

**2004 ANNUAL REPORT OF
IMPERIAL IRRIGATION DISTRICT PURSUANT TO
SWRCB REVISED ORDER WRO 2002-013**

March 31, 2005

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I. INTRODUCTION

On October 5, 1998, Imperial Irrigation District ("IID") and the San Diego County Water Authority ("SDCWA") submitted a joint petition to the SWRCB seeking approval to transfer conserved water from IID to SDCWA as a long-term transfer and to change the place of use, point of diversion and purpose of use necessary to allow the transfer under IID's Permit 7643. This petition was later amended to also include transfers to the Coachella Valley Water District ("CVWD"); and/or The Metropolitan Water District of Southern California ("MWD"), for water transfers to CVWD that CVWD determines to reduce or postpone. After completion of a lengthy water rights hearing, the SWRCB issued Order WRO 2002-013 and then its Revised Order WRO 2002-013 in accordance with WRO 2002-016.

Pursuant to Revised Order WRO 2002-013 (the "Order"), IID is to submit an annual report by March 31 of each year to the Chief of the Division of Water Rights reporting on certain facts and actions taken during the prior calendar year, as specified on pages 85 to 92 of the Order. This annual report covers calendar year 2004.

The long-term transfer of conserved water from IID to SDCWA commenced in calendar year 2003 following (i) IID's adoption on October 2, 2003, of the September 2003 Amended and Restated Addendum to the Final EIR/EIS for the Transfer Project, CEQA Findings and Statement of Overriding Considerations and the MMRP; (ii) the recording of a Notice of Determination for the Transfer Project and posting by the State Clearinghouse on October 8, 2003; and (iii) execution of the QSA and related agreements on October 10, 2003.

Pursuant to the Fourth Amendment to the IID/SDCWA Transfer Agreement and the Amended and Restated Addendum to the Final EIR/EIS, and other QSA and Related Agreements, IID conserved water for transfer to SDCWA in 2003 by entering into voluntary

thirteen-month contracts with farmers to fallow some of their farmland. Pursuant to a solicitation process commenced after October 10, 2003, IID entered into 69 contracts with farmers as of December 1, 2003, to fallow approximately 5,764 acres to produce the 10,000 AF of conserved water transferred to SDCWA in calendar year 2003. The monthly and annual schedule of conserved water created by fallowing for transfer to SDCWA is contained in Appendix 1. As will be noted, only 3,445 AF was created in December 2003, with the balance created from January through December 2004. Nonetheless, SDCWA received its full transfer volume in December 2003 by IID utilizing the Inadvertent Overrun and Payback Program ("IOPP") implemented by the Secretary of Interior.

IID conserved water for transfer to SDCWA in 2004 by entering into voluntary twelve-month contracts with farmers to fallow some of their farm land. Pursuant to a solicitation program between April 1 and April 30, 2004, IID entered into 118 twelve-month contracts with farmers as of July 1, 2004, to fallow approximately 12,127 acres to produce the 20,000 AF of conserved water transferred to SDCWA in calendar year 2004, plus conserved water for other QSA and Related Agreement purposes. The monthly and annual schedule of conserved water created by fallowing for transfer to SDCWA and for other purposes is also contained in Appendix 1.

Transfers to CVWD are not scheduled to commence until calendar year 2008.

II. REVISED ORDER WRO 2002-013 REQUESTED INFORMATION

A. Report on Water Transferred

The Order (p.85 Condition No. 4), requests IID to verify the amount of water transferred. Condition No. 4 requests the following information:

- (a) The quantity of water diverted at Imperial Dam;

- (b) An estimate of the quantity of water that is returned to the Colorado River from diversions made at Imperial Dam;
- (c) The quantity of water subject to variation permitted by the IOPP adopted by the Department of Interior;
- (d) Gross diversions at Whitsett Intake plus the quantity of water diverted at Whitsett Intake pursuant to the Order;
- (e) An estimate of the reductions in deliveries to participating farmers;
- (f) An estimate of the quantity of water conserved by conservation projects implemented by the permittee; and
- (g) An estimate of the quantity of water conserved by efficiency-based conservation measures.

IID is producing each year an Annual QSA Water Report that identifies IID compliance with its water conservation, transfer and mitigation obligations under the SWRCB Order and QSA and Related Agreements. Fifteen tables, based on IID's best estimates as of the date of this annual report, are included in Appendix 1 entitled:

- 2004 IID Water Use
- Provisional 2005 IID Water Use
- SDCWA Transfer Accounting
- Salton Sea Mitigation Accounting
- CRWDA Exhibit C Accounting
- Total Following
- SDCWA Transfer Following
- Salton Sea Mitigation Following

- CRWDA Exhibit C Following
- IOPP Following
- Early CRWDA Exhibit C Following
- Total Efficiency Conservation
- SDCWA Efficiency Conservation
- CVWD Efficiency Conservation
- SDCWA Diversion at Parker Dam Accounting.

The United States Bureau of Reclamation ("BOR") provides IID and other users of Colorado River water with annual reports containing the information requested in Condition No. 4 (a)-(d). This information can also be found on the BOR website at <http://www.usbr.gov/lc/region/g4000/hourly/use04.html>. The BOR does not generally complete its annual reports until approximately May 1 of each year, and IID has not yet received the final BOR 2003 or 2004 report. Additionally, IID and the BOR are working to solve certain minor discrepancies and disagreements over certain calculations and measurements. IID will revise this report and the 2003 SWRCB annual report should the final BOR 2003 and 2004 reports or the resolution of any open issues with the BOR materially change any of the reported information herein.

The most recent "provisional" information from the BOR for 2004 is contained in Appendix 1. Pursuant to the information in that report, IID responds to Condition 4(a)-(d) as follows:

- (a) 2, 853,695 AF diverted at Imperial Dam.
- (b) 96,575 AF measured return flows to Colorado River.

(c) IID has an IOPP account allowing variation in consumptive use above 3.1 MAFY in the aggregate volume of 310,000. IID inadvertently overran in 2003 in the amount of 6,102 AF. The payback of all overruns in the Lower Basin States for 2003 was waived by BOR. IID had no overrun under the IOPP for 2004.

(d) Gross Diversions at Whitsett Intake – 753,095 AF (return flow credit of 3,064 AF). Diversions at Whitsett Intake, pursuant to the Order – 20,000 AF.

Condition 4(e)-(g). Pursuant to the following contracts in effect for 2004, IID estimates that it reduced deliveries to participating farmers by approximately 20,000 AF as measured at the Colorado River, net of return flows, and estimates the quantity of water conserved by fallowing for transfer to SDCWA in 2004 at 20,000 AF. No water was conserved by efficiency-based conservation measures for transfers in 2004 pursuant to Revised Order WRO 2002-013. However, efficiency-based conservation measures implemented pursuant to Order WR 88-20 generated 101,900 AF of conserved water that was transferred to MWD. Appendix 2 identifies the type of efficiency-based conservation measures utilized and the amount of conserved water saved by each.

B. Salton Sea Habitat Conservation Strategy Compliance

Condition Nos. 5 and 6, p.86 of the Order requires the preparation of a plan and annual reporting on Salton Sea Salinity and elevation, and implementation of the Salton Sea Habitat Conservation Strategy as described in the Final EIR. On October 23, 2003, IID petitioned the Chief of the Division of Water Rights to modify Condition Nos. 5 and 6 to be consistent with an alternate Salton Sea Habitat Conservation Strategy utilizing a specific fallowing-for-transfer schedule and a fallowing-for-mitigation schedule as reflected in the QSA and Related Agreements and the September 2003 Amended and Restated Addendum to the Final EIR/EIS. After allowing for comment on IID's request and consideration of all submitted material, on

January 7, 2004, the Chief of the Division of Water Rights approved IID's use of the Alternate Salton Sea Habitat Conservation Strategy. In essence, this alternate strategy has IID create conserved water by fallowing in addition to the conserved water transferred to SDCWA, on an annual schedule attached as Appendix 3, and to cause the delivery of mitigation water to the Salton Sea in order to mitigate salinity and elevation impacts of the IID transfer to SDCWA for up to 15 years by causing replacement inflow to the Salton Sea to offset the reduced inflow caused by the IID transfer to SDCWA.

As Appendix 3 illustrates, IID was to create 5,000 AF of conserved water by fallowing in 2003 for Salton Sea mitigation purposes. However, authorization to utilize this alternative mitigation strategy was not received by IID until early January 2004. On December 19, 2003, IID informed the Chief of the Division of Water Rights of its intent to "roll over" the 2003 mitigation water into 2004, and no objection was received. Thus, for 2003, IID did not implement Condition Nos. 5 and 6, as now modified, but added 5,000 AF to its mitigation obligation for 2004. IID produced a total of 15,000 AF for Salton Sea mitigation purposes in 2004. IID delivered 15,000 AF of fallowed conserved water to the Salton Sea in calendar year 2004. (Note all volumes for transferred conserved water, mitigation fallowing, and delivery of mitigation water to the Salton sea are in common units of consumptive use, as measured at Imperial Dam, net of return flows.) The Salton Sea mitigation water was physically delivered by taking diversions from the Colorado River into the All-American Canal and then discharging the diversion into the New River. The mitigation volumes were measured by a calibrated weir equation at the AAC New River turnout. Attached as Appendix 4 is a graph identifying Salton Sea elevation changes from 2003 through March 26, 2005.

