



IMPERIAL IRRIGATION DISTRICT

OPERATING HEADQUARTERS • P. O. BOX 937 • IMPERIAL, CALIFORNIA 92251

June 28, 2010

Ms. Lorri Gray-Lee, Regional Director
Bureau of Reclamation
Lower Colorado Region
P.O. Box 61470
Boulder City, Nevada 89006-1470

Subject: IID's 2011 Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus

Dear Lorri:

Attached please find a copy of the Imperial Irrigation District's (IID) *2011 Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus* (ICS Plan) in accordance with Section 2.5(A) of the *Lower Colorado River Basin Intentionally Created Surplus Forbearance Agreement* (ICS Forbearance Agreement) dated December 13, 2007.

While IID's ICS Plan submittal contains project components that span multiple calendar years (in particular its fallowing program), IID acknowledges that the terms of the ICS Forbearance Agreement require annual approval of its ICS Plan by the Secretary in consultation with the Lower Division States. IID's fallowing program was originally designed to coincide with local field leases (based on the local cropping seasons) and runs from July 1st of one year through June 30th of the following year(s). Since the fallowing program term does not coincide with the calendar year assumptions envisioned under the ICS program, and given that IID has yet to receive approval for its 2010 ICS Plan, IID again requests that a multi-year project approval be considered by Reclamation. Extraordinary conservation yields will vary depending on fallowing program contracting levels and ICS Plan approvals for the 2010 through 2012 calendar years, so IID requests that Reclamation approve its ICS Plans for multiple years when approved conservation projects are materially unchanged in order to facilitate program contracting.

Should you have any questions regarding the IID's 2011 ICS Plan, please contact me at (760) 339-9038.

Sincerely,

TINA ANDERHOLT SHIELDS, PE
Assistant Water Department Manager
Water Supply Planning-Colorado River
& QSA Issues

cc: Terry Fulp
Steve Hvinden

Imperial Irrigation District
2011 Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus

Introduction

This plan for the creation of Extraordinary Conservation Intentionally Created Surplus (ICS) has been prepared pursuant to the specifications outlined in Section 3.B.1 on page 40 of the *Record of Decision: Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines) signed by the Secretary of the Interior (Secretary) on December 13, 2007.

IID will implement two extraordinary conservation measures to create ICS in 2011, a fallowing program and a main canal seepage interception system, which are described in this plan and are incorporated as Exhibits D and F to the December 13, 2007, *Lower Colorado River Basin Intentionally Created Surplus Forbearance Agreement* (ICS Forbearance Agreement) among the Arizona Department of Water Resources, the Palo Verde Irrigation District, the Imperial Irrigation District, the City of Needles, the Coachella Valley Water District, Metropolitan, the Southern Nevada Water Authority, and the Colorado River Commission of Nevada.

The projected annual yields of these extraordinary conservation measures for calendar year 2011 are as follows:

Conservation Measure	Annual Conservation Yield
IID On-Farm Fallowing Program	up to 25,000 acre-feet
IID Main Canal Seepage Interception System	up to 12,000 acre-feet
<i>Annual Extraordinary Conservation ICS Total</i>	<i>not to exceed 25,000 acre-feet</i>

The total annual conservation yield of these activities in 2011 is estimated to be up to 25,000 acre-feet, the annual volume of Extraordinary Conservation ICS that IID may create (excluding Excess Extraordinary Conservation ICS) under the December 13, 2007, *California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus* (California ICS Agreement). Without implementing the aforementioned Extraordinary Conservation measures for ICS purposes, this water would have been diverted by IID for beneficial use within its water service area. The total annual yield of these activities will not exceed the 25,000 acre-feet of Extraordinary Conservation ICS available to IID each year as described in the California ICS Agreement. Additionally, the accumulated volume of annual conservation created by IID will be equal to or less than the 50,000 acre-feet of Extraordinary Conservation ICS available to IID and similarly described in the California ICS Agreement. For purposes of this planning period, at this time IID does not anticipate creating any Excess Extraordinary Conservation ICS to be delivered to the MWD system.

