

Increase Water Supply

This section presents a summary of the findings and recommendations for how the Conveyance (Regional, Local, CALFED), Surface Storage (Regional, Local, CALFED), Systems Reoperation, Precipitation Enhancement RMS may be applied in the Imperial Region.

Findings - Conveyance- Local, Regional, CALFED

- Local IID conveyance infrastructure
 - The IID conveyance infrastructure provides regional economic benefits to all of the water users.
 - IID regional supply, conveyance and distribution infrastructure is aging and faces a backlog of maintenance. The backlog of maintenance is not being met due to revenue constraints. Additional investment is needed to preserve and protect these assets.
 - IID does not currently have a policy for other agencies or interests to use their distribution canals **and should adopt a wheeling policy.**
 - Existing IID drainage facilities convey flood water to the New or Alamos Rivers from the developing urban areas, but were not designed as flood/stormwater conveyance and need improvements to meet these objectives.
 - There are no major local conveyance improvements to the IID system that were identified as stand- alone projects for inclusion in the Imperial IRWMP.
- Integration of local conveyance improvements with other strategies
 - Conveyance needs or requirements for individual or regional projects will be integrated into those projects.
 - Local conveyance will be integrated evaluated in context of individual Imperial IRWMP water supply or flood/stormwater management projects.
 - IID Definite Plan and Systems Conservation Program identify conveyance systems improvements to conserve water that are not currently being implemented and these improvements could be included in the IRWMP through the agricultural demand management strategy.
 - Disadvantages Community Water Supply and Quality Needs.
 - Systems reliability- Improvements to local conveyance to provide supply reliability and back up in the event of catastrophic supply interruptions. Cities could realize regional benefit by planning and designing regional interconnections for domestic or wastewater systems.
 - Water Quality- conveyance and systems interconnection should also be factored into evaluation of larger regional efforts for wastewater treatment and recycling; and drinking water treatment and distribution.

- System expansion and annexation- Continue to evaluate connecting areas that surround existing larger water systems and are served by individual pipe connections to the larger municipal water systems.
- **Large Interregional Conveyance** projects such as the Sea to Sea should be integrated with other strategies and could be long term prospects for inclusion in the IRWMP, but such projects are low priority for near term action because of the following consideration
 - IRWMP Objectives - Large interregional conveyance would only marginally help to meet IRWMP goals and objectives since long term mitigation to the Salton Sea are not part of the Imperial IRWMP
 - Complexity – Large scale interregional conveyance projects would be very complex and face permitting, economic and engineering challenges. Projects could involve complex international boundary water issues.
 - Resolve Conflicts, Colorado River- Large interregional conveyance could avoid conflicts on the Colorado River by providing a new source of supply. This is balanced by unknowns related to costs and benefits, and potential for legal conflicts between competing interests.
 - Resolve Conflicts, Imperial Region- Until the project are better defined, it is hard to evaluate whether they would increase or reduce current conflicts or help avoid future conflicts.
 - Regional Benefits- Large interregional conveyance has the potential to provide multiple benefits to multiple participants, but this is balanced against unknown environmental, economic and other impacts and the complexity of development.
 - Timeliness- Large interregional conveyance require further definition and feasibility study to resolve technical, environmental, economic and institutional issues and would be considered a mid- to long term prospect.
 - Political Acceptability, Local- Unknown until better defined. Neutral at this time.
 - Political Acceptability Colorado River – Unknown until better defined. Neutral at this time.
 - Adaptability to Climate Change- could support alternative water supplies to the region and help adapt to uncertainties related to climate change.
- CALFED Conveyance - CALFED conveyance projects are not directly related to the Imperial Region, though increased conveyance as anticipated by CALFED and the CWP could increase reliability of State Water Project and Central Valley supplies to southern California, potentially reducing competition for Colorado River supplies.

Recommendations

- IID should consider evaluate and develop a ‘wheeling’ policy to define the terms for others to utilize conveyance IID capacity when it is available.
- The Water Forum should support IID in defining the long term maintenance requirements for the regional conveyance infrastructure and a cost distribution model to preserve these assets to the Imperial Region.

Surface Storage- Regional, Local, CALFED

There are no large surface water reservoirs in the Imperial Region. Small local storage projects are part of the Definite Plan and Systems Conservation Plan and are integrated into the agricultural demand and water management strategy.

- Large Scale Local Reservoirs. There have been no opportunities identified for developing cost effective, large scale local reservoirs due to low rainfall in local watersheds and low potential yields; large evaporative losses; environmental and permitting constraints.
- There are no opportunities for additional large-scale reservoir facilities on the Colorado River.
- Cities in the region have identified a need for raw or treated water storage facilities to meet state and local requirements and support responses to supply interruption and damages due to catastrophic events as was experienced in the recent 2009 earth quake.
- Integration of storage improvements with other strategies
 - Opportunities to store additional Colorado River water can be realized through groundwater storage and banking.
 - Integrate need for raw or treated water storage into program to support DAC supply and quality needs.
 - Systems storage to optimize operations of IID facilities is included and integrated into the Definite Plan and Systems Conservation Program and are part of the agricultural water demand management efforts.
- Surface Storage as part of CALFED or the CWP are unrelated to the Imperial Region, though increased surface storage statewide could increase reliability of State Water Project and Central Valley supplies to southern California, potentially reducing competition for Colorado River supplies.

Systems Reoperation

- Systems reoperation opportunities have been part of the Definite Plan and Systems Conservation Program, and as such, this strategy is part of the agricultural demand management strategy and ongoing IID program within the Imperial Region.
- Interregional reoperation of the facilities on the Colorado River are beyond the scope of work for the Imperial IRWMP since such activity is part of the ongoing management activities of the U.S. Bureau of Reclamation, lower basin states and large diverters, including IID.

Precipitation Enhancement

- With average annual precipitation of less than 3 inches per year, opportunities for precipitation enhancement are negligible and the potential yields do not merit investment in program development and implementation, and the strategy is not carried forward for further evaluation.