C. Advanced Delivery of Salton Sea Mitigation Water

At the request of the United States Bureau of Reclamation and in consultation with Lower Basin Colorado River contractors, IID caused 15,880 AF of Colorado River spill waters to be conserved and delivered to storage in the Salton Sea in satisfaction of future IID mitigation water delivery. In future years, water will be conserved from fallowed lands in a corresponding amount, as specified in Appendix 3, and will be left in Lake Mead and, rather than being diverted directly to the Salton Sea, exchanged for the previously conserved and stored Colorado River spill. Advanced Salton Sea mitigation water deliveries provide a temporal benefit to the Salton Sea by satisfying the cumulative mitigation delivery schedule identified in Appendix 3 in advance of the annual deadlines. An accounting of the water delivered to the Salton Sea in 2004 as advance delivery is contained in Appendix 1.

D. Air Quality Mitigation

Condition No. 8, p.87, requires the IID to implement the monitoring and mitigation plan described on pp. 3-50 to 3-52 of the Final EIR/EIS; to implement best management practices ("BMPs") to mitigate PM10 emissions associated with fallowing, as described in the Draft and Final EIR/EIS; to comply with any relevant requirements of the State Implementation Plan for PM10 Emissions ("SIP") or PM10 rules of the Imperial County Air Pollution Control District ("ICAPCD") or the South Coast Air Quality Management District ("SCAQMD"); and to report annually on actions taken to comply.

1. Exposed Salton Sea Shoreline Air Quality Mitigation

The use of Salton Sea mitigation water (including the rollover volume from 2003) under the approved Alternative Salton Sea Habitat Conservation Strategy, and the advance delivery as described in Section II.C above, prevented the IID transfer of conserved water to SDCWA from causing any exposed shoreline in 2004. The eventual exposure of Salton Sea shoreline will be

mitigated through a four-step process that includes (i) access restrictions; (ii) research and monitoring; (iii) creating or purchasing offsetting emission reduction credits; and (iv) direct emission reductions. During 2004, IID commenced the research and monitoring program. IID began compilation of existing air quality data from IID sources and began identifying submerged and adjacent land ownership. IID is working with local, state and federal agencies to coordinate and share research and monitoring data.

2. Fallowing-Caused PM10 Emission Mitigation

The implementation of BMPs to minimize PM10 emissions from fallowed lands below the level otherwise caused by farming the land was implemented in 2003 and continued in 2004. All contracts between the IID and farmers participating in the fallowing program in 2004 included a contractual requirement in Section 5D, *Obligations of Fallowing Party, Dust Control and Mitigation Requirements* that states:

Fallowing Party shall be responsible for and undertake the timely control of all dust on the Fallow Lands as described on Exhibit D, and shall provide to IID proof of performance and evidence of the costs and expenses incurred for dust control and mitigation requirements.

Exhibit D to the 2004 fallowing contracts provides the following:

In order to satisfy mitigation and reporting requirements adopted pursuant to the Transfer EIR (defined in Recital B), the Fallowing Party shall be responsible for and comply with the following requirements:

1. MITIGATION REQUIREMENTS

A. In order to mitigate air quality impacts on Fallow Lands, any necessary means may be used as appropriate including but not limited to the following best management practices ("BMPs"):

- Implement conservation cropping sequences and wind erosion protection measures as outlined by the US Department of Agriculture Natural Resources Conservation Service, such as:

- Plan ahead to start with plenty of vegetation residue, and maintain as much residue on fallowed fields as possible. Residue is more effective for wind erosion protection if left standing.
 - If residues are not adequate, small grain can be seeded about the first of the year to take advantage of winter rains
 - Avoid any tillage if possible
 - Avoid any traffic or tillage when fields are extremely dry to avoid pulverization.
- Apply soil stabilization chemicals to fallowed lands.
 - Re-apply drain water to allow protective vegetation to be established.
 - Reuse irrigation return flows to irrigate windbreaks across blocks of land including many fields to reduce wind fetch and reduce emissions from fallowed, farmed, and other lands within the block. Windbreak species, management, and layout would be optimized to achieve the largest feasible dust emissions reduction per unit water available for their irrigation.

B. In order to satisfy Imperial County dust control and mitigation requirements, Fallowing Party will comply with any lawful conditions required by the Imperial County Air Pollution Control District.

2. REPORTING REQUIREMENTS

Provide a written report to the Manager of the Water Department of IID on or before July 31, 2004, and update the report in writing before November 30, 2004, and July 31, 2005, verifying the method(s) used to satisfy the mitigation requirements set forth in Section 1 above and the total costs incurred by Fallowing Party therefore, including written documentation evidencing such costs.

The mitigation reporting forms submitted by fallowing participants to IID disclosed that all fallowed fields utilized BMP's as outlined by the U.S. Department of Agriculture Natural Resources Conservation Service.

The fallowing contracts also condition and limit payments to the Fallowing Party to compliance with the mitigation requirement. (See Sections 2A and 2B and 12.) A copy of a pro forma 2004 contract between participating farmers and the IID is attached as Appendix 5. All 69 fields participating in the first thirteen-month fallowing program were inspected by IID in January 2004. In July 2004, all 118 of the newly-fallowed fields from the 2004 contracts, as well as the 69 fallowed fields from the 2003 contracts, were inspected by IID. In addition, in October 2004 IID assisted USBR in a verification of fallowed fields utilizing a random 5% acreage spot check. The IID is not aware of any instances of noncompliance with the contractual requirements as of the date of this report.

3. SIP, ICAPCD and SDCQMD PM10 Mitigation Compliance

The actions required of participating farmers by IID to mitigate air quality impacts caused by fallowing also satisfy and comply with any relevant and applicable requirements for PM10 emissions under the SIP and the rules of the IAPCD and the SCAQMD.

E. Lower Colorado River Mitigation

On October 10, 2003, USBR, MWD and SDCWA entered into an agreement whereby SDCWA and MWD shall pay up to a total of \$6.236 million in 2003 dollars to USBR, and USBR shall perform all measures required under the USFWS Biological Opinion for the Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary Arizona, California and Nevada (January 12, 2001). On November 7, 2003, SDCWA established the account from which USBR may withdraw funds to pay for work in furtherance of satisfying the BO mitigation

measures. SDCWA has reported to IID that USBR has not yet used any funds, but plans on beginning work in 2005.

F. Tamarisk Scrub Habitat Conservation Strategy

The Tamarisk Scrub Habitat Conservation Strategy has three components referred to as Tree Habitat 1, 2 and 3.

Tree Habitat 1 – In 2004, the Implementation Team (consisting of representatives of IID, U.S. Fish and Wildlife Service, and California Department of Fish and Game) began development of survey protocol for a desert vegetation survey. The results of this survey, along with the results of the drain vegetation survey conducted in late 2004, will be used to determine tamarisk scrub and other tree habitat acreage for future mitigation requirements.

Tree Habitat 2 – No construction of seepage recovery systems was scheduled for 2004, so no habitat survey or replacement was required.

Tree Habitat 3 – No breeding surveys were necessary in 2004.

G. Drain Habitat Conservation Strategy

The Drain Habitat Conservation Strategy has three components referred to as Drain Habitat 1, 2 and 3.

Drain Habitat 1 – A vegetation survey of the drains utilizing the required protocol was completed in December 2004. A site selection process was also developed to prioritize criterion to aid in the identification of potential sites for the construction of the managed marsh areas.

Drain Habitat 2 – No dredging of the river deltas between February 15 and August 31 occurred in 2004.

Drain Habitat 3 – IID completed the drain vegetation survey in December 2004, which will be used to identify vegetated areas that may be potential breeding habitat for covered

species. No areas identified as potential breeding habitat by the above survey were disturbed during the breeding season.

H. Desert Pupfish Conservation Strategy

The Desert Pupfish Conservation Strategy has six components referred to as Desert Pupfish 1, 2, 3, 4, 5 and 6.

Desert Pupfish 1 – IID operated and maintained the drains in 2004 so as not to reduce any pupfish habitat.

Desert Pupfish 2 – There were no effects from water conservation on drain water quality because only fallowing conservation was utilized in 2004.

