S										P	S							
75	Fresno State University	Recycling Turbid Well Water for Crop Production	Conceptual		P								P			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			P	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										P	S						
136	Hardwick Water Company	Hardwick Water Distribution System Replacement and Hookup Project	Preliminary Design		P	S				S	P						S						
80	Kings River Conservancy	The Kings Ribbon of Gems - North Riverside Park	Ready For Construction			S		P																
100	Kings River Conservancy	The Kings Ribbon of Gems - Sanger Kings River Park and River Access	Preliminary Design			S		P									P		S					
106	Kings River Conservation District	Kings River Levee Evaluation	Ready For Construction		S		P			P				S										
107	Kings River Conservation District	Kings River Levee Critical Repairs	Planning		S		P				P			S										
108	Kings River Conservation District	North Fork Channel Recharge Project - Site 16	Conceptual	P	S	S	S	P	P			S	S	S										
116	Kings River Conservation District	McMullin Recharge Project - Site #1	Planning	P	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				P			S										
137	Kings River Conservation District	Coehlo and Gragnani Wetlands Recharge Project	Planning	P	S	S	S	S	P	S		S	S			S		S		S				
118	Laguna Irrigation District	Laguna Groundater Recharge Site 11	Planning	P	S	S	S	S	P			S	S	S										
120	London Community Services District	London Water Conservation Project	Ready For Construction	P	S	S			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			S					S			S
125	Sultana Community Services District	Sultana Safe Drinking Water Feasibility Study Project	Planning		S	P				S	P						S							
135	Sultana Community Services District	Sultana Water Conservation and Meter Project	Preliminary Desgin	P	S	S			P		S	S					S							S
144	Terranova Ranch, Tetra Tech	On-Farm Flood Capture Expansion Project	Conceptual, Planning, Preliminary Desgin	S	P	S	S		P		S	S	S	S	S	S						S		

P = Primary
S = Secondary

Kings Basin Water Authority – Current and Recently Completed Grant Contracts

Last updated: December 4, 2015

Program & Agency	Project Title	Project Proponents	Project Description	Grant Award/Request	Status
Prop 50 Supplemental – AKA Mini 50 – Grant Program (CDWR)	The Fresno Irrigation District Jameson Pond Expansion Project Phase II The City of Fresno Residential Water Meter Project Phase II	UKBIRWMA City of Fresno Fresno ID	Fresno ID's Jameson Pond Phase II Expansion enhances water supply capacity by constructing an addition recovery well. The City's Phase II meter project installs an additional 5k meters (of planned 110k) complete with AMR devices and software.	Grant: $2,099,868 Project Cost: $4,661,500 Contract executed with CDWR, September 2011	Completed December 2015. .
Prop 1E Round 1 IRWM Stormwater Flood Management Grant Program (CDWR)	Fancher Creek Flood Control Improvement Project	City of Fresno w/ Fresno Metropolitan FCD (project is included in the Kings Basin IRWMP project list)	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.	Grant: $2,231,086 Project Cost: $4,462,173 Contract executed with CDWR, Sept. 5, 2012.	Grant completion date: 12/31/16.
Prop 84 Round 1 IRWM Implementation Grant Program (CDWR)	UKBIRWMA – Groundwater Overdraft Reduction and Disadvantaged Community Water Supply Reliability Projects	UKBIRWMA Bakman WC w/ FID Consolidated ID County of Fresno City of Clovis City of Fresno East Orosi CSD w/ AID	Bakman WC's project entails installation of 2,453 residential water meters. 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 Fresno's project would install an additional 10k residential water meters. And East Orosi CSD's project rehabilitates two existing muni wells in a DAC to extract from a higher quality zone of the aquifer.	Grant: $8,496,000 Project Cost: $15,316,390 Contract executed with CDWR, July 2012	City of Fresno and City of Clovis project's complete; CID and County of Fresno nearing completion. The grant contract concludes December 2015; however, East Orosi CSD will request a contract schedule extension which will extend the contract into mid-2016.
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	Project is 60% complete. Levee coring work to begin in mid 2015.

Program & Agency	Project Title	Project Proponents	Project Description	Grant Award/Request	Status
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: $5,000,000 Project Cost: $5,000,000 Contract executed with CDWR, February 2013	H&H study is complete. CEQA nearly complete. Permitting, 30% design work nearing completion. Schedule is approximately 18 months behind.
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 ~$1,050,000 Contract executed with CWF, February 2013	Kings IWFM model complete and final development report being prepared. Installation of 9 monitoring wells in the Lower Kings Basin completed Aug 2015. New KBWA website, land use planning page, land use planner's packet and Groundwater Land Use Symposium completed.
Prop 1E Round 2 IRWM Stormwater Flood Management Grant Program (CDWR)	Dry Creek Flood Control Improvement Project	Fresno Metropolitan FCD (project is included in the Kings Basin IRWMP project list)	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.	Grant: $6,891,010 Project Cost: $13,782,021 Contract executed Mar 5, 2014	FMFCD received full request (highest proposal score in the State). Contract awarded in early 2014 with grant completion date of 9/30/17. Construction nearing completion.

Program & Agency	Project Title	Project Proponents	Project Description	Grant Award/Request	Status
Prop 84 Round 2 IRWM Implementation Grant Program (CDWR)	KBWA IRWM Implementation Grant Projects	UKBIRWMA City of San Joaquin Fresno ID Bakman Water Co. Laguna ID City of Kerman	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.	Grant: $8,734,000 Project Cost: $10,437,645 Contract executed July 2014	Received full funding of the KBWA application. KBWA received the highest proposal score in the State. Contract executed July 2014. LID nearing end of construction phase. Bakman, Kerman and City of San Joaquin continuing installation of meters. FID delayed due to AWMP compliance.