

Attachment 11 – Program Preferences

Introduction

The IRWM Program was conceived and developed to integrate the water management efforts of neighboring, and often competing or disconnected stakeholders. Before a discussion of the Program Preferences and Statewide Priorities, this is an appropriate location to discuss how the Upper Kings Basin Water Authority is different than other regions in the Hydrologic region and throughout the State.

- 1. Stakeholder Involvement.** The Authority now has 44 stakeholders actively involved in the IRWMG. This region is not just made up of a few major water purveyors, but rather a wide cross-section of stakeholders representing varied interests. Water Districts, cities of different size, community service districts, DACs, conservation trusts, water advocates, private water companies, environmental interests, and others have come together to provide a truly integrated group of stakeholders that are actively and frequently meeting together.
- 2. Governance.** As described in Attachment 1, the formation of the Joint Powers Authority established a formal governance structure that now manages the IRWMP. The formal structure developed a Board, established an Advisory Committee that allows DACs and other entities to participate without a funding commitment, and developed various workgroups to focus on carrying out the objectives of the IRWMP. The Authority and its committees meet at least quarterly. Agenda and minutes of these meetings are not included in this application, but are readily available at the Authority's website, <http://www.krcd.org/water/ukbirwma/index.html>.
- 3. Outreach.** Even prior to the formation of the Authority, the region has focused on spreading the word about the IRWM process, plan, goals and projects. Representatives of the Authority have diligently pursued opportunities to reach out to the community at large, as well as potential members. Websites, press releases, community speaking engagements, stakeholder presentations and site tours have been utilized to reach out to the region. The Upper Kings Basin IRWMP and the Authority's website news link (<http://www.krcd.org/water/ukbirwma/news.html>) include summaries of these and other recent outreach efforts.
- 4. DAC Involvement.** The Authority has actively worked to ensure DACs inclusion within the planning process. The very formation of the Authority includes provisions for DACs to have direct and official involvement through the formation of the Advisory Committee. DAC involvement and projects are included in the IRWMP and a listing of the current efforts is included in Attachment 12.
- 5. Proven Track Record.** The Authority and its project proponents have proven that the region can implement projects and programs with and without DWR grant funding. The

Authority has implemented several of the objectives and projects identified in the IRWMP. Recently, the Authority, or its predecessor the Water Forum, have successfully implemented studies and construction projects as proposed and on schedule. In consideration of geographic balance points, we believe that our recent funding success and contracting will help to ensure that this grant is implemented successfully.

6. History. Working together since 2001, the Kings Basin region has developed into a truly integrated and collaborative effort focused on achieving the goals and objectives identified in the IRWMP. The commitment and longevity of the participants help to further and extend the efforts considered by the region.

The six projects included in this application promote the Program Preferences defined in the State’s Public Resources Code and California Water Code in addition to the Statewide Priorities identified for the IRWM Grant Program. A summary table listing the six projects and the corresponding Program Preferences and Statewide Priorities is included as **Table 11-1** on the following page. Descriptions of how each project promotes these Program Preferences and Statewide Priorities are discussed below.

Program Preferences

Regional Project or Programs

The Consolidated Irrigation District South and Highland Basin project would create a new average annual 2,500 AF water supply that would be available on the market for water agencies within the Kings River region. CID would not be the only beneficiary of this new water supply. Water transfers and sales would likely occur between CID and other irrigation districts and municipalities.

Through the reduction of groundwater well use, the City of Clovis Surface Water Treatment Plant Expansion project would allow the City to be contributing an “in-lieu” groundwater recharge quantity of 7,711 ac-ft annually. The Expansion combined with the interconnection to the City of Fresno will provide water supply to an expanded area. Surface water treatment is critical to meeting the regions goals and halting the overdraft of groundwater.

The City of Fresno Residential Water Meter Project for the installation of 10,000 residential water meters within Contract Area IV is a component of overall regional groundwater management efforts to address overdraft conditions, and promote source water sustainability through conservation.