IID will submit to the United States Bureau of Reclamation (USBR) its annual Extraordinary Conservation ICS estimate each year as a line item in its yearly ‘estimate of diversion’ (“water order”), and any ICS yield estimate decreases within the calendar year will be relayed to USBR via mid-year ‘water order’ estimate revisions. Mid-year reductions to ICS conserved water estimates would generally be the result of (but not necessarily limited to) (1) the final ‘truing up’

of IID following program provisional conservation yields based on actual (as opposed to estimated) monthly water use and savings, with minor adjustments to account for any contract breaches by the following participants; (2) implementation/contracting for the IID following programs; (3) USBR finalization of provisional decree accounting records (in particular accounting changes and true-ups to IID's Inadvertent Overrun and Payback Policy (IOPP) obligations (or that payback obligation performed by IID on behalf of another entitlement holder); (4) any II(B)(6) unused apportionment credited to IID; and (5) operational and maintenance issues affecting the main canal seepage recovery project.

Imperial Irrigation District
Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus
On-Farm Fallowing Program

Project Description

Extraordinary Water Conservation created by an IID fallowing program is described in Exhibit D of the December 13, 2007, *Lower Colorado River Basin Intentionally Created Surplus Forbearance Agreement* (ICS Forbearance Agreement).

The Imperial Irrigation District (IID) Fallowing Program is a voluntary program that allows willing landowners and/or lessees to contract with the IID to fallow agricultural fields to create conserved water for various purposes including:

- Transfer to the San Diego County Water Authority (SDCWA)
- Mitigation of environmental impacts resulting from reduced inflow to the Salton Sea
- Satisfaction of payback obligations under the *Colorado River Water Delivery Agreement* (CRWDA)
- Compliance with any inadvertent overrun obligations under the *Inadvertent Overrun and Payback Policy* (IOPP)
- Limitation of IID's Priority 3 diversions for the annual 3.1 million acre-feet cap
- Creation of Extraordinary Conservation Intentionally Created Surplus (ICS)

Each year the price for the water to be conserved from fallowing is set by IID and applications are sent out asking for participants to fallow an agricultural field in exchange for payment for the conserved water. Utilizing a random selection process, IID contracts with participants to fallow fields required to provide the amount of conserved water needed by IID each year. Eligibility criteria require that a field be at least 10 acres in size and have been irrigated for crop production the previous three years (excluding the years contracted with IID for fallowing); each field's participation in an IID Fallowing Program is limited to two out of every four years. Additionally, the fallowing participants must warrant that the fallowed lands would have been planted for agricultural production during the fallowing term, and designate the crops that would have been grown on the participating fields had those lands not participated in the IID Fallowing Program.

Initial program parameters were established in the Phase I On-Farm Fallowing Program Plan dated March 18, 2004 (see http://www.iid.com/Media/2004program_proposal.pdf). Revisions to this document were made in 2006 (see <http://www.iid.com/Media/Fallowing-Program-Plan-2006-rev.pdf>) and are anticipated to be updated again in 2010. Additional minor program changes have been incorporated into the contractual documents (entitled *Agreement for Fallowing Land in the Imperial Irrigation District*) on an annual basis as necessary. Links to annual fallowing program summary information, which includes the contract templates, can be accessed from IID's main fallowing webpage at <http://www.iid.com/Water/FallowingPrograms> .

Since 2003 IID has conducted eight separate fallowing programs and will soon solicit applications for the ninth. In total, IID has paid participants over \$25 million to fallow

approximately 76,500 acres of agricultural lands within its service area, yielding nearly 491,000 acre-feet of conserved water.

