

Upper Kings Basin Water Forum

IRWMP Vision, Problem Statements, Goals and Objectives

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Vision

The vision for the Upper Kings Basin Water Forum is a sustainable supply of the Kings River Basin's finite surface and groundwater resources through regional cooperation, planning and implementation of projects that are balanced and beneficial for the environment, quality of life, economy, and future generations.

Water Management Planning Process and Framework

Planning is the art and science of deciding what to do and how to get it done. The Kings Basin Integrated Water Resources Management Plan (IRWMP) will define projects and programs to manage and develop the surface water and groundwater supplies in a sustainable manner. The IRWMP will be the result of a collaborative planning process that is intended to plan for the future as well as reduce or avoid conflicts related to the water supply, groundwater management, ecosystem restoration, and water quality.

The Upper Kings Basin Water Forum (Water Forum) is a multi-stakeholder group tasked with coordinating the overall planning process on behalf of the IRWMP partners. Representatives of local water districts, cities, counties, and other interest groups comprise the Water Forum. It provides the wide array of input and support needed so regional benefits are achieved and priority issues are addressed. Water Forum participants realize that water, land use, and environmental resource issues are interrelated and of regional scope, and that both local and regional solutions are required. This ensures that responses to one issue do not result in undue impacts on other issues.

Most Water Forum participants have been working together since 2001 to address the critical water resources issues facing the region. Now, Water Forum participants plan to adopt Resolutions that commit to completion of the IRWMP by January 2007. The IRWMP must be completed by this date to meet state requirements and qualify for state bond funding that is available to implement capital projects. During the next two years about \$380 million in funding from Proposition 50, Chapter 8 will be provided to support the development and implementation of projects identified in IRWMPs that meet the State's standards.

This briefing is intended to support the adoption of Resolutions of Cooperation and Support by highlighting key IRWMP issues, goals, and objectives. The preliminary water resources objectives will be refined through the IRWMP process, and will be finalized upon adoption by those participating in the IRWMP process.

A number of sources have been consulted in crafting IRWMP goals and objectives including:

- The original Memorandum of Understanding (MOU) adopted in May 2001 by the California Department of Water Resources (DWR), Kings River Conservation District (KRCD), Alta Irrigation District (AID), Consolidated Irrigation District (CID), and Fresno Irrigation District (FID);
- The Water Forum Concept Paper (2004);
- Basin Assessment (WRIME, 2004); and
- IRWMP Guidelines (DWR, November 2004).

Clear problem statements have been developed to generate a consensus on the purpose and need for the IRWMP, and provide a basis for setting goals and objectives. **Regional Planning Objectives** have been established to guide the development of the IRWMP and the planning process. These objectives also help define how the Upper Kings Basin stakeholders will integrate other community values into the process to define water management strategies.

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Preliminary **Water Resources Objectives** have been developed to address regional water resources issues more specifically.

Regional Problems and Issues

Water Forum participants have identified and developed consensus on priority problems, issues, and sources of potential conflicts in the Kings Basin. These include:

Groundwater Overdraft. Overdraft of the groundwater resource is the primary problem to be addressed in the Kings Basin IRWMP. Overdraft provides a unifying theme for the IRWMP and is the major “driver” for the planning process. The Basin Advisory Panel (BAP) composed of original MOU partners documented that the basin was in overdraft (WRIME, 2004), concluding that the primary water management goal should be to “halt and ultimately reverse the current overdraft of the groundwater aquifer,” clearly stating that attainment of the goal would “lead to overall maintenance or improvement in the quantity, quality and cost of development of groundwater resources in the region.” Overdraft is evidenced by declining groundwater levels, increased pumping costs, and loss of groundwater supply in some areas in the eastern part of the planning area. Overdraft increases the competition for the available supply and creates conflicts between agricultural, environmental and urban water users, and between geographic areas within the region. Declining groundwater levels and groundwater migration across jurisdictional boundaries are also a potential source of increased conflict. In addition, site-specific issues associated with groundwater quality, groundwater recharge, and the need for water and wastewater management facilities to address overdraft have been identified as high priority issues.

Water Supply Reliability. Water demand has exceeded the available surface and groundwater supplies as they are currently developed and managed with the existing capital facilities and institutional arrangements. A reliable surface water supply is not assured in normal and dry years. Groundwater makes up the balance of urban and agricultural water demands when surface water is not available. Some areas are totally reliant on groundwater. All groundwater pumpers are contributing to the regional overdraft. Long- term sustainability and reliability of the surface and groundwater supply must be addressed. To increase supply reliability there is a defined need to improve the capture of and storage of storm water and surface water both annually (winter storage for summer use), and during multi- year climatic variations (wet year surface or groundwater storage to meet dry year demands), and for further conjunctive use of the available surface and groundwater supply and storage. The ability to utilize the available groundwater storage is contingent upon construction of capital facilities and on agreements for how to operate and manage the available groundwater storage space. The community, through the Water Forum and IRWMP process, seeks to avoid litigation over water resources and develop a consensus solution for creating sustainable water supplies with minimum environmental impact.

Degradation of water quality. Water quality problems can be a result of natural or man made conditions. Migration of poor quality water is a factor in the operation of the groundwater basin. Degradation of water quality in parts of the planning region has the potential to reduce the available supply or increase treatment costs, and existing water quality needs to be maintained or improved to ensure that there is water of sufficient quality to meet current and future agricultural, urban, and environmental requirements. A wide range of local, state, and federal programs, both regulatory and voluntary, need to be better coordinated to avoid additional burdensome regulations and provide benefits to the region.