The Bakman Water Company Water Meter Installation project includes and is consistent with regional efforts to meter urban water users, particularly by the City of Fresno. Both the City of Fresno and Bakman Water Company are promoting water conservation within this region to ensure a more reliable water supply.

Table 11-1 Program Preferences Summary

Project	Program Preferences							Statewide Priorities							
	Regional Project or Program	Integrate WMPs and Projects w/in Hydrologic Region	Effectively Resolve Water-Related Conflicts w/in or Between Regions	Contribute to Objectives of CALFED Bay-Delta Program	Address Critical Water Supply or Quality Needs of DACs	Integrate Water Management w/ Land Use Planning	SWFM Funding: Provide Multiple Benefits	Drought Preparedness	Use & Reuse Water More Efficiently	Climate Change Response Actions	Expand Environmental Stewardship	Practice Integrated Flood Management	Protect Surface Water & GW Quality	Improve Tribal Water & Natural Resources	Equitable Distribution of Benefits
CID - South & Highland Basin	X		X	X			X	X		X	X		X		
Clovis - SWTP Expansion	X	X	X				X	X	X	X			X		
Fresno Co. - Drummond Jensen Sewer Study					X								X		X
East Orsi CSD - Well Rehabilitation					X			X	X	X			X		X
Fresno - Water Meter Project	X		X			X		X	X	X			X		
Bakman WC - Water Meter Project	X		X		X	X		X	X	X			X		X

Integrate water management programs within a hydrologic region

The City of Clovis Surface Water Treatment Plant Expansion project is an integrated project with several benefits. The project is included in the Upper Kings IRWMP as a management program of conjunctive water use, water quality improvements, and the project increases the City's water system flexibility and reliability. The project includes a cooperative effort between FID and the City to deliver surface water. Clovis will expand the existing Plant by 7,711 ac-ft for potable water supply. The added capacity will allow the City to remove some of their groundwater wells from use. The added capacity will also increase the supply to City of Fresno users in the south east portion near Clovis through the intertie program.

Effectively resolve significant conflicts within or between regions

Prior to project selection and grant application, regional goals and objectives are coordinated through the Upper Kings Basin IRWM Authority and prioritized with other projects to identify those projects that will effectively address and mitigate any potential regional water-related conflicts.

The Consolidated Irrigation District South and Highland Basin project would be a water banking project that would be able to sell water on the market with other water users within the Kings River region. By increasing the available water supply in this region by approximately 2,500 AF per year, the project would reduce water supply conflicts.

The City of Clovis Surface Water Treatment Plant Expansion project helps resolve the local basin's overdraft issue in two ways. One way is through the reduction of overdraft due to "in-lieu" groundwater recharge. Further, the additional capacity to the Plant will allow for a greater number of users to be serviced through the City of Fresno and City of Clovis interconnection agreement. The users previously would be receiving water from groundwater wells from either the City of Fresno or the City of Clovis. If the users obtain water through surface supplies prior to the City of Fresno constructing their surface water treatment plant then the groundwater basin has additional recharge from those users not being on groundwater wells.

In a region of groundwater overdraft, any reduction in groundwater pumping is a positive step toward resolving significant water-related conflicts within the region. Bakman Water Company, who is completely reliant on groundwater as its potable supply, expects to reduce its groundwater pumping by 10% as a result of its Meter Installation Project. The City of Fresno expects to also conserve approximately 10% as a result of its Residential Water Meter Project. These projects will therefore serve to reduce water-related conflicts in the region.

Contribute to CAL-FED Bay-Delta Program Objectives

The primary objectives of the CAL-Fed Bay-Delta Program are: Water Quality; Water Supply; Ecosystem Restoration; and Levee Integrity. Any project in the State that protects water quality, supply, and strides to improve use efficiency indirectly supports the objectives. The cumulative beneficial impacts of all the projects included in this grant application, incrementally contribute to some relief of the problems faced in the Bay-Delta. Holistic statewide endeavors help not only their respective region, but the state on the whole. The Consolidated Irrigation District South and Highland Basin project is linked in supporting these objectives.