Term of the Activity

IID's fallowing program was initially designed to coincide with field leases based on the cropping seasons that run from July 1st of one year through June 30th of the following year. In 2009 IID began offering these mid-year to mid-year contracts with a two-year term in order to facilitate local concerns regarding lease and farm planning issues. A calendar year fallowing program is also being considered that would run annually from January 1st through December 31st. The following fallowing programs are anticipated to be in effect through 2017 as per the QSA and related agreements:

2009-2011 Fallowing Program: July 1, 2009 – June 30, 2011
2010-2011 Fallowing Program: July 1, 2010 – June 30, 2011
2011 Fallowing Program: January 1, 2011 – December 31, 2011
2011-2012 Fallowing Program: July 1, 2011 – June 30, 2012
2011-2013 Fallowing Program: July 1, 2011 – June 30, 2013
2012 Fallowing Program: January 1, 2012 – December 31, 2012
2012-2013 Fallowing Program: July 1, 2012 – June 30, 2013
2012-2014 Fallowing Program: July 1, 2012 – June 30, 2014
2013 Fallowing Program: January 1, 2013 – December 31, 2013
2013-2014 Fallowing Program: July 1, 2013 – June 30, 2014
2013-2015 Fallowing Program: July 1, 2013 – June 30, 2015
2014 Fallowing Program: January 1, 2014 – December 31, 2014
2014-2015 Fallowing Program: July 1, 2014 – June 30, 2015
2014-2016 Fallowing Program: July 1, 2014 – June 30, 2016
2015 Fallowing Program: January 1, 2015 – December 31, 2015
2015-2016 Fallowing Program: July 1, 2015 – June 30, 2016
2015-2017 Fallowing Program: July 1, 2015 – June 30, 2017
2016 Fallowing Program: January 1, 2016 – December 31, 2016
2016-2017 Fallowing Program: July 1, 2016 – June 30, 2017
2017 Fallowing Program: January 1, 2017 – December 31, 2017

Estimate of the Amount of Water that Will be Conserved

Up to 25,000 acre-feet of conserved water is anticipated to be created annually for ICS purposes from IID on-farm fallowing programs. This amount will vary based on the number of contracted fields and the conservation yields associated with the participating fields. Conserved water yield estimates for fallowed fields are determined individually based on the previous year's water history, ten-year running average water history baseline (minus high and low years), and are reviewed for material trend deviation in recent years and crops grown during the previous three years.

Consumptive use reduction accounting occurs at IID's Imperial Dam (Station 60) diversion point to account for total losses from the field to Imperial Dam for participating fields in the IID fallowing programs. IID will utilize the transportation loss accounting methodology described in USBR's December 3, 2007 letter to IID on this issue for the IID Fallowing Programs.

Proposed Methodology for Verification of the Amount of Water Conserved

IID staff monitors fields to verify canal water is not being delivered for irrigation purposes, and all farm turnout gates are locked (shared gates require the delivery ditch be blocked or some sort of physical obstruction installed to prohibit water delivery to the participating field). In addition, IID inputs modified crop codes into its computerized water order system that prevent water orders from being processed on fallowed fields and indicate participation in an IID fallowing program.

Fallowed field locations are posted to IID's website and will be provided to USBR promptly after the fallowing contract execution deadline. USBR staff has conducted semi-annual verification site visits to randomly selected fields accounting for five percent of the total acreage enrolled in all IID Fallowing Programs. Blind data sets illustrating the historical water use and conserved water yield calculations for the fields selected by USBR are shared with USBR staff during their verification site visits. These verification site visits are documented in a USBR report entitled "IID Extraordinary Conservation Program Verification" that includes fallowed field verification summary data and field observations (including photographs of the fallowed field) to confirm implementation of this extraordinary conservation measure.

Regulatory Approvals

IID has completed an environmental assessment of proposed water conservation and transfer activities and diversion limitations pursuant to the California Environmental Quality Act (CEQA), as set forth in a *Final EIR/EIS for the IID Water Conservation and Transfer Project* certified by IID in June 2003, as supplemented by an *Amended and Restated Addendum* thereto certified by IID in October 2003.