Urban Development. Significant urban development is occurring throughout the planning area, placing increased demands on already stressed resources and increasing the potential for conflicts between existing and new water users. Recent legislation requires urban areas to document and prove that long- term water supplies are available. Potential conflicts exist due to inconsistent planning horizons, lack of compatibility between land use and water supply plans, decreased water quality, increased treatment costs and requirements for both drinking water and wastewater treatment. Urban areas reduce the amount of applied irrigation water and have a potential effect on the amount of groundwater recharge. Urban water use serves to “harden” the water demand and require a reliable supply of high quality water as compared to agricultural uses. Current urban use is not measured in some areas.

Protection of Water Rights. The existing agreements, rights and entitlements must be acknowledged and will provide the basis for further basin planning and management. This system and the associated agreements were put in place to resolve long standing historical conflicts. Protecting existing rights is a premise for the planning effort

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and is required to avoid conflicts. A complex system of water rights exists and is managed by the Kings River Water Association (KRWA) on behalf of its 28 members. The agreements demonstrate that local interests can solve and manage conflicts at a local level. Overlying groundwater rights must also be protected to avoid conflicts. Agreements similar to those that direct surface water management need to be developed for the operation of the groundwater basin and any potential groundwater management facilities for recharge and storage.

Sustaining the Agricultural Economy. The Kings Basin is a rich agricultural region, and agriculture is a pillar of the local economic and cultural landscape. Agricultural interests developed and paid for many of the local water supply facilities and hold some of the most senior water rights in the Kings Basin. Agricultural and urban users have differences in the ability to pay for new water supplies. Existing agricultural land uses need to be protected to avoid conflicts associated with water and land use conversions.

Protection of life and property from flooding. Major storm events have the potential for impacts to existing land use. Regional and local flood control facilities may need improvement to better manage flood runoff and protect existing or proposed land uses. Urbanization increases impervious areas and can increase runoff and the associated impacts to existing drainage, water delivery infrastructure, and downstream agricultural land uses. Cities and water districts need to work together to avoid these impacts and plan for long term regional flood control solutions.

Protection of the Environment. Community and social programs designed to protect or enhance environmental conditions must be identified and factored into project designs. Environmental protection goals and objectives may be in conflict with other economic development goals and objectives. Integrated solutions to land use and water supply issues need to also factor in potential ecosystem management benefits and costs. Ignoring ecosystem needs could result in projects that do not meet regulatory requirements, are subject to legal challenge, and therefore subject to schedule delays, cost overruns or abandonment.

Regional Goals

The regional goals are the broadest statement of intent or purpose for the IRWMP and are intended to address the primary problems and resources conflicts in the region. The Water Forum consulted and elaborated on the original goals and objectives developed by the Basin Advisory Panel. The goals of the IRWMP are;

- 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

Regional Planning Objectives

The following regional planning objectives are intended to guide Water Forum during the development of the IRWMP planning process. The regional planning objectives reflect community values and acknowledge a range of stakeholder perspectives towards land use, water supply and environmental resources. Proposed regional planning objectives include:

- Use the Kings Basin Water Forum to help:
 - Create a framework for ongoing regional collaboration and conflict resolution,
 - Increase public understanding
 - Coordinate the regional planning process to produce an IRWMP,
 - Define local and regional water management strategies,
 - Evaluate and compare alternatives,

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- Prioritize cost effective local and regional solutions, and
- Collect and compile much needed water quality baseline data for the region and define opportunities to integrate existing local, state, and federal programs.
- Investigate and resolve legal and institutional issues that may affect project development.
- Identify and pursue sources of funding needed to support project development.
- Compile an inventory of existing water resources plans and policies for the region (including state agencies); include an inventory of local government and water district strategies and initiatives for dealing with water resources problems.
- Avoid environmental impacts during planning and project design where possible.
- Develop an integrated hydrologic model to evaluate water budgets, define how the basin operates, evaluate and compare alternatives, and support decision making.
- Coordinate needed environmental review of the final alternative projects and programs.
- Generate locally-based water demand and needs analyses through water districts and local government.
- Seek to ensure compatibility and consistency with land use and water supply plans.
- Create and define opportunities to share data and information.
- Develop and implement a community affairs strategy to provide outreach and educate the public and decision makers on water management problems and solutions.
- Evaluate local and regional economic impacts and benefits of proposed projects.
- Identify potential environmental and ecosystem benefits associated with developing the IRWMP.

Preliminary Water Resources Objectives

Preliminary water resources objectives were specifically crafted to address the priority water supply problems, and begin integrating land, water, and environmental management strategies in order to provide multiple benefits and the greatest return on investment. In developing the water resources objectives, resolving groundwater overdraft is still a primary purpose and unifying theme for the IRWMP. The preliminary water management objectives include:

- Define local and regional opportunities for groundwater recharge, water reuse/reclamation, and drinking water treatment.
- Develop large scale regional conjunctive use projects and artificial recharge facilities to:
 - Capture storm and flood water currently lost to the region
 - Enhance operational flexibility of existing water facilities, consistent with existing agreements, entitlements, and water rights.
 - Improve the ability to store available sources of surface water in the groundwater basin
 - Provide multi- purpose groundwater recharge facilities that provide flood control, recreation and ecosystem benefits.
 - Design programs to improve water conservation and water use efficiency by all water users.
 - Integrate the fishery management plan.
- Promote ‘in- lieu’ groundwater recharge to reduce reliance on groundwater through reclamation and reuse of treated wastewater; surface water treatment and delivery for municipal drinking water; and delivery of untreated water for agricultural use.

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- Negotiate and develop institutional arrangements and cost sharing for water banking, water exchange, water reclamation, and water treatment.
- Enhance wildlife habitat through surface water reclamation, recharge and treatment facilities.
- Identify beneficial interconnections or improvement of conveyance systems to provide multiple benefits.