As discussed in **Attachment 3**, the Consolidated Irrigation District South and Highland Basin project will create 2,500 acre-feet of dry-year supply to the Upper Kings Region. This is new supply, utilizing storm, flood, and fishery water that has historically not been put to beneficial use. This project would bank water that is available and will make a dry-year supply available. Making dry year supply is vital to the critically overdrafted Upper Kings Region. In addition, as discussed in **Attachment 3**, this project will allow CID to divert water down the river for the establishment of a fishery without an appreciable loss in its supply.

Critical Water Supply and Needs for DACs

There exist numerous DAC's within the IRWMA boundaries. These communities have been represented by various organizations and attempts to incorporate their needs into regional projects are being taken very seriously. As the IRWMA reviews and assembles grant application packages, DAC needs will be incorporated as best possible.

The Fresno County Drummond Jensen Avenue Sewer Study project would lead to a project that satisfies the neighborhood's critical need of a safe and reliable way of disposing septic and sewage waste from each residence. Not only are many private septic systems in this neighborhood malfunctioning causing standing sewage on the ground surface, the groundwater contamination from these septic systems are contaminating the groundwater supply that the private wells at many of the homes are pumping from. The size of each property in the neighborhood is not large enough to adequately space the domestic wells from the septic systems. A dedicated sewer system in this neighborhood is vital to protect not only the water supply for most of its residents but to also protect the neighborhood's environment from surface pollution and contamination.

The East Orosi CSD Well Rehabilitation project would improve the reliability and quality of the only drinking water supply for the severely disadvantaged community of East Orosi. The residents of this community are reliant on the performance of the community's two production wells. These wells, however, have reduced pumping performance due to clogging of perforations in the casings, resulting in inadequate water supply and distribution system pressures. In addition, the wells are extracting groundwater with high levels of nitrate

contamination. However, with no other water source available to this community, residents are forced to consume this contaminated water even when nitrate levels exceed the allowable EPA MCL.

Bakman, as a water supplier, is required by California State Law (AB 2572) to install water meters on all customer connections by January 1, 2025. The Bakman W.C. Water Meter Installation Project will therefore address the water supply needs of Bakman, a disadvantaged community. This project will help conserve water, protecting the groundwater aquifer, and help to slow movement of known contamination plumes.

Integrate water management programs with land use planning

All regional projects involving the Upper Kings Basin IRWM Authority are developed to meet established urban and metropolitan water management plan objectives. These water management plans are focused to be consistent with the goals of the California Water Plan and those guidelines and objectives of other statewide and regional entities specifically identified by the Department of Water Resources (DWR). Both the City of Fresno and Bakman Water Company meter installation projects effectively integrate water management with land use planning. Conservation is critical to the overall supply to meet the demands associated with existing land use plans.

SWFM Funding: Provide Multiple Benefits

Although this preference only applies to the SWFM funding, there are some related benefits related to two of the projects included in this application. The Consolidated Irrigation District South and Highland Basin project would provide multiple benefits, including groundwater recharge, improving groundwater quality, and flood control benefits. This groundwater banking project would also provide a new wetlands habitat with its surface water basins.

The City of Clovis Surface Water Treatment Plant Expansion project would also provide multiple benefits, including indirect groundwater recharge (“in-lieu” recharge) through a reduction in groundwater pumping. In addition, the project would improve groundwater quality by reducing groundwater pumping and increasing the amount of “in-lieu” recharge throughout the city.

Statewide Priorities

Drought Preparedness

By establishing a new, reliable dry year water supply for the Kings River region, the Consolidated Irrigation District South and Highland Basin project will benefit the region during drought conditions. With banking operations continuing over the course of several years without significant project extraction or recovery, a considerable groundwater supply would be developed below the project. This increased groundwater supply would benefit irrigation

districts and municipalities within the Kings River region not just during dry years, but also during years of reduced water allocations due to environmental concerns, as discussed in **Attachment 7**.