Imperial Irrigation District
Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus
Main Canal Seepage Interception System

Project Description

Extraordinary Water Conservation created by an IID seepage recovery program is described in Exhibit F of the December 13, 2007, *Lower Colorado River Basin Intentionally Created Surplus Forbearance Agreement* (ICS Forbearance Agreement).

IID's Main Canal Seepage Interception System is the first efficiency conservation program to be implemented to meet IID's water transfer obligations under the QSA and other related agreements. This project as currently designed will consist of the construction and installation of pump stations, collection sumps, and appurtenant structures in open drains that run parallel to certain main canals located in areas of highly permeable soils. These open drains were originally constructed to intercept seepage from certain main canals and carry it to the Salton Sea so the down slope agricultural lands could be farmed. At full implementation, the main canal seepage interception project will collect over 40,000 acre-feet of these flows and pump them back into the main canal to supply downstream water users. In total, 24 pumping stations will be constructed at the lower ends of these drains to ensure that they have no impact on the drain flows nor induce additional seepage from the main canals.

This seepage recovery project was designed to provide conserved water for transfer to the Coachella Valley Water District; however the QSA conserved water delivery schedules ramp up over time and indicate that the full conserved water potential associated with build-out of this extraordinary conservation project will produce conserved water in excess of the transfer requirements through at least 2015. As such, the excess conserved water is available for use by IID for other purposes including overrun payback and ICS until such time that the full conservation yield of this seepage recovery project is transferred under the QSA and related agreements to the agreed upon transferee.

Project design and construction began in 2008 with the installation of four pump stations and construction of most of the remaining project capital improvements. The final twenty pumps were installed in early 2009 and project completion is anticipated this year. The main canal seepage interception system has a total engineering, design, and construction budget of \$7,665,000.

Term of the Activity

IID Main Canal Seepage Interception System was substantially built and fully operational in 2009. Excess conserved water from this seepage recovery project is estimated to be available for payback and ICS purposes through at least 2015 based on current extraordinary conservation yield estimates and water transfer and delivery schedules.

Estimate of the Amount of Water that will be Conserved

IID's Main Canal Seepage Interception System consists of 22 pump station locations with a total recovery capacity estimated at up to 40,000 acre-feet per year. However, Section 1 (page 3) of

the December 13, 2007, *California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus* (California ICS Agreement) limits the annual creation of Extraordinary Conservation ICS by IID to not more than 12,000 acre-feet from seepage recovery projects.

Consumptive use reduction accounting occurs at IID's Imperial Dam (Station 60) diversion point to account for total losses from the Main Canal Seepage Interception Systems to Imperial Dam. IID will utilize the same transportation loss accounting methodology, described in detail in USBR's December 3, 2007 letter to IID, as that used for its following programs.

Proposed Methodology for Verification of the Amount of Water Conserved

Intercepted seepage water pumped to the main canal will be continuously metered and the data reported electronically to IID's Operations Center where it will be subject to quality control procedures and stored in a relational database. Electrical conductivity readings of the seepage water will also be monitored for salinity to ensure there are no significant local water quality impacts from this project.

Seepage recovered through the Main Canal Seepage Interception system will be reported to USBR on a quarterly and annual basis. All measurements are subject to verification by USBR for accuracy and 5 percent of the project pumps will be visited semi-annually by USBR staff to verify operational status and metering data. These verification site visits are documented in a USBR report entitled "IID Extraordinary Conservation Program Verification" that summarizes site conditions (including photographs of the pumping station) and checks water records and flow data to confirm implementation of this extraordinary conservation measure.

Regulatory Approvals

IID has completed an environmental assessment of proposed water conservation and transfer activities and diversion limitations pursuant to the California Environmental Quality Act (CEQA), as set forth in a *Final EIR/EIS for the IID Water Conservation and Transfer Project* certified by IID in June 2003, as supplemented by an *Amended and Restated Addendum* thereto certified by IID in October 2003.