

Imperial IRWMP Scoping and Review of DWR Resources Management Strategies

A Water Quality Workshop was held May 17, 2011 and the Draft IID Plan findings for the strategies below were introduced. The workshop was discussed at the June 2011 Water Forum meeting but the Water Forum has not adopted the findings or made recommendations.

1.1 Improve Water Quality

The 2009 California Water Plan, Improve Water Quality grouping of Resource Management Strategies (RMS) to include the following:

- Drinking Water Treatment and Distribution
- Matching Quality to Use
- Salt and Salinity Management
- Groundwater Remediation/Aquifer Remediation
- Pollution Prevention

The strategies to improve water quality are intended to protect the existing quality of the naturally occurring water and to protect public health and the environment. The Imperial IRWMP is required to consider and be consistent with the State's Water Quality Control Plan (Basin Plan) for the Colorado River Basin Region (Region 7)¹. The Basin Plan defines the beneficial uses of water bodies in the Imperial Region², establish water quality standards and objectives to protect the designated beneficial uses, and includes implementation plans to improve water quality where it is impaired.

1.1.1 *Drinking Water Treatment and Distribution*

Drinking Water Treatment and Distribution includes planning and development of infrastructure necessary to provide a safe, high-quality drinking water to communities in the Imperial Region; supporting compliance with state and federal requirements designed to protect public health and safety.³

¹ Proposition 84 & Proposition 1E Integrated Regional Water Management Guidelines, Pgs. 41 and 42.

² Basin Plan Table2-2: Beneficial Uses of Surface Waters in the East Colorado River Basin

³ Chapter 17 Title 22 of California Code of Regulations, California Department of Public Health requirements, Environmental Protection Agencies Clean Water Act and/or in accordance with Public Utilities Commission General Order 103, which

1.1.1.1 Findings

- To the degree possible, seek to avoid competition between the Imperial Region Cities for IRWMP grant monies by identifying common needs and developing regional priorities, and not simply providing money to the projects based readiness-to-proceed.
 - Define opportunities to interconnect the DWT systems to reduce the risks from catastrophic supply interruption.
 - Address raw and treated water storage opportunities.
 - Ensure each city has multiple connections to IID facilities for raw water sources to allow for canal maintenance.
- Review opportunities to consolidate DWT treatment facilities.
- Provide Imperial Region Disadvantaged Communities (DACs) need technical, management and financial support to design and approve projects so that they are ready to proceed to compete for state and federal funds.
- The Imperial IRWMP should be used to inventory project-level investments to:
 - Address public health or environmental emergencies.
 - Repair, rehabilitate, or replace treatment, collection, or distribution systems.
 - Attain compliance with applicable federal or state regulatory requirements.
 - Meet applicable local service levels and future requirements consistent with the general plans.
- Use the Imperial IRWMP to identify funding sources and to match projects to available funds.
- Define how local rates and assessments should be used to meet any local matching funds requirements for state or federal grants.
- Develop the region's political capital needed to minimize local competition, establish regional priorities, and define integration opportunities and approaches to generating local funds to leverage state and federal monies and invest in needed infrastructure.

The Water Forum also supports the following water quality planning principals as identified in the Draft IID Plan.

Utilities must be well managed locally to ensure long-term sustainability of collection, treatment, and distribution systems. The second line of defense in ensuring the Imperial Region enjoys the benefits of clean and safe water is ensuring that our local water and wastewater utilities are well maintained and operated with sufficient local support. Specifically, the Water Forum supports:

- Strong professional staff that are viewed as advocates for clean and safe water in the community and on the state and federal levels. In addition, utilities must have employee development and training programs that ensure that utility staff has the skills needed to manage, operate, and maintain the utility using BMPs.

- Full cost-of-service pricing systems that encourage local communities to establish rates that reflect, to the maximum extent practicable, the system's true life-cycle costs, including debt service, and that can support long-term management needs.
- Sustainable management approaches, including asset management and environmental management systems that proactively ensure long-term viability of each component of the system while simultaneously ensuring compliance with local, state, and federal environmental regulations.
- A culture of constant innovation and research into new technologies and management approaches that support BMPs – including conservation, efficiency, and reuse – and system to ensure transparency and public participation so the utility remains accountable to ratepayers and the general public.