By improving the reliability of East Orosi's water wells as part of the East Orosi CSD Well Rehabilitation project, the community will be better able to satisfy the increased water demands of the community during the summer months and other dry periods. Excessive demands during these time periods on the community's existing water system have created conditions of reduced water system pressure, which not only affects the available water supply to each resident but also increases the potential of contamination due to water backflow from homes back into the main water system.

The City of Clovis Surface Water Treatment Plant Expansion project uses surface water supply to lower the amount of groundwater pumping required to service the City of Clovis. The unpumped water is an "in-lieu" groundwater recharge to the local basin. This recharge will ensure there is water available in dry/drought years when surface water deliveries might not meet expectations.

As the groundwater aquifer recovers from being in a condition of overdraft, it also becomes an increasingly important resource during periods of sustained drought. The State of California has and will continue to experience periods of multiple years of drought. During these periods, surface water supplies become scarce and water purveyors must rely on groundwater to meet demands. The restoration of the groundwater system through the use of the City of Fresno Residential Water Meter Project affords the City the opportunity to extract more groundwater when experiencing these dry conditions. Once the drought has subsided, the City would then be able to meet a majority of the demands with surface water supplies and permit the groundwater system to again replenish and be available for the next drought cycle.

The Bakman Water Company Water Meter Installation Project addresses long-term drought preparedness by contributing to sustainable water supply and reliability by promoting water conservation. Through the meter program, and by utilizing a volumetric billing rate, users will be encouraged to reduce water consumption. This project is therefore anticipated to reduce consumption, and thus groundwater pumping, by about 10%. Through this project, Bakman will therefore leave the conserved groundwater in reserve for use during droughts.

Use and Reuse Water More Efficiently:

The City of Clovis Surface Water Treatment Plant Expansion project uses surface water supply to reduce the amount of groundwater pumping required to service the City of Clovis. It is less expensive for the City to treat and distribute surface water than to pump groundwater supplies, increasing water use efficiency by providing energy use and power cost reductions.

The East Orosi CSD Well Rehabilitation Project would allow more flow through the well casing perforations in both wells, improving pumping efficiency. This would reduce the energy consumption of the community's water system and increase the efficiency of the community's water system.

Through the installation of water meters at all service connections and billing consumers at a metered rate, the Bakman Water Company Water Meter Installation Project and City of Fresno Residential Water Meter Project will encourage users to use water more efficiently in order to reduce individual billings.

Climate Change Response Actions

The Consolidated Irrigation District South and Highland Basin project addresses climate change response actions by advancing the expanding the conjunctive management of multiple water supply sources. These sources include Kings River water (including flood flows, fish flows, and normal deliveries) and groundwater resources. As climate change progresses, the project would be able to capture early snowmelt or additional flood flows due to increases in rain and bank this water at the project for use later in the year.

The City of Clovis Surface Water Treatment Plant Expansion project uses surface water supply to lower the amount of groundwater pumping required to service the City of Clovis and providing a net reduction in Greenhouse Gas. The Project provides greater flexibility to respond to changes in the water availability due to climate changes. In addition, it is less expensive for the City to treat and distribute surface water than to pump groundwater supplies, providing energy use and power cost reductions.

The East Orosi CSD Well Rehabilitation Project would allow more flow through the well casing perforations in both wells, improving pumping efficiency. This would reduce the energy consumption of the community's water system.

The Bakman Water Company Water Meter Installation Project and City of Fresno Residential Water Meter Project will address climate change issues by encouraging more efficient use of the water supply, which will both conserve water and reduce energy consumption by reducing pumping needs.

Expand Environmental Stewardship

The Consolidated Irrigation District South and Highland Basin project promotes environmental stewardship to protect and enhance the environment by sustaining the Kings River fishery. This project displays how agencies can work alongside water resource restrictions and still develop an extremely beneficial project for the region. By utilizing the required fish flows in the Kings River, the fishery remains healthy and the District can take advantage of a water supply new to CID.

