

Over the past 50 years, the Imperial Irrigation District (IID), its conservation partners and member farms have invested \$613 million (1996 dollars) to improve water use efficiency. Water conservation measures have included concrete lining canals, construction of reservoirs and interceptor canals, implementing canal seepage recovery programs and additional irrigation management measures.

In December 1988, the IID and the Metropolitan Water District of Southern California (MWD) entered into a water conservation agreement that allowed MWD to invest in water conservation measures in the Imperial Valley in exchange for use of the conserved water. This historic water conservation and transfer agreement between the IID and MWD has been praised as a model of cooperation between agriculture and urban centers in stretching California's limited water resources.

MWD financed the construction, operation and maintenance of the projects selected at a total project cost of \$233 million (1988 dollars). The program included structural and nonstructural conservation measures which can be grouped into seven categories: canal concrete lining, regulatory reservoirs, 12-hour deliveries, nonleak gates, system automation, lateral interceptors and on-farm irrigation water management. These conservation projects in Imperial Valley will save approximately 106,110 acre-feet of water annually. This water is now available to MWD.

In 1998, continuing its leadership in water conservation, the IID signed a historic water conservation and transfer agreement with the San Diego County Water Authority (SDCWA). The IID/SDCWA agreement will benefit California, Imperial and San Diego counties, as well as advance Western water policy. This agreement is the largest water conservation and transfer in United States history, and will allow the SDCWA to receive up to 200,000 acre-feet annually of water conserved by the IID. IID expects to invest \$295 million from the SDCWA in water conservation programs through the year 2011. Water conservation will enable farmers to maintain current agricultural production, while transferring conserved supplies to SDCWA. Imperial Valley farmers produce more than \$1 billion annually in agricultural products from their 460,000 cultivated acres.

In October 1999, IID, Coachella Valley Water District (CVWD), MWD, SDCWA, the state of California and the U. S. Bureau of Reclamation issued key terms for a quantification settlement of Colorado River water use issues. The key terms represent a major advance in Colorado River water use by seeking to maximize the beneficial use of California's basic apportionment through water transfers, conservation and improved water management. When implemented, the key terms will shift the use of over 500,000 acre-feet per year of California's Colorado River water supply from agricultural to urban use.

Data from the United States Bureau of Reclamation shows that IID's conveyance and distribution system efficiency along the lower Colorado River is now about 90 percent. The California Department of Water Resources rates Imperial Valley farm efficiency at approximately 79 percent as compared to the statewide goal of 73 percent.

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Chronology of Events

- 1911 – IID organized.
- 1929 – IID, in cooperation with the U. S. Department of Agriculture's Soil Conservation Service, designed tile drainage systems suited to the valley's conditions.
- 1951 – Seepage recovery program, All-American Canal. Approximately 24,000 acre-feet (AF) of water returned to canals.
- 1954 – IID began concrete lining canals and laterals (1954-1989: 910 miles completed with an estimated water savings of about 58,000 AF per year).
 - Started "carryover" system for farm water orders.
- 1967 – Seepage recovery program, East Highline Canal.
- 1976 – First water regulating reservoir (Kakoo Singh) located on East Highline Canal placed in service.
 - 13 Point Water Conservation Program, focusing on reducing tailwater, canal seepage and operational water, adopted by IID Board.
- 1977 – Second water regulating reservoir (J. M. Sheldon) added to system.
- 1979 – IID Board of Directors appointed farmers to a Water Conservation Advisory Board.
- 1980 – 21-Point Water Conservation Program adopted. The program included policies and procedures for ordering water, operating the delivery system and assessing extra charges for excessive water use.
- 1981 – Third water regulating reservoir (Oscar Fudge) completed.
- Began irrigation scheduling program.
- 1983 – Fourth water regulating reservoir (H. "Red" Sperber) went into operation.
- 1984 – Resolution to develop water conservation opportunities in the Imperial Valley.
- 1985 – An IID Water Conservation Plan was drafted and distributed.
 - Five-Year Tailwater Recovery Demonstration Program, five systems.
- 1987 – 15-Point Water Conservation Program. Replaced 13-and 21-Point programs. Contained aggressive policies to promote on-farm conservation, including a tailwater triple charge program.
- 1988 – IID/farmer funded conservation (1951-1988) – estimated 523,000 AF/yr. conserved.
 - Fifth water regulating reservoir (R. F. Carter) opened.
- 1989 – IID/MWD Water Conservation and Transfer Agreement – 106,110 AF/yr. by 1995; 35 years; \$233 million. (107,160 AF saved by 1998.)
- 1990 – Resolution No. 24-90 – Offer to meet and discuss conservation possibilities to assist the state with its water crisis.
 - Resolution No. 38-90 – IID's best interest to make conserved water temporarily available for use by others and offered to meet and discuss.
 - Construction started on IID/MWD projects.
- 1991 – Drought assistance letter to Director David Kennedy, Department of Water Resources (DWR), encouraging DWR to

- investigate the technical, economic and political feasibility of using wells to recover lost seepage water from the All-American Canal as a drought emergency water source.
- Non-Crop Irrigation Demand Reduction Program – Regulation No. 53 – A limit on the length of time water may be applied to flood lands not seeded for crop.
 - Pilot Program – Crop Specific Modified Irrigation Program – Evaluate removal of irrigation water from alfalfa during the period August 1 through October 15, 1991; total of 420 acres ± in 12 locations.
 - Transfer of 26,700 AF available to MWD.
 - USBR issues draft “Regulations for Administering Entitlements in the Lower Colorado River Basin,” suggesting a limit of 2.88 million acre-feet (MAF) per year for IID.
- 1995 – April: Seeking financial partners for an additional conservation and transfer program, IID contacts MWD.
- September: IID and SDCWA sign Memorandum of Understanding (MOU) to pursue a conservation and transfer agreement.
- 1996 – July: IID/SDCWA release Summary of Draft Terms.
- 1997 – February: IID offers proposal to resolve disputes with Coachella Valley Water District (CVWD).
- December 11: Draft Final Agreement between IID and SDCWA released for public review.
- 1998 – April 29: IID/SDCWA sign a landmark Water Conservation and Transfer Agreement.
- IID/MWD water conservation projects completed; 35-year water transfer period begins.
- 1999 – October 15: IID, CVWD, MWD, SDCWA, the state of California and the U. S. Bureau of Reclamation issued key terms for a quantification settlement of Colorado River water supply issues.

Summary

IID has long recognized the importance of water conservation at each step of the delivery and recovery process – transport, distribution, on-farm and tailwater capture. Because of Imperial Valley’s challenging physical conditions, IID’s efforts have been equally innovative. Despite difficult soil and climate conditions, Imperial Valley farmers are consistently ranked among the most efficient California irrigators.

Conservation has occurred along every step of the water delivery process. The IID and its partners have funded canal lining projects, regulating reservoirs for in-valley distribution and tailwater recovery programs to recycle irrigation water on the farm. Perhaps more than any other agency, IID has continuously participated in collaborative and independent conservation studies to refine its programs and technology.

Given the high salt content of Colorado River water delivered to the Imperial Valley, the extremely hot climate in the below-sea-level valley and the complexity of the water distribution system, IID’s conservation record is all the more impressive.

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