There must be a significant and continuing State and Federal investment. Water Forum recognizes that even if local utilities do all of the above and are managing their systems using best practices, federal and state assistance in financing infrastructure costs will continue to be essential for many Imperial Region communities. Congress and the state legislature must make a significant renewed commitment to help communities and regional watershed partnerships meet their obligations under the Clean Water Act and the Safe Drinking Water Act. Specifically, the Water Forum supports:

- **Strengthening State and Federal Funding:** All Water Forum members and the State of California should support reauthorization and funding for the Clean Water and Safe Drinking Water State Revolving Fund (SRF) Programs with a significant increase in appropriations to more closely reflect financing needs that exist.
- Improving administration of SRFs that (1) streamlines the application process; (2) provides increased flexibility to the state to determine with public input project eligibility and environmental compliance standards; (3) encourages innovative partnerships that bring diverse stakeholders together for more effective broad-based solutions; and (4) reduces paperwork burdens on communities.
- Flexible forms of need-based financing, made available by states, to assist communities that do not have the rate base to support conventional or SRF loan financing costs. These include extended loan terms, loan forgiveness programs and grants. Needy communities in the Imperial Region include low-income communities and small communities or those facing costly environmental challenges and expenses to correct existing problems or meeting new regulatory and security requirements. More comprehensive affordability criteria should be developed for the state to use in allocating SRF financing.
- A dedicated revenue source for the SRF which could ensure that federal investment in water infrastructure is consistent and no longer solely depends on annual discretionary appropriations. Water Forum believes that any dedicated SRF revenue source identified should be broad-based, related to clean and safe water, and should

not impose a national tax on local water and wastewater ratepayers. Support for State Programs, Small Communities, Research, Asset Management, and Public Education.

- In addition to increased funding for the SRF, assuring infrastructure sustainability will require increased federal support for California to administer clean water programs, including:
 - Support for technical assistance to small communities.
 - Increased federal investment for research and development of treatment and infrastructure technologies and asset management strategies that improve the life-cycle of drinking water treatment systems.
 - Support for the development of a program to educate the public about the benefits and economic importance of water and wastewater infrastructure.

The general public and the business community in the Imperial Region need to play a larger role in ensuring clean and safe water. The Water Forum supports strategies that encourage greater participation by the general public and the business community in maintaining the healthy operation of community water and wastewater treatment facilities. The Water Forum believes that to ensure long-term stewardship of our water resources, all stakeholders must be informed involved. Specifically, Water Forum supports:

- Entering into partnerships and cooperative relationships with the business community to develop innovative, cost-effective solutions to infrastructure sustainability. Public-private partnerships should not be restricted or hindered by tax laws, grant conditions, or other requirements. Public-private partnership decisions should be made locally based on what local officials determine is most appropriate for preserving and enhancing the water environment.
- Elected officials and non-governmental organizations, including public health organizations, advocacy groups, business associations and other civic organizations, playing a leadership role in highlighting the importance of water infrastructure and continued investment in it.
- A continued commitment from Water Forum to continue public outreach among all stakeholders to increase the public's support for investment in infrastructure for clean, safe water.

1.1.2 ***Matching Quality to Use***

Matching water quality to use is a CDWR 2009 State Water Plan management strategy that recognizes that not all water uses require the same quality of water. One common measure of water quality is its suitability for an intended beneficial use; a water quality constituent often is only considered a contaminant when that constituent adversely affects the potential beneficial use of the water. High quality water sources can be directed to drinking and industrial purposes, and lesser quality water can be directed for user that can take economic advantage of such water. The Imperial IRWMP should identify and promote economic uses of poor quality water.

1.1.2.1 Findings

- The Water Forum strongly supports use and development of impaired quality where cost effective and where such uses could provide economic benefits to the Imperial Region.
- Conduct pilot and demonstration projects that demonstrate economic use of poor quality water to expand the water supply portfolio and support economic growth.
- Developing and adopting policies for BMPs for cooling water similar to the State for use of alternative sources of cooling water (recycled, desalination of brackish groundwater) in lieu of Colorado River supplies.
- Treating and recycling municipal wastewater to a level where it can be used for agricultural purposes in place of Colorado River supplies.
- Extend the available supply by using saline and brackish water and matching water quality to appropriate uses, including promoting the use of saline and brackish water to produce algae, manage dust and particulate, and providing economic incentives to use recycled water.