Practice Integrated Flood Management

The Consolidated Irrigation District South and Highland Basin project promotes and practices integrated flood management by being able to route Kings River floodwater to the project's basins. This would create multiple benefits including improved flood protection of areas along the Kings River and assist with enhancing the floodplain ecosystems along the River.

Protect Surface Water and Groundwater Quality

The Consolidated Irrigation District South and Highland Basin project would protect groundwater quality in the region east of the City of Fowler. By monitoring groundwater levels and quality surrounding the proposed project, the District can carefully manage groundwater banking operations to recharge the underlying aquifer and ensure groundwater quality remains favorable. Recharging aquifer with clean Kings River water will improve water quality in the region.

The City of Clovis Surface Water Treatment Plant Expansion project will expand the use of treated surface water, a reliable, high quality source for municipal water users. Another benefit of using surface water is the reduction of salt loading on the local groundwater basin because of the lower salt content in the surface water than groundwater. Additionally, the additional treated surface water can be made available, through intertie programs, to other communities that do not have access to groundwater that has contaminants.

The Fresno County Drummond Jensen Avenue Sewer Study project would lead to a project that reduces the amount of nitrate groundwater contamination created by failing septic systems in the neighborhood. The City of Fresno Nitrate Management Plan (**Attachment 3k**) clearly shows nitrate contaminate plumes existing in this area and moving laterally over time towards the heart of Fresno in a northwesterly direction. The proposed sewer system would improve groundwater quality in this region of Fresno by eliminating the use of private septic systems.

The East Orosi CSD Well Rehabilitation project will improve the function of the existing wells so that there will be less aquifer drawdown during pumping operations. The shallow groundwater in East Orosi is contaminated with high levels of nitrate, and the groundwater drawdown has been pulling this contaminated water down to lower levels of the aquifer where there is better water quality. The mixing of the shallow groundwater with the deeper, cleaner aquifer can contaminate the only water resource this community has available. Opening the clogged perforations near the bottom of the well casings will allow the wells to pump from the deeper, cleaner aquifer and reduce the drawdown of the contaminated shallow groundwater.

The Bakman Water Company Water Meter Installation Project and City of Fresno Residential Water Meter Project will protect groundwater quality by slowing the migration of contamination plumes in the Fresno region through reduced groundwater pumping. This will

help to protect public health, secure water supplies, and reduce the need for groundwater treatment at currently untreated wells.

Improve Tribal Water & Natural Resources

While no Native American tribes are located within the Upper Kings IRWM area, the projects included in this grant application do collectively improve the water and natural resources in this region. The successful development and implementation of the Upper Kings IRWMP, along with its effective governance for promoting the goals of its IRWMP, can be used as a model for other IRWM areas with Native American tribes and reservations.

Ensure Equitable Distribution of Benefits:

This grant application includes projects for three disadvantaged communities: the Drummond Jensen Avenue neighborhood outside of Fresno, East Oroshi, and the area within Bakman Water Company in southeast Fresno. The Upper Kings Basin IRWM Authority has established has made it a priority to include and encourage the participation of small and disadvantaged communities with the IRWM process. The Authority takes special measures to send letters out to disadvantaged communities throughout the Upper Kings IRWM region to notify them of IRWM process and progress.

The East Oroshi Well Rehabilitation Project provides a multi-benefit project to this disadvantaged community. The project would not only improve water well performance (including output flow rate and distribution system pressure increases), but would allow the well to extract water lower in the aquifer where water quality is improved. Combined, the benefits of this project will provide residents with a more reliable and safer water supply.

Bakman is a disadvantaged community, and will reap the benefits of its Bakman Water Company Water Meter Installation Project in various ways. Water meters are required by law to be installed at all service connections by 2025; grant award of this project will assist Bakman in installing these meters and meeting the deadline. It will also benefit users within this disadvantaged community whose bills would reflect the costs associated with this project if not awarded grant funding. Additionally, water treatment projects for Bakman will be avoided or prolonged due to this project, as this project will help to slow the movement of contamination plumes in the local aquifer.