Desert Pupfish 3 – Salton Sea shrinkage as a result of the Transfer Project will not commence until 2018 at the earliest because of the utilization of the Alternate Salton Sea Strategy discussed above. Therefore, creation of additional pupfish habitat by extending or modifying existing drains to maintain Salton Sea connectivity is not anticipated until 2018 at the earliest.

Desert Pupfish 4 – In 2004 the Implementation Team began development of a pupfish monitoring protocol for use in future drain monitoring efforts and for the pupfish abundance and distribution monitoring mitigation requirement.

Desert Pupfish 5 – The study to examine the effects of drain maintenance practices on pupfish will commence following completion of the monitoring protocol referenced in Desert Pupfish 4, above.

Desert Pupfish 6 – Inapplicable in 2004 because there was no construction activity in any pupfish habitat portion of the IID drains.

I. Razorback Sucker Conservation Strategy

During 2004, the IID did not dewater any of its main canals or reservoirs requiring the capture, transport and return of stranded razorbacks to the Colorado River. During 2004, the Implementation Team began development of a razorback sucker capture and relocation protocol.

J. Selenium Concentration, Discharge and Reduction Study

The IID is to prepare a study plan, obtain approval of the study plan by the Chief of the Division of Water Rights, complete the study and prepare a report, all before implementation of efficiency-based conservation measures that will yield 25,000 AFY. Such yield is not currently anticipated until after 2012; however, in 2004 IID began funding portions of an ongoing study conducted by the USGS Columbia Environmental Research Center (CERE) to determine selenium threshold limits, selenium transfer mechanisms and identify applicable surrogate species. Additionally, IID is negotiating a contract with the USGS – Western Fisheries Research Center to conduct a four-year evaluation of selenium concentrations in water, sediment and tissue in IID-managed drains tributary to the Salton Sea. A copy of the focus and status of such study is attached as Appendix 6.

K. Recreation and Aesthetics Mitigation

Salton Sea shrinkage as a result of the Transfer Project will not commence until 2018 at the earliest because of the utilization of the Alternate Salton Sea Strategy described above. Therefore, no relocation of boat launch and access facilities or campgrounds was necessary during 2004.

III. CONCLUSION

This 2004 Annual Report is based on the information available to the IID at the time of its preparation. IID staff and consultants are available to answer any questions that the Chief of the Division of Water Rights may have. For further information, please contact the following:

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APPENDIX 1

2004 IID Water Use

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

	CONSUMPTIVE USE	FOLLOWING EFFICIENCY	SALTON SEA DELIVERY	LAKE MEAD DELIVERY
Maximum CU	3,100,000			
Misc PPR	-11,500			
88 Agreement	-101,900			
San Diego Transfer	-20,000	20,000		
SD Transfer Salton Sea Mitigation	-15,000	15,000	15,000	
CRWDA Exhibit C Payback	-18,900	18,900		18,900
Early CRWDA Exhibit C Payback	-25,881	25,881		25,881
IOPP				
Colo. River Spill Conservation & Storage in SS ¹	-3,970		15,880	
TOTAL	2,902,849	79,781	30,880	44,781

Notes: 1) Per Agreement, IID is credited with 25% of Colo. River Water Spill Stored in Salton Sea. This credit cannot cause an IOPP overrun or payback.

PROVISIONAL 2005 IID Water Use

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

	CONSUMPTIVE USE	FOLLOWING EFFICIENCY	SALTON SEA DELIVERY	LAKE MEAD DELIVERY
Maximum CU	3,100,000			
Misc PPR	-11,500			
88 Agreement	-105,360			
San Diego Transfer	-30,000	30,000		
SD Transfer Salton Sea Mitigation	-15,000	15,000		15,000
CRWDA Exhibit C Payback	-18,900	18,900		18,900
Early CRWDA Exhibit C Payback ³	-12,000	12,000		12,000
IOPP				
Colo. River Spill Conservation & Storage in SS^{1,2}	-5,000		20,000	
TOTAL	2,902,240	75,900	20,000	45,900

Notes: 1) Per Agreement, IID is credited with 25% of Colo. River Water Spill Stored in Salton Sea. This credit cannot cause an IOPP overrun or payback.

2) Estimated for 2005

SDCWA TRANSFER ACCOUNTING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	OBLIGATION	ANNUAL VOLUMES ¹			ANNUAL OVER/UNDER OBLIGATION
		FALLOWING	EFFICIENCY	TOTAL VOLUME ³	
2003 ²	10,000	3,445	0	3,445	-6,555
2004	20,000	20,000	0	20,000	0
2005	30,000				
2006	40,000				
2007	50,000				
2008	50,000				
2009	60,000				
2010	70,000				
2011	80,000				
2012	90,000				
2013	100,000				
2014	100,000				
2015	100,000				
2016	100,000				
2017	100,000				
TOTAL	1,000,000	23,445	0	23,445	

Notes:

1) From Applicable Year

2) Since the QSA was executed in October of 2003, IID was able to only fallow 3,445 acre feet and therefore had an inadvertent overrun of 6,555 acre feet. The USBR waived payback for all 2003 overruns.

3) Any difference in total volume compared to IID transfer obligation is satisfied by IID use of an IOPP overrun.

SALTON SEA MITIGATION ACCOUNTING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	OBLIGATION	DELIVERY TO SEA				REMAINING OBLIGATION BALANCE	INFLOW/OUTFLOW ACCOUNTING	
		ANNUAL VOLUMES ¹			ANNUAL OVER/UNDER OBLIGATION		RUNNING CREDIT/DEFICIT	
		FOLLOWING	CR SPILL CONSERVATION & STORAGE	TOTAL VOLUME				
2003	5,000	0	0	0	800,000	-5,000	-5,000	
2004	10,000	15,000	15,880	30,880	769,120	20,880	15,880	
2005	15,000							
2006	20,000							
2007	25,000							
2008	25,000							
2009	30,000							
2010	35,000							
2011	40,000							
2012	45,000							
2013	70,000							
2014	90,000							
2015	110,000							
2016	130,000							
2017	150,000							
TOTAL	800,000	15,000	15,880	30,880				

Notes: 1) From Applicable Year

CRWDA EXHIBIT C ACCOUNTING

(All Values are Consumptive Use in Acre Feet at Imperial Dam)

YEAR	OBLIGATION	PAYBACK				REMAINING BALANCE	EXHIBIT C DELIVERY DIFFERENCE		ADJUSTED EXHIBIT C OBLIGATION
		ANNUAL VOLUMES ¹			ANNUAL OVER/UNDER OBLIGATION		RUNNING CREDIT/DEFICIT		
		FOLLOWING	CR SPILL CONSERVATION & STORAGE	TOTAL VOLUME					
2003	0	0	0	0	151,400	0	0	0	
2004	18,900	44,781	3,970	48,751	102,649	29,851	29,851	0	
2005	18,900							18,900	
2006	18,900							18,900	
2007	18,900							18,900	
2008	18,900							18,900	
2009	18,900							18,900	
2010	19,000							8,149	
2011	19,000							0	
TOTAL	151,400	44,781	3,970	48,751		29,851		102,649	

Notes: 1) From Applicable Year

TOTAL FALLOWING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL VOLUME	MONTHLY														
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC			
2003	3,445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,445
2004	79,781	3,445	3,445	3,445	3,445	3,445	3,445	13,925	11,316	11,458	9,976	6,678	5,758			
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
TOTAL	83,226															

Notes: Each year the monthly breakdown of the annual fallowed volume of water will be refined as time and resources permit.

2003 monthly distribution was assumed to be equally distributed over 13 months (December 2003 through December 2004).

2004 monthly distribution was computed using the previous 12 months (July-Dec.2003 and Jan-June2004) history for the participating gates in the following program.

SDCWA TRANSFER FOLLOWING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL QSA OBLIGATION	ANNUAL VOLUME	ANNUAL DIFFERENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003 ¹	10,000	3,445	-6,555	0	0	0	0	0	0	0	0	0	0	0	3,445
2004	20,000	20,000	0	3,445	3,445	3,445	3,445	3,445	2,775	0	0	0	0	0	0
2005	30,000														
2006	40,000														
2007	50,000														
2008	50,000														
2009	60,000														
2010	70,000														
2011	80,000														
2012	90,000														
2013	80,000														
2014	60,000														
2015	40,000														
2016	20,000														
2017	0														
TOTAL	700,000	23,445													

Notes: 1) Since the QSA was executed in October of 2003, IID was able to only follow 3,445 acre feet and therefore had an inadvertent overrun of 6,555 acre feet. The USBR waived payback for all 2003 overruns.