1.1.3 ***Other Water Quality Strategies Considered***

Numerous ongoing and existing water quality programs were reviewed and discussed by the Water Forum. Additional new programs or policies have not been identified or included in this version of the Imperial IRWMP. The water quality related strategies that were considered, but which are not further developed in the Imperial IRWMP, simply means that the Water Forum did not identify any urgent or current needs to improve the existing program or for new programs. The Water Forum will continue to seek opportunities to better integrate the existing programs where this would help meet the Imperial IRWMP goals and objectives.

1.1.3.1 Salt and Salinity Management

The CDWR salt and salinity management strategy is defined as a mechanism to protect water quality. Salts may be defined as materials that originate from dissolution or weathering of the rock and soils. Salinity describes the conditions where the dissolved minerals of either natural or human caused sources are present in the water supply. The total dissolved solids (TDS) in a water supply may affect the ability to put the water to beneficial uses. Salt and salinity management could influence the development of the Imperial IRWMP in numerous ways. Essentially, the level of salt can limit the use of available supply if the quality is degraded beyond its ability to be put to use, or may increase the treatment costs to allow the water to be used.

1.1.3.1.1 Findings

The Draft IID Plan did not address salt or salinity management. The following preliminary findings and conclusions are provided for Water Forum consideration.

- Salt and salinity management is a way of life for growers at the farm scale and within the Imperial Region due to the relatively high salt content in the Colorado River Water.
- Salt and salinity management is already integrated with the other management strategies or as part of existing programs and no new activities or actions have been identified.
 - Agricultural Water Use Efficiency measures through the Definite Plan and System Conservation Plan.
 - The QSA include mitigation for the Salton Sea.
 - Water Supply- Desalination includes removal of salts from drain water or brackish groundwater and anticipates requirements for brine disposal. is a water supply strategy that is included as part of the Increase.
 - Water Supply - Recycled water projects or programs that could result in decreased drain flows or potentially increase salinity will mitigate for identified impacts.

1.1.3.2 Pollution Prevention

For the vast majority of contaminants, it is generally accepted that a pollution prevention approach to water quality often is more cost-effective than end-of-the-pipe treatment of wastes or advanced domestic water treatment for drinking water. Pollution prevention measures usually are more cost-effective because they have lower initial capital costs and less ongoing operations and maintenance costs than traditionally engineered treatment systems. Pollution can originate from point or non-point sources of contamination. Point sources are well controlled. Water quality impairment in the Imperial Region comes primarily from non-point sources such as urban or agricultural runoff, or from sources originating across the border. This includes the IID drain water quality program and the New River Committee activity.

1.1.3.2.1 Findings

- The existing local, state and federal programs in place are generally able to control the nature and sources of most contaminants. Beneficial uses are protected under the existing program, and an additional pollution prevention approach may not be cost effective at this time. No additional pollution prevention actions were identified during initial Imperial IRWMP scoping or project definition and no further measures are anticipated for inclusion as part of the plan.
- The Water Forum and ongoing planning efforts should be used to identify, integrate and coordinate the existing non-regulatory programs where feasible.
- IID DWQIP to control Total Maximum Daily from agricultural lands is being implemented by IID and growers, and no program expansion or changes are anticipated as part of the Imperial IRWMP. BMPs to further control contaminants of

concern are to be implemented where problems are detected by the current water quality monitoring programs.

- Coordinate with the New River Committee and efforts to remediate contaminated water flowing across the Mexican Board, and do so through the Ecosystem Enhancement efforts of the Imperial IRWMP.

1.1.3.3 Groundwater Remediation/Aquifer Remediation

Groundwater remediation involves extracting contaminated groundwater from an aquifer, treating it, and discharging it to a water source, using it for some other purpose, or injecting it back into the aquifer. Contaminated groundwater can result from a multitude of both naturally occurring and human sources. Remediation results in a water source that would not otherwise be available. Withdrawal of geothermal fluids and/or groundwater could cause subsidence of the land surface. The issues of subsidence and the possibility of remedial action have been raised at the Water Forum.

1.1.3.3.1 Findings

- Groundwater is not highly developed in the Imperial Region and the need for remediation is minimal and no opportunities have been identified in addition to the desalination program being considered as part of the strategies to increase supplies.
- Existing programs to clean up identified problems (e.g.; leaking underground storage tanks) are believed adequate. Development of new programs would not contribute to meeting Imperial IRWMP goals and objectives and are not planned as part of the Imperial IRWMP at this time.
- The Water Forum should investigate issues and approaches to monitoring, identifying and addressing subsidence; and the Imperial IRWMP could provide a mechanism to further develop priorities, plans and a strategy to address subsidence.