



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

August 17, 2009

Mr. Steve Hvinden
Area Manager
Boulder Canyon Operations Office
U.S. Bureau of Reclamation
P.O. Box 61470
Boulder City, NV 89006-1470

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Dear Mr. Hvinden:

Metropolitan's Plan for the Creation of
Extraordinary Conservation Intentionally Created Surplus During Calendar Year 2010

In accordance with Section 3.B.1. of the Interim Guidelines for the Operation of Lake Powell and Lake Mead, enclosed is The Metropolitan Water District of Southern California's (Metropolitan) Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus During Calendar Year 2010 (Plan). Metropolitan's Plan demonstrates how all requirements of the Guidelines will be met in the creation of Extraordinary Conservation Intentionally Created Surplus.

Metropolitan looks forward to the Secretary of the Interior's review and approval of the Plan in consultation with the Lower Division States. Should you have any questions regarding our Plan, I may be reached at (213) 217-5786.

Very truly yours,


Roger K. Patterson
Assistant General Manager

JPM:tt

Enclosure

The Metropolitan Water District of Southern California

Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus During Calendar Year 2010

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* signed by the Secretary of the Interior (Secretary) on December 13, 2007.

Two separate activities are described in this plan, each of which are incorporated as an exhibit to the December 13, 2007, *Lower Colorado River Basin Intentionally Created Surplus 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 yields of these activities for calendar 2010 are as follows:

	<u>acre-feet</u>
Activity 1: Metropolitan Funded Palo Verde Irrigation District Forbearance and Fallowing Program	133,000
Activity 2: Metropolitan Funded Imperial Irrigation District Water Conservation Program	<u>90,000 to 110,000</u>
Total	223,000 to 243,000

The total yield of these activities is less than the annual amount of Extraordinary Conservation ICS that can be created by Metropolitan under the December 13, 2007, *California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus*. Absent the creation of Extraordinary Conservation ICS, this water would otherwise be beneficially used by Metropolitan through diversion into the Colorado River Aqueduct. The amount of Extraordinary Conservation ICS that Metropolitan would create is limited to the amount of Colorado River water that, if added to its consumptive use, will not result in an inadvertent overrun pursuant to Reclamation's October 10, 2003, Inadvertent Overrun and Payback Policy. The total yield of these activities when added to the projected amount of Extraordinary Conservation ICS available to Metropolitan as of January 1, 2010, would be less than the total amount of Extraordinary Conservation ICS which may be accumulated by Metropolitan under the December 13, 2007, *California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus*.

Activity 1: Metropolitan Funded Palo Verde Irrigation District Forbearance and Fallowing Program

Project Description

Under the August 18, 2004, Forbearance and Fallowing Program Agreement with the Palo Verde Irrigation District (PVID) and landowner agreements for fallowing in PVID, Metropolitan pays landowners within the Palo Verde Valley to annually fallow a portion of their land, foregoing the planting and irrigation of crops, allowing PVID to forbear use of water on lands that historically were and otherwise would be irrigated, increasing the amount of water available to Metropolitan.

The volume of water that becomes available to Metropolitan is governed by the October 10, 2003, *Quantification Settlement Agreement*¹ and the October 10, 2003, *Colorado River Water Delivery Agreement*.² Under these agreements:

- Metropolitan must reduce its consumptive use of Colorado River water by that volume of consumptive use by PVID and holders of Priority 2³ that is greater than 420,000 acre-feet in a calendar year, or
- Metropolitan may increase its consumptive use of Colorado River water by that volume of consumptive use by PVID and holders of Priority 2 that is less than 420,000 acre-feet in a calendar year.

In both cases, each acre-foot of reduced consumptive use by PVID is an additional acre-foot that becomes available to Metropolitan.