SALTON SEA MITIGATION FOLLOWING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL OBLIGATION	ANNUAL VOLUME	ANNUAL DIFFERENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003 ¹	5,000	0	-5,000	0	0	0	0	0	0	0	0	0	0	0	0
2004	10,000	15,000	5,000	0	0	0	0	0	670	13,925	405	0	0	0	0
2005	15,000														
2006	20,000														
2007	25,000														
2008	25,000														
2009	30,000														
2010	35,000														
2011	40,000														
2012	45,000														
2013	70,000														
2014	90,000														
2015	110,000														
2016	130,000														
2017	150,000														
TOTAL	800,000	15,000													

Notes: 1) Since the QSA was executed in October of 2003, SWRCB approved the 2003 obligation being satisfied in 2004.

CRWDA EXHIBIT C FOLLOWING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ADJUSTED ANNUAL OBLIGATION ¹	ANNUAL VOLUME	ANNUAL DIFFERENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	18,900	18,900	0	0	0	0	0	0	0	0	10,911	7,989	0	0	0
2005	18,900														
2006	18,900														
2007	18,900														
2008	18,900														
2009	18,900														
2010	19,000														
2011	19,000														
2012	0														
2013	0														
2014	0														
2015	0														
2016	0														
2017	0														
TOTAL	151,400	18,900													

Notes: 1) Annual obligation will be adjusted based on Early CRWDA Exhibit C Paybacks each year.

IOPP FALLOWING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL OBLIGATION	ANNUAL VOLUME	ANNUAL DIFFERENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003 ¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004 ²	6,555	0	-6,555	0	0	0	0	0	0	0	0	0	0	0	0
2005	0														
2006	0														
2007	0														
2008	0														
2009	0														
2010	0														
2011	0														
2012	0														
2013	0														
2014	0														
2015	0														
2016	0														
2017	0														
TOTAL	6,555	0													

Notes: 1) Since the QSA was executed late in 2003, IID was only able to fallow 3,445 acre feet of the total SDCWA obligation of 10,000 acre feet.

2) The USBR waived payback for all 2003 overruns.

EARLY CRWDA EXHIBT C FOLLOWING

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL VOLUME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	25,881	0	0	0	0	0	0	0	0	3,469	9,976	6,678	5,758
2005													
2006													
2007													
2008													
2009													
2010													
2011													
2012													
2013													
2014													
2015													
2016													
2017													
TOTAL	25,881												

Notes:

TOTAL EFFICIENCY CONSERVATION

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL VOLUME	MONTHLY														
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC			
2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2005																
2006																
2007																
2008																
2009																
2010																
2011																
2012																
2013																
2014																
2015																
2016																
2017																
TOTAL	0															

Notes: Efficiency conservation will be in accordance with QSA schedule.

SDCWA EFFICIENCY CONSERVATION

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

YEAR	ANNUAL QSA OBLIGATION	ANNUAL VOLUME	ANNUAL DIFFERENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0														
2006	0														
2007	0														
2008	0														
2009	0														
2010	0														
2011	0														
2012	0														
2013	20,000														
2014	40,000														
2015	60,000														
2016	80,000														
2017	100,000														
TOTAL	300,000	0													

Notes: Efficiency conservation will be in accordance with GSA schedule.

CVWD EFFICIENCY CONSERVATION

(All Values are Consumptive Use Volumes in Acre Feet at Imperial Dam)

	ANNUAL QSA OBLIGATION	ANNUAL VOLUME	ANNUAL DIFFERENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0														
2006	0														
2007	0														
2008	4,000														
2009	8,000														
2010	12,000														
2011	16,000														
2012	21,000														
2013	26,000														
2014	31,000														
2015	36,000														
2016	41,000														
2017	45,000														
TOTAL	240,000	0													

Notes: Efficiency conservation will be in accordance with QSA schedule.

DIVERSIONS FROM MAINSTREAM-AVAILABLE RETURN FLC
AND CONSUMPTIVE USE OF SUCH WATER
CALENDAR YEAR 2004
STATE OF CALIFORNIA

02/08/05

(ACRE-FEET)

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC TOTAL 1/
CA	FORT MOJAVE INDIAN RESERVATION							11727					11727
CA	DELIVERED BY CITY OF NEEDLES												0
CA	PUMPED FROM RIVER AND WELLS	0	0	0	0	0	0	0	0	0	0	0	0
CA	MEAS. RETURNS	0	0	0	0	0	0	5418	0	0	0	0	5418
CA	UNMEAS. RETURNS	0	0	0	0	0	0	6309	0	0	0	0	6309
CA	CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0
CA	CITY OF NEEDLES												0
CA	4 WELLS NW SW SEC 29 T9N R23E SBM												0
CA	MEAS. RETURNS 9/												0
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0
CA	CHEMEHUEVI INDIAN RESERVATION												0
CA	PUMPED FROM RIVER AND WELLS												0
CA	MEAS. RETURNS	0	0	242	242	240	240	240	240	0	240	180	1864
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	0	0	112	112	111	111	111	111	0	111	83	862
CA	METROPOLITAN WATER DISTRICT												0
CA	DIVERSION FROM LAKE HAVASU	59834	57871	57243	70831	67486	69445	51655	43173	41857	40032	97177	753095
CA	MEAS. RETURNS 2/	271	247	266	257	264	248	258	223	244	253	257	276
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	59563	57624	56977	70574	67222	69197	51397	42950	41613	39779	96920	96215
CA	PARKER DAM AND GOVERNMENT CAMP												0
CA	DIVERSION AT PARKER DAM												0
CA	MEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0
CA	COLORADO RIVER INDIAN RESERVATION												0
CA	PUMPED FROM 11 PUMPS AND WELLS												0
CA	4 PUMPS BIG RIVER												0
CA	MEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0
CA	CITY OF WINTERHAVEN												0
CA	1 WELL SE NE SEC 27 T16S R22E SBM												0
CA	MEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0
CA	PALO VERDE IRRIGATION DISTRICT												0
CA	DIVERSION FROM PALO VERDE DAM	39560	58710	80700	94590	116200	119600	126900	116700	88360	53160	35980	969040
CA	MEAS. RETURNS	32721	33570	38712	41531	44457	46103	46825	51320	53645	42963	35901	34327
CA	UNMEAS. RETURNS	2215	3288	4519	5297	6507	6698	7106	6535	4948	2977	2015	2160
CA	CONSUMPTIVE USE	4624	21852	37489	47762	65236	66799	72969	58845	29767	7220	-1936	2093
CA	YUMA PROJECT, RES. DIV. INDIAN UNIT												0
CA	DIVERSION AT IMPERIAL DAM	2784	2699	5068	5788	4428	1370	2121	2402	2515	5043	3980	2042
CA	MEAS. RETURNS	47	42	15	33	69	27	26	59	45	150	148	18
CA	UNMEAS. RETURNS	465	451	846	967	739	229	354	401	420	842	665	341
CA	CONSUMPTIVE USE	2272	2206	4207	4788	3620	1114	1741	1942	2050	4051	3167	1683
CA	YUMA PROJECT, RES. DIV. BARD UNIT												0
CA	DIVERSION AT IMPERIAL DAM	2147	2310	4827	5607	6542	5074	3643	2504	2911	3264	3197	1447
CA	MEAS. RETURNS	22	21	8	18	58	57	26	35	41	61	71	7

CA	UNMEAS. RETURNS	359	386	806	936	1093	847	608	418	486	545	534	242	7260
CA	CONSUMPTIVE USE	1766	1903	4013	4653	5391	4170	3009	2051	2384	2658	2592	1198	35788
CA	RETURNS FROM YUMA PROJECT													
CA	RESERVATION DIVISION RETURNS	2180	2114	1791	2626	3167	2154	2101	2169	2511	3172	3054	2173	29212
CA	SUM YUMA PROJECTS, RES. DIV. USE	1856	1995	6429	6815	5844	3130	2649	1824	1923	3537	2705	708	39417
CA	IMPERIAL IRRIGATION DISTRICT													
CA	DIVERSION AT IMPERIAL DAM	141009	142098	266314	296357	333448	323236	326977	302306	256788	215342	147997	101823	2853695
CA	MEAS. RETURNS /10	4104	3790	1327	2739	8527	10190	6513	12403	8909	10901	25663	1509	96575
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	136905	138308	264987	293618	324921	313046	320464	289903	247879	204441	122334	100314	2757120
CA	COACHELLA VALLEY WATER DISTRICT													
CA	DIVERSION AT IMPERIAL DAM	17487	16588	24449	29444	36180	35511	34725	39996	31653	28672	21357	15073	329135
CA	MEAS. RETURNS	509	442	122	272	925	1119	692	1641	1098	1350	1357	223	9750
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	16978	16146	24327	29172	35255	34392	34033	38355	30555	25322	20000	14850	319385
CA	OTHER USERS PUMPING FROM COLORADO RIVER AND WELLS IN FLOOD PLAIN													
CA	DAVIS DAM TO INTERNATIONAL BOUNDARY													
CA	CALIFORNIA TOTALS													
CA	DIVERSION 5/	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	MEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	UNMEAS. RETURNS	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	CONSUMPTIVE USE	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	DIVERSION	262821	280276	438843	502859	564524	554476	557988	507321	424084	343753	309868	255456	5002269
CA	MEAS. RETURNS	39854	40226	42241	47476	57467	59898	56441	67850	66493	58850	66451	38533	641780
CA	UNMEAS. RETURNS	3039	4125	6283	7312	8450	7885	13997	7465	5854	4475	3297	2743	74525
CA	CONSUMPTIVE USE	219928	235925	390319	448071	498607	486693	487950	432006	351737	280428	240120	214180	4285964
CA	WATER MANAGEMENT													
CA	ACCT. CREDITS	0	0	0	0	0	0	0	0	0	0	0	0	0
CA	TOTAL USE	219928	235925	390319	448071	498607	486693	487950	432006	351737	280428	240120	214180	4285964
CA	WATER CONSERVATION PROGRAM													
CA	IMPERIAL I. D./METROPOLITAN W. D. CONSERVED WATER 8/	8492	8492	8492	8492	8492	8492	8492	8492	8492	8492	8492	8488	101900

NOTE: The term 'CONSUMPTIVE USE' in this tabulation means diversions including underground pumping, less measured return flow and less current estimated unmeasured return flow to the river.