Palo Verde Valley landowners decided whether to participate in the 35-year program and those participating stop irrigating from 9 to 35 percent of their land in any year at Metropolitan's request. Upon one-year notice, Metropolitan has the option to change the percentage of land fallowed, with an increase in the percentage effective for a two-year period. The land taken out of agricultural production is maintained and rotated once every one to five years. The maximum amount of farmland taken out of production is 25,947 acres; however, fallowing in excess of 23,508 acres is limited to a total of ten years under the 35-year program. The landowner is responsible for payment of taxes, PVID water tolls, vegetation abatement, dust control and all other costs related to the fallowed lands. A history of farming is required for fields to be fallowed. Parcels to be fallowed must be at least 5 acres. Through July 2009, Metropolitan has paid \$136 million in Program costs and another \$15 million in Program costs will be incurred in September 2009.

¹ The parties to the Quantification Settlement Agreement are Imperial Irrigation District, Coachella Valley Water District, and Metropolitan.

² The parties to the Colorado River Water Delivery Agreement are the United States, Imperial Irrigation District, Coachella Valley Water District, Metropolitan, and the San Diego County Water Authority.

³ The Yuma Project Reservation Division holds California's Priority 2.

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 Calendar Year 2010

Activity 1

This activity is separate and distinct from Metropolitan’s “Emergency Short-Term Fallowing Program” with PVID under which additional Palo Verde Valley lands are being fallowed from April 2009 through July 2010. The Emergency Short-Term Fallowing Program is not included in this ICS Creation Plan and \$21 million in costs will be incurred for this Program in September 2009.

Term of the Activity

The Forbearance and Fallowing Program Agreement with PVID terminates on July 31, 2040.

Metropolitan’s current “Fallowing Call” for 25,947 acres is in effect through July 31, 2010. Metropolitan has issued a Fallowing Call for 25,947 acres for the period commencing August 1, 2010 through July 31, 2012.

Estimate of the Amount of Water that Will be Conserved

The volume of projected savings during calendar year 2010 is 132,539 acre-feet based on the amount of water used for irrigation in the Palo Verde Valley in 2008. The monthly tabulation of this projected savings is as follows:

Month	Monthly Consumptive Use Fraction†	Acres Fallowed	Reduced Consumptive Use (acre-feet)*
January	0.00359141	25,947	476
February	0.05341147	25,947	7,079
March	0.09240248	25,947	12,247
April	0.10933428	25,947	14,491
May	0.11802433	25,947	15,643
June	0.14136546	25,947	18,736
July	0.14196060	25,947	18,815
August	0.15304101	25,947	20,284
September	0.10307295	25,947	13,661
October	0.06213304	25,947	8,235
November	0.02183917	25,947	2,895
December	-0.00017620	25,947	-23
Total	1.00000000	----	132,539

†Monthly fraction of annual use of 5.108 acre-feet per acre.
 *Volumes rounded to the nearest acre-foot.

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Activity 1

Proposed Methodology for Verification of the Amount of Water Conserved

Upon designation of fallowed acreage, a Metropolitan representative visits the field on the date when fallowing is to commence and verifies that fallowing conditions have been met. The same procedure is followed when program participants make changes in the area or location of fallowed lands.

In addition to field verification by Metropolitan, it is proposed that the Bureau of Reclamation (Reclamation) conduct an independent verification with its own staff during the spring of 2010. Similar to past years' practice, it is proposed that Reclamation select 5 percent of the 25,947 acres fallowed for inspection. On-site inspection would be made of all selected fields to observe fallowing conditions and take photographs. A report would be prepared that confirms extraordinary conservation implementation, and includes field observations and relevant photographs of fallowing conditions in PVID. It is proposed that Reclamation conduct another independent verification in the fall of 2010.

A calendar year 2010 Fallowed Land Verification Report will be prepared jointly by PVID, Metropolitan, and Reclamation. The Report will determine the actual amount of water saved in 2010 by the Program.

Documentation Regarding State or Federal Permits or Other Regulatory Approvals

Pursuant to the provisions of the California Environmental Quality Act (CEQA), PVID, certified the "Final Environmental Impact Report for the Proposed Palo Verde Irrigation District Land Management, Crop Rotation and Water Supply Program" and adopted its Findings of Fact on September 18, 2002. Because no significant impacts would result with Program implementation, as determined by PVID, no statement of overriding considerations and no mitigation monitoring or reporting program were required. Metropolitan certified that it reviewed and considered the information in the certified 2002 Final EIR and adopted PVID's findings on October 22, 2002.

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Activity 2: Metropolitan Funded Imperial Irrigation District Water Conservation Program

Project Description

Under the December 22, 1988, *Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water* (1988 Conservation Agreement) as amended and the December 19, 1989, *Approval Agreement* as amended, Metropolitan has funded water efficiency improvements within the Imperial Irrigation District's (IID) service area in return for IID's agreement to not use 105,000 acre-feet of water annually.

The program implemented structural and non-structural measures—extraordinary measures to conserve water—including,

- concrete lining of 13 miles of existing main canals and 200 miles of lateral canals,
- construction of two local reservoirs and three spill-interceptor canals with four reservoirs,
- installation of 14 non-leak gates,
- automation of the distribution system,
- delivery of water to farmers on a 12-hour basis,
- improvements in on-farm water management through the installation of drip irrigation systems, and
- installation of tailwater pumpback systems.

Through July 2009, Metropolitan has paid IID \$231.8 million for program costs.

Term of the Activity

The term of the 1988 Conservation Agreement as amended and the *Approval Agreement* as amended, extends through at least December 31, 2041, or 270 days beyond the termination of the October 10, 2003, *Quantification Settlement Agreement*, whichever is later, with extensions to this term as specified in the agreements.

Estimate of the Amount of Water that Will be Conserved

As specified in the May 14, 2007, second amendment to the 1988 Conservation Agreement, 105,000 acre-feet of water will be made available by the program during calendar year 2010. Of this volume, pursuant to the *Approval Agreement*, Metropolitan would reduce its use of this water by up to 20,000 acre-feet to leave that water available for diversion by the Coachella Valley Water District (CVWD) should CVWD request delivery of this water. Exhibit H to the *Lower Colorado River Basin ICS Forbearance Agreement* provides that:

Plan for the Creation of Extraordinary Conservation Intentionally Created Surplus

Calendar Year 2010

Activity 2

“The amount of EC ICS that can be created during any Year is limited to the amount of water resulting from the program that Metropolitan does not consumptively use, up to 105,000 acre-feet, plus any reduction in calculated IID conveyance losses as a result of IID conveying less water through its conveyance and distribution system due to the conservation of water from this program. The volume of water conserved annually pursuant to this program to be devoted to the creation of EC ICS credits is further limited to the quantities set forth in the following...:

Limitations on Creation of EC ICS

...

- c) The amount of EC ICS created pursuant to this Exhibit is limited to the IID reduction shown in column 4 of Exhibit B to the October 10, 2003 Colorado River Water Delivery Agreement, less any portion of that reduction that results in delivery of water to Coachella Valley Water District.”

Accordingly, the amount of Extraordinary Conservation ICS that Metropolitan would create is between 90,000 and 110,000 acre-feet, depending upon the amount of water which will be delivered to CVWD and the reduction in calculated IID conveyance losses as a result of IID conveying less water through its conveyance and distribution system due to the conservation of water from this program.

Proposed Methodology for Verification of the Amount of Water Conserved

IID’s reduction in net diversions at Imperial Dam permits the Secretary to deliver water made available for Metropolitan absent the creation of Extraordinary Conservation ICS.

Through 2006, the Conservation Verification Consultants prepared and presented to the Water Conservation Measurement Committee an annual report on the estimated amount of water conserved by the program and each project thereof. A Systemwide Monitoring Program was developed to identify and explain trends in IID system performance as a function of the operational environment within which the IID/Metropolitan conservation projects operated. The Systemwide Monitoring Program was designed to function over the life of the IID/Metropolitan program to:

- Identify changes in on-farm irrigation practices.
- Identify changes in main and lateral canal operations and zanjero accounting procedures.
- Provide data support for the five-year verification updates.
- Provide a basis for separating water savings associated with IID/Metropolitan-sponsored conservation projects from water savings associated with measures implemented by others. In this case, the Systemwide Monitoring Program provides valuable baseline data for separating the effects of a new program from those attributable to the IID/Metropolitan program.
- Fulfill the requirement for overall verification specified in the *Approval Agreement*.

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Activity 2

Forty sites were selected and developed to provide data required for systemwide monitoring.

In order to collect and process the flow data needed in support of the water conservation verification activities for the 1988 Conservation Agreement projects, an automated data collection, quality control, processing and retrieval system was developed under the IID/Metropolitan program. The system was designed to include many of the control sites for the various projects as well as the sites needed for systemwide monitoring. In December 1995, data processing procedures developed by the Conservation Verification Consultants were institutionalized and incorporated into IID's Water Information System.

Beginning January 1, 1996, conservation verification data were processed and stored using Water Information System applications and capabilities. IID data collected prior to January 1, 1996, which were processed by the Conservation Verification Consultants for use in determining annual projected water conservation savings over the life of the program, were also stored in the Water Information System. The Water Information System management system was developed to generate daily, monthly, calendar year, and water year tables, summary tables and bar charts that have been presented in an annual Processed Flow Data document and an annual Projected Water Conservation Savings report.

The last published Projected Water Conservation Savings report will be made available to Reclamation upon its request.

Documentation Regarding State or Federal Permits or Other Regulatory Approvals

Metropolitan's Board of Directors certified on December 22, 1988, that it reviewed and considered the environmental information contained in the final program Environmental Impact Report prepared by IID entitled "Proposed Water Conservation Program and Initial Water Transfer". Reclamation complied with the National Environmental Policy Act through execution of Categorical Exclusion No. LC-89-2 on January 6, 1989, for the "Water Conservation Program, Imperial Irrigation District, Imperial County, California".

Project specific documents completed by IID pursuant to the California Environmental Quality Act are described in the table on the following page.

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Activity 2

Project Name	California Environmental Quality Act Documentation
Trifolium Reservoir Project	Negative Declaration filed on August 20, 1986
South Alamo Canal Lining Phase I Project	Categorical Exemption filed on September 11, 1987
South Alamo Canal Lining Phase II Project	Categorical Exemption filed on September 6, 1989
“Z” Reservoir	Initial Environmental Study published in May 1989; Negative Declaration published on September 6, 1989; Addendum to the Negative Declaration filed on November 22, 1989
Lateral Concrete Lining Project, 265 Miles	Environmental Assessment and Initial Study published in January 1990; Categorical Exemption filed on January 26, 1990
Rositas Supply Canal Concrete Lining Project	Environmental Assessment and Initial Study published in June 1990; Categorical Exemption filed on August 15, 1990
Vail Supply Canal Lining Project	Categorical Exemption filed on August 15, 1990
Lateral Interceptor Pilot Project	Initial Environmental Study published in April 1990; Negative Declaration published on May 23, 1990; and an Addendum to the Negative Declaration filed on August 15, 1990
Westside Main Canal Concrete Lining Project	Initial Environmental Study published in June 1990; Negative Declaration filed on October 5, 1990
System Automation Project	Categorical Exemption published in July 1990; Categorical Exemption filed on September 11, 1990
Westside Main Canal Concrete Lining Project	Initial Environmental Study published in June 1990; Negative Declaration filed on October 5, 1990
Non-Leak Gates Project	Categorical Exemption published in August 1990 and filed on September 6, 1990
12-Hour Delivery Project	Categorical Exemption filed on December 21, 1990
Irrigation Water Management Project	IID determined Project to be exempt from the California Environmental Quality Act on August 23, 1991
Modified East Lowline and Trifolium Interceptors, and Completion Projects	Final Environmental Impact Report published in May 1994; on June 8, 1994, IID certified the Final Environmental Impact Report, made a Statement of Findings and adopted a Statement of Overriding Considerations