- 1/ No surface returns unless shown.
- 2/ Estimate based on measured seepage returning from regulatory reservoirs less an estimated amount of phreatophyte use.
- 3/ Returns unassigned include drainage from the Indian Unit and the Bard Unit in the Reservation Division but excludes seepage from the All-American Canal.
- 4/ Calculated using monthly power records.
- 5/ Details on California Supplemental Sheets.
- 6/ Reported annual total only, distributed monthly according to nearby users.
- 7/ Calculated by assuming an annual diversion of 6 ac-ft per irrigated acre.
- 8/ IID/IMWD Water Conservation Program Phase 1 conserved water made available by Imperial I.D. for diversion in current year. Of the amount conserved, Metropolitan W.D. utilized \$5,592 acre-feet and Coachella Valley W.D. utilized 49,538 acre-feet.
- 9/ Needles total return estimated as 40% of diversion plus measured returns (unpublished report, Colorado River Board of California).
- 10/ IID measured return for November includes 16,259 ac-ft of system water delivered to the Salton Sea.
- 11/ CVWD diversion includes mitigation water delivered to the Salton Sea and charged to CVWD.

APPENDIX 2

WATER CONSERVATION SAVINGS IN ACRE-FEET

* Historical Verified Savings

Project Name	HVS* 2000	HVS* 2001	HVS* 2002	HVS* 2003	HVS* 2004
Robert F. Carter (Trifolium) Reservoir	4,100	4,090	3,200	3,430	3,920
South Alamo Canal Lining, Phase I	510	510	510	510	510
Plum-Oasis (Lateral) Interceptor	9,390	8,550	8,340	8,390	7,630
Bernard Galleano (z) Reservoir	4,530	4,510	4,570	4,490	4,480
South Alamo Canal Lining, Phase II	900	900	900	900	900
Lateral Canal Lining	24,250	24,250	24,250	24,250	24,250
Trifolium Interceptor	16,300	15,020	14,480	15,880	11,860
12-Hour Delivery	21,730	21,390	20,740	20,610	20,450
Vail Supply Canal Lining	10	10	10	10	10
Rositas Supply Canal Lining	130	130	130	130	130
Non-Leak Gates	630	630	630	630	630
System Automation	14,000	14,390	14,250	14,200	14,210
Westside Main Canal Lining, North	260	260	260	260	260
Mulberry-D (Modified East Lowline) Interceptor	8,540	8,220	8,030	8,510	8,960
Additional Irrigation Water Management	<u>4,180</u>	<u>4,020</u>	<u>4,640</u>	<u>2,930</u>	<u>3,700</u>
TOTAL	109,460	106,880	104,940	105,130	101,900

APPENDIX 3

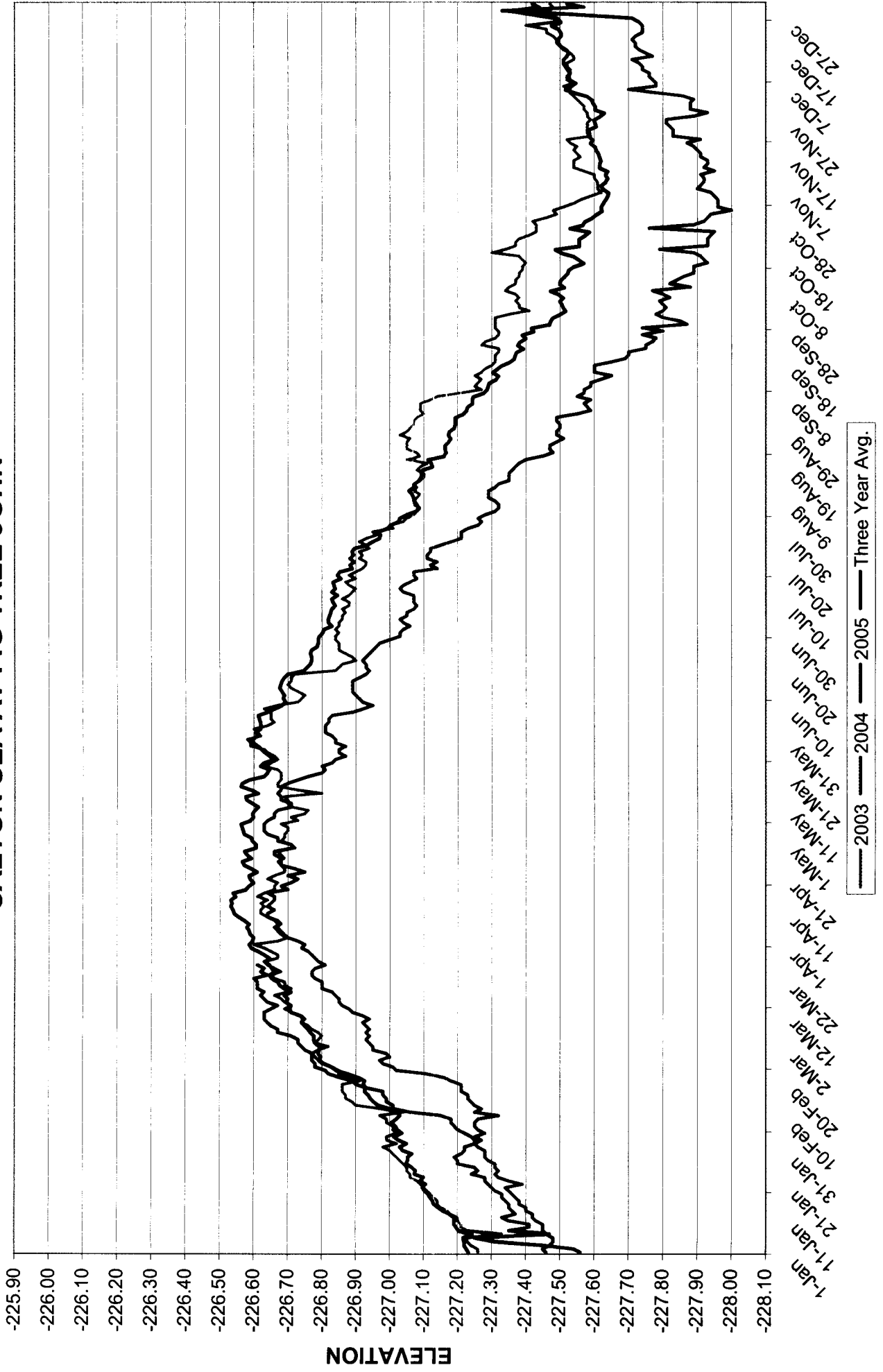
EXHIBIT _____
COMPROMISE IID/SDCWA AND QSA DELIVERY SCHEDULE

Agmt Yr	Cal Yr	IID/SD (KAF)	IID/CVWD (KAF) ¹	IID/MWD (KAF)	Total Delivery (KAF)	Total Efficiency (KAF)	Fallowing for Delivery (KAF)	Mitigation Fallowing (KAF)	Total Fallowing (KAF)
1	2003	10	0	0	10	0	10	5	15
2	2004	20	0	0	20	0	20	10	30
3	2005	30	0	0	30	0	30	15	45
4	2006	40	0	0	40	0	40	20	60
5	2007	50	0	0	50	0	50	25	75
6	2008	50	4	0	54	4	50	25	75
7	2009	60	8	0	68	8	60	30	90
8	2010	70	12	0	82	12	70	35	105
9	2011	80	16	0	96	16	80	40	120
10	2012	90	21	0	111	21	90	45	135
11	2013	100	26	0	126	26	100	50	150
12	2014	100	31	0	131	31	100	50	150
13	2015	100	36	0	136	36	100	50	150
14	2016	100	41	0	141	41	100	50	150
15	2017	100	45	0	145	45	100	50	150
16	2018	130	63	0	193	63	130	67	200
17	2019	160	68	0	228	68	160	72	236
18	2020	192.5	73	2.5	268	73	192.5	77	273.5
19	2021	205	78	5.0	288	78	205	83	293
20	2022	202.5	83	2.5	288	83	202.5	88	296
21	2023	200	88	0	288	88	200	92	296
22	2024	200	93	0	293	93	200	97	293
23	2025	200	98	0	298	98	200	102	298
24	2026	200	103	0	303	103	200	107	303
25	2027	200	103	0	303	103	200	107	303
26	2028	200	103	0	303	103	200	107	303
27-45	2029-2047	200	103	0	303	103	200	107	303
46-75	2048-2077	200	50	0	250	50	200	50	250

¹ or MWD if CVWD declines to acquire.

APPENDIX 4

SALTON SEA AT FIG TREE JOHN



APPDNEIX 5

AGREEMENT FOR FALLOWING LAND
IN THE IMPERIAL IRRIGATION DISTRICT

THIS AGREEMENT FOR FALLOWING LAND IN THE IMPERIAL IRRIGATION DISTRICT ("Agreement") is made and entered into as of the 1st day of July 2004, by the Imperial Irrigation District ("IID") and the person(s) or entity referred to as "Fallowing Party" listed on the signature page of this Agreement (collectively, "Parties"), each of which is at times referred to individually as Party.

RECITALS

A. IID, as a trustee under the California Irrigation District Law, holds water rights to and diverts water from the Colorado River for distribution and use within its service area.

B. IID has completed an environmental assessment of proposed water conservation and transfer activities 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 (collectively, "Transfer EIR").

C. IID has entered into a conserved water transfer agreement with the San Diego County Water Authority ("SDCWA") which involves the creation of conserved water by fallowing until 2017 for transfer to SDCWA and/or use for environmental mitigation of impacts of reduced inflow to the Salton Sea. In addition, IID has entered into an agreement with the United States and others to limit its diversions under Priority 3 and to repay certain "overuse" on an agreed-upon schedule. IID will create conserved water by fallowing for those purposes as well.

D. Fallowing Party owns or leases agricultural property within the IID service area described and/or depicted on Exhibit A attached hereto ("Fallow Lands").

E. If Fallowing Party is a lessee of the Fallow Lands, the identity of the lessor, any sublessor, and the fee owner, and the remaining term of the lease or sublease is identified on Exhibit B attached hereto.

F. Fallowing Party is willing to fallow the Fallow Lands for the limited time period and in accordance with the other terms and conditions set forth herein, in order to assist IID in meeting its obligations described above.

NOW, THEREFORE, IN CONSIDERATION OF THE ABOVE RECITALS AND THE COVENANTS AND OBLIGATIONS SET FORTH HEREIN, THE PARTIES AGREE AS FOLLOWS:

1. Term

The term of this Agreement ("Term") shall commence on July 1, 2004 ("Start Date") and expire on June 30, 2005.

2. Payment

As consideration for Following Party's performance of its obligations hereunder, IID shall make payments to the Following Party in the following manner:

A. Payment for Following.

The total amount of \$ _____ (\$60/acre-foot x ## acres x ## acre-feet/acre) shall be divided into three (3) equal payments. The first payment shall be made on or before August 31, 2004. The second payment shall be made before December 31, 2004, provided that IID has verified that Following Party is in compliance with this Agreement. The third and final payment shall be made no later than August 31, 2005, provided that IID has verified that Following Party has fulfilled all of its obligations under this Agreement. If at any time the IID determines that Following Party is in noncompliance with this Agreement, payments may be suspended as provided in Section 11.

B. Payment for Dust Control and Mitigation.

Following Party shall be reimbursed for its actual out of pocket costs for dust control and mitigation compliance in conformance with Exhibit D in two (2) equal payments. The first payment shall be made before December 31, 2004, provided that IID has verified that Following Party is in compliance with this Agreement. The second and final payment shall be made no later than August 31, 2005, provided that IID has verified that Following Party has fulfilled all of its obligations under this Agreement. If at any time the IID determines that Following Party is in noncompliance with this Agreement, payments may be suspended as provided in Section 11. For purposes of dust control and mitigation cost reimbursement under this subsection, costs shall mean any and all additional out of pocket costs incurred by the Following Party to implement required dust control and mitigation as required by Exhibit D that would not have been incurred by Following Party if Following Party had not been a Party to this Agreement.

3. Applicability of Williamson Act

Following Party represents that, either:

A. No portion of the Fallow Lands is subject to a contract pursuant to the California Land Conservation Act of 1965 ("Williamson Act") with the County of Imperial or other agency; or

B. If all or any portion of the Fallow Lands is subject to a Williamson Act contract, said contract does not prohibit following of the Fallow Lands as required pursuant to this Agreement.

This Agreement is not intended to impede or prevent compliance with any Williamson Act contract applicable to the Fallow Lands or to adversely affect any rights or benefits accruing thereunder.

4. Fallowing Party Representations and Warranties

The Fallowing Party represents and warrants to IID the following:

- A. The Fallow lands are within the IID Service Area receiving water.
- B. Fallowing Party is either the fee title owner of the Fallow Lands or the lessee of the Fallow Lands and as such, has the full right, power and authority to execute this Agreement and to carry out each and every obligation hereunder. To the best of Fallowing Party's knowledge, no legal impediment exists regarding the Fallow Lands to prevent Fallowing Party from entering into or performing under this Agreement; this Agreement will be a legal and binding obligation of Fallowing Party enforceable against Fallowing Party in accordance with its terms and will not violate any provisions of any agreement to which Fallowing Party is a party or to which Fallowing Party is subject; and Fallowing Party's agreement to fallow the Fallow Lands does not and will not violate applicable laws or recorded documents affecting the Fallow Lands.
- C. The Fallow Lands have not been contracted for fallowing the previous two years.
- D. The Fallow Lands are whole fields equal to or greater than (10) acres with defined historic boundaries.
- E. The Fallow Lands have been irrigated for crop production or leaching, or used as duck ponds the previous three (3) years, accounting for the years contracted for fallowing..
- F. The Fallow Lands would have been planted for agricultural production in the crop(s) identified on Exhibit C, leached or used as duck ponds during the Term of this Agreement had the lands not been fallowed pursuant to this Agreement.
- G. All information submitted by the Fallowing Party to the IID in Fallowing Party's Proposal to Fallow is true and correct as of the time of submittal and as of July 1, 2004.
- H. The Fallow Lands are zoned agriculture and Fallowing Party will take no action to cause or support a change in such zoning during the contracted-for fallowing period.
- I. Fallowing Party acknowledges that IID retains all water rights to the Colorado River in its name and control as a trustee under the California Irrigation District Law, and no water rights or other rights to water are created by this Agreement.

J. Fallowing Party has provided IID with an accurate and complete written plan and schedule to accommodate service pipes.

5. Obligations of Fallowing Party

A. Fallowing

Fallowing Party shall fallow the Fallow Lands during the Term defined in this Agreement which requires that there be no irrigation, application or use of water thereon during the Term.

B. Dust Control and Mitigation Requirements

Fallowing Party shall be responsible for and undertake the timely control of all dust on the Fallow Lands as described on Exhibit D, and shall provide to IID proof of performance and evidence of the costs and expenses incurred for dust control and mitigation requirements.

C. Weed Control

Fallowing Party shall be responsible for and undertake the timely control of all weeds on the Fallow Lands as required by the Imperial County Ordinance, Title 9, Division 18; "ABATEMENT OF WEEDS AND OTHER VEGETATION."

D. Water Charges and Fees

Fallowing Party shall continue to be responsible for all water delivery and water availability charges on lands owned and leased within the IID service area subject to IID's Regulation No. 11 as if this Agreement were not in effect, and all such charges shall be timely paid before they become delinquent.

E. Taxes

All real and personal property taxes, assessments or other charges of every description levied on or assessed against the Fallow Lands or improvements on the Fallow Lands shall remain the sole responsibility of the Fallowing Party. All tax payments shall be made directly to the charging authority prior to delinquency.

F. Insurance

Fallowing Party shall acquire and maintain liability insurance coverage on the Fallow Lands in the amount of \$1,000,000 and shall name IID as an additional insured on each such policy. Proof of such insurance coverage shall be provided to IID by a copy of an applicable document from the insurer at the time of execution of this Agreement.

G. Right of Entry

Fallowing Party agrees that IID and its designees shall have the right to enter the Fallow Lands and, to the extent necessary, other land owned or leased by Fallowing Party for the purpose of verification, monitoring, and enforcement of compliance with this Agreement.

H. If Land is Already Subject to Leases or Contracts

Fallowing Party shall be responsible for compliance with the terms, covenants and conditions of any existing leases and/or contracts affecting the Fallow Lands, and shall defend, indemnify and hold IID harmless from any claim by any third party for any damages asserted to be caused by Fallowing Party's agreement to or performance under this Agreement.

6. Governing Law

This Agreement shall be interpreted, governed by and construed under the laws of the State of California.

7. No Third-Party Rights

The Parties do not intend to create rights in or to grant remedies to any third party as a beneficiary of this Agreement.

8. Assignment

This Agreement shall be binding upon and inure to the benefit of the Parties and their permitted successors and assigns. No Party may assign or transfer its rights or obligations under this Agreement without the prior written consent of the other Party hereto.

9. Change in Legal Status Affecting Fallow Lands

During the term of this Agreement, any activity affecting the legal status of the Fallow Lands shall carry forward all obligations provided in this Agreement. Any party acquiring title to the Fallow Lands or taking assignment or sublease of the lease of the Fallow Lands shall be bound to the Term of this Agreement as if a signatory. In the event of any change affecting the legal status of the Fallow Lands, Fallowing Party shall notify IID in writing within ten (10) days of such change.

10. Legal Effect on Fallow Lands

Except as otherwise expressly stated herein, nothing herein shall be construed as affecting the legal status of the Fallow Lands, including, but not limited to, the effect of liens, encumbrances, statutory or regulatory requirements, or entitlements. Fallowing Party agrees that IID is not responsible for, and no action or conduct of IID, its staff or other representatives, shall be construed as advice or identification of the legal effect or consequences, if any, of the Fallowing Party's decision regarding fallowing.

11. Non-precedent

Nothing contained in this Agreement nor the execution of this Agreement shall be deemed to give the Following Party any rights to obtain any similar agreement after the expiration of the Term. In addition, IID reserves the right to change any rules governing the fallowing of land to create conserved water in any future agreement and to determine the provisions of any future agreement relating to the fallowing of land to create conserved water.

12. Noncompliance With Terms of Agreement

If IID determines at any time that the Following Party is in noncompliance with or has breached this Agreement, the Following Party will be provided notice of such noncompliance or breach at the address referenced in Section 14 below, and shall have thirty (30) days from the date of such notice to cure the noncompliance or breach. If the noncompliance or breach is not timely cured, remaining payments may be withheld by IID and, in addition, Following Party will be responsible for any other losses suffered by IID as a result of the noncompliance or breach. Nothing contained herein shall preclude the IID from exercising any other available remedy in law or equity, including specific performance.

13. Entire Agreement

This Agreement constitutes the entire understanding of the Parties hereto.

14. Amendment

This Agreement may not be modified or amended except in writing executed by the Parties.

15. Contacts

A. All notices, requests, demands, payments, and other communications required or permitted under this Agreement shall be in writing and shall be deemed to have been received either when delivered or on the fifth (5th) business day following the mailing, by registered or certified mail, postage prepaid return receipt requested, whichever is earlier, addressed as set forth below:

1) If to IID:

Manager, Water Department
Imperial Irrigation District
333 East Barioni Boulevard
P.O. Box 937
Imperial, CA 92251

2) If to Following Party:

Name _____
Address _____

B. Any Party may change the addressee or address to which communications or copies are to be sent by giving notice of such change of addressee or address in conformity with the provision of this Paragraph 15 for the giving of notice.

16. Counterparts

This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument with the same force and effect as though all signatures appeared on a single document.

17. Recording of Memorandum of Agreement.

Fallowing Party agrees that IID may, and Fallowing Party will cooperate to permit, a memorandum identifying the existence and summary of this Agreement to be recorded in the real property records for the County of Imperial.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day and year first above written.

IMPERIAL IRRIGATION DISTRICT

Manager, Water Department

FALLOWING PARTY as

- Lessee of Fallow Lands
- Owner of Fallow Lands

Signature _____

Print Name _____

Signature _____

Print Name _____

EXHIBIT A
FALLOW LANDS

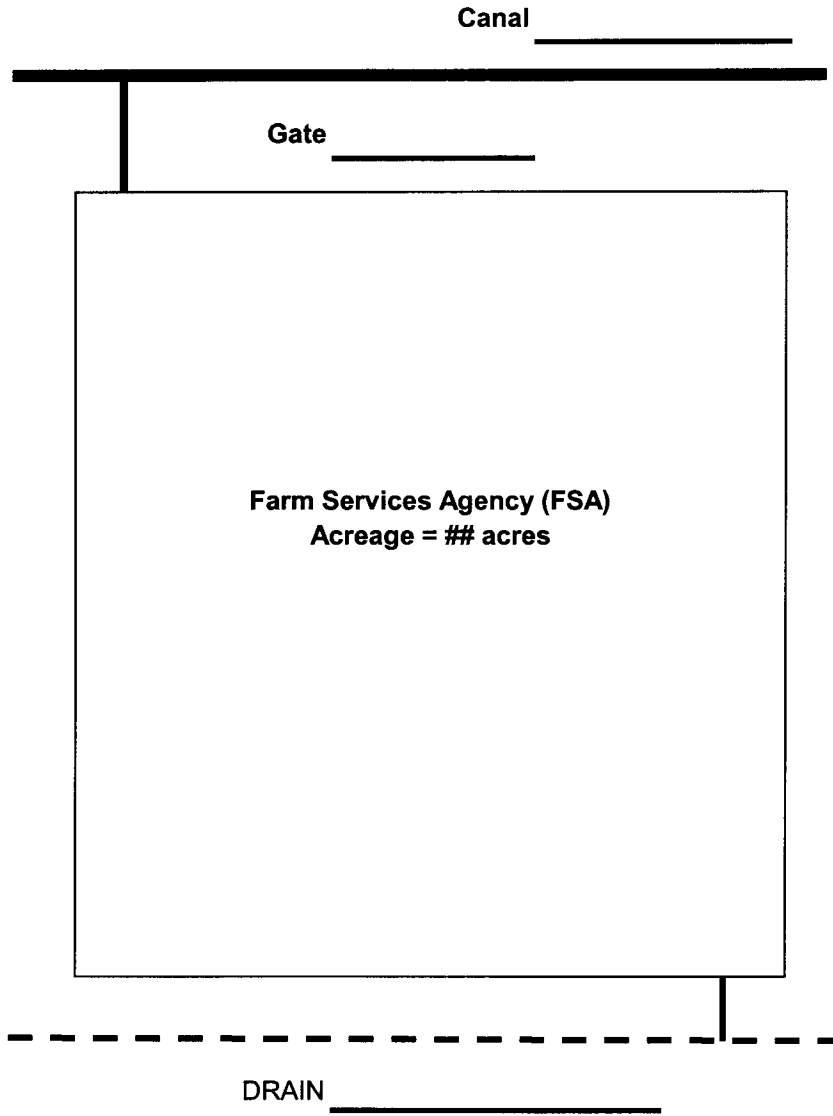


EXHIBIT B

CONSENT OF FEE OWNER, LESSOR, SUBLESSOR AND LEASE TERM (AS APPLICABLE)

We consent to the Lessee (Following Party as defined in the Agreement)
following the Fallow Lands as defined in Exhibit B for the period July 1, 2004 to
June 30, 2005.

Fee Owner

Name _____
Address _____
Address _____
Signature _____

Lessor (As Applicable)

Name _____
Address _____
Address _____
Signature _____

Sublessor (As Applicable)

Name _____
Address _____
Address _____
Signature _____

Remaining Term of Lease _____

Remaining Term of Sublease _____
(As Applicable)

EXHIBIT C

CROP(S) THAT WOULD HAVE BEEN GROWN ON THE FALLOW LANDS

CANAL

GATE

ACREAGE

List only the farmable acres (FSA Acreage)

	DATES	CROP
SUMMER 2004		
FALL 2004		
WINTER 2004		
SPRING 2005		
SUMMER 2005		

Note: Crop Includes Leaching and Duck Ponds

EXHIBIT D

DUST CONTROL AND MITIGATION REPORTING REQUIREMENTS APPLICABLE TO CONSERVATION BY FALLOWING FOR 2004-2005

In order to satisfy mitigation and reporting requirements adopted pursuant to the Transfer EIR (defined in Recital B), the Fallowing Party shall be responsible for and comply with the following requirements:

1. MITIGATION REQUIREMENTS

A. In order to mitigate air quality impacts on Fallow Lands, any necessary means may be used as appropriate including but not limited to the following best management practices ("BMPs"):

- Implement conservation cropping sequences and wind erosion protection measures as outlined by the US Department of Agriculture Natural Resources Conservation Service, such as:
 - Plan ahead to start with plenty of vegetation residue, and maintain as much residue on fallowed fields as possible. Residue is more effective for wind erosion protection if left standing.
 - If residues are not adequate, small grain can be seeded about the first of the year to take advantage of winter rains
 - Avoid any tillage if possible
 - Avoid any traffic or tillage when fields are extremely dry to avoid pulverization.
- Apply soil stabilization chemicals to fallowed lands.
- Re-apply drain water to allow protective vegetation to be established.
- Reuse irrigation return flows to irrigate windbreaks across blocks of land including many fields to reduce wind fetch and reduce emissions from fallowed, farmed, and other lands within the block. Windbreak species, management, and layout would be optimized to achieve the largest feasible dust emissions reduction per unit water available for their irrigation.

B. In order to satisfy Imperial County dust control and mitigation requirements, Fallowing Party will comply with any lawful conditions required by the Imperial County Air Pollution Control District.

2. REPORTING REQUIREMENTS

Provide a written report to the Manager of the Water Department of IID on or before July 31, 2004, and update the report in writing before November 30, 2004, and July 31, 2005, verifying the method(s) used to satisfy the mitigation requirements set forth in Section 1 above and the total costs incurred by Fallowing Party therefore, including written documentation evidencing such costs.

APPENDIX 6



United States Department of the Interior

U. S. GEOLOGICAL SURVEY

Columbia Environmental Research Center
4200 New Haven Road
Columbia, Missouri 65201

Evaluation of the effects of dietary selenium on the desert pupfish (*Cyprinodon macularius*).

A proposal submitted by the Columbia Environmental Research Center (CERC) to Scott Sobiech and Carol Roberts of the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California for submission to the Joint Power Authority

The goal of this proposed project is to determine the effects of dietary selenium on desert pupfish (*Cyprinodon macularius*) that inhabit Imperial Valley agricultural drains and shoreline pools at the Salton Sea. Results of this project will be used to determine if proposed management actions, specifically actions taken as part of the Imperial Irrigation District's Habitat Conservation Plan, are sufficient to conserve the pupfish in the Imperial Valley. To directly assess the potential toxic effects of dietary selenium on fish in the Imperial Valley, survival, growth, egg production and hatching, biochemical indicators, teratogenesis, and bioaccumulation of selenium by pupfish will be evaluated in chronic exposures covering multiple stages of the pupfish life cycle. Threshold concentrations for toxic effects selenium will be established based on selenium concentrations in the diet and in the tissue of pupfish. Fractionation and speciation of selenium among tissue compartments will be conducted for diet samples and pupfish tissue samples to provide more suitable measures of residue-based Se effects thresholds in these chronic dietary exposures, selenium exposures occurring in wild pupfish populations, and in other fish (e.g., *Gambusia*) and invertebrates that make up the diet of fish inhabiting the Imperial Valley. Fractionation and speciation of Se in tissues has recently been identified as a critical data gap in the interpretation of virtually all previously conducted Se ecotoxicological studies (Sappington et al. 2002).

There are 6 tasks associated with this project:

- (1) Develop methods for culturing pupfish
- (2) Develop methods for conducting early-life stage toxicity tests with pupfish
- (3) Conduct acute water-borne exposures with pupfish
- (4) Develop methods for dosing selenium in the diet of pupfish
- (5) Evaluate effects of dietary selenium exposure on selenium bioaccumulation and reproduction of desert pupfish
- (6) Evaluate effects of dietary and maternal selenium exposure on early life-stage pupfish

The FWS Carlsbad Fish and Wildlife Office provided \$100,000 to CERC for development of methods for conducting dietary toxicity tests with pupfish. Tasks 1, 2, and 3 have been completed with funding received from the FWS (Besser et al. 2004). Partial funding has been received from FWS for Task 4. Additional funding is needed to complete Tasks 4, 5, and 6.

1. Develop methods for culturing pupfish

The objective of this task was to obtain pupfish under appropriate permit in coordination with the Region 2 Regional Office in Albuquerque, New Mexico and the California Department of Fish and Game. A total of 38 live pupfish were received by CERC on June 6, 2002. Pupfish have been successfully maintained in the laboratory under culturing conditions at a salinity of 10 parts per thousand (ppt) with a diet of live brine shrimp and flaked fish food (Besser et al. 2004). The cultures produced 25 to 100 eggs/day at 23°C. During a 160-day period, the initial cohort of 38 adults produced 8,419 eggs. Hatching of eggs was typically greater than 80% after a one week incubation period and survival of the juveniles was excellent. The juvenile pupfish were reared to reproductive maturity in about a 6 month period. Both the second and third generation offspring were used for acute toxicity tests (Task 2) and for development of methods for conducting chronic toxicity tests (Task 3).

Status: Completed.

2. Conduct acute water-borne exposures with pupfish

The objective of this task was to conduct acute 96-h toxicity tests with selenate, selenite, and selenomethionine using two life stages of pupfish or fathead minnows (*Pimephales promelas*; a species that has been widely used as a laboratory test organism; Besser et al. 2004). Toxicity tests were conducted with newly-hatched larvae (<24 h old) and 3- to 6-month old juveniles (average length 29 mm) pupfish, and with comparable age groups of fathead minnows (Table 1). Acute toxicity differed widely among three chemical forms of selenium (selenate, selenite, and selenomethionine) and between fish species and age groups. In tests with all three selenium forms, pupfish were generally less sensitive than fathead minnows, which are among the most sensitive aquatic taxa to acute toxicity of waterborne selenium. For pupfish, larvae were more sensitive than juveniles to selenite, but juveniles were more sensitive to selenate and selenomethionine. For both species, toxicity generally increased in the order: selenate < selenite < selenomethionine. Lowest median lethal concentrations (LC50) for pupfish were 38 mg/L for selenate, 22 mg/L for selenite, and 0.44 mg/L for selenomethionine.

The sensitivity of pupfish to acute toxicity of waterborne selenium may not provide a reliable prediction of the potential for chronic selenium toxicity. Fathead minnows, which are consistently among the most sensitive fish species to acute selenium toxicity, are not highly sensitive to chronic selenium toxicity. Whereas, sunfish (*Lepomis*) and Pacific salmon (*Onchorhynchus*), which are consistently among the most sensitive genera in chronic toxicity studies, are not highly sensitive to acute toxicity (Besser et al. 2004). Chronic selenium toxicity in fish is typically caused by different exposure routes (selenium-contaminated diets) and chronic effects are expressed on different target organs (reproductive tract) than acute toxicity.

Status: Completed.

3. Develop methods for conducting early-life stage toxicity tests with pupfish

The objective of this task was to develop methods for conducting early life stage toxicity tests with pupfish (Table 2; Besser et al. 2004). Newly-hatched pupfish performed well under test conditions for early life-stage toxicity tests, with virtually no mortality during a 90-d study. Pupfish larvae thrived on a diet of live brine shrimp, and were able to switch to a diet of laboratory-cultured aquatic oligochaetes (*Lumbriculus variegatus*) after 48 days. Pupfish fed a diet that included oligochaetes grew more rapidly than those fed only brine shrimp and reached reproductive maturity by the end of the 90-d study. Pupfish from the oligochaete diet treatment that were transferred to a breeding tank began spawning immediately and produced large numbers of eggs during a three-week observation period. Hatching success (90%) and larval survival (96%) were excellent. The use of the oligochaete diet would be advantageous for the design of chronic dietary toxicity tests, as the greater biomass and longer life cycle of oligochaetes, relative to brine shrimp, would facilitate production of the large quantity of selenium-dosed food required for tests with adult pupfish. Supplemental studies conducted at CERC suggest that pupfish can be switched to a diet of live oligochaetes at an earlier age (at about 5 weeks) than was attempted in this study. Scientists at the U.S. Environmental Protection Agency have developed methods for using metal-dosed oligochaetes in dietary toxicity studies with freshwater fish and these methods could be adapted to dose oligochaetes with selenium for future dietary toxicity studies with pupfish.

Results of these studies indicate that pupfish are highly suitable for laboratory culture and toxicity testing, and that the rapid sexual maturation of this species should facilitate completion of life cycle testing (egg-larvae-juvenile-adult-F1) in a period of about six months. To be realistic simulations of selenium exposure in contaminated habitats, such studies should include exposure to selenium via diets of live brine shrimp and/or oligochaetes, although additional methods development will be necessary to characterize the uptake and bioavailability of selenium into potential live diets (Task 4).

Status: Completed.

4. Develop methods for dosing selenium in the diet of pupfish

The objective of this task will be to develop methods for dosing selenium in live brine shrimp and live oligochaetes, which will be used to prepare Se-contaminated experimental diets for feeding pupfish in Tasks 5 and 6. Studies will be conducted to evaluate the time it takes selenium to reach steady state concentrations in brine shrimp or in oligochaetes. A variety of selenium forms (i.e., selenite, selenate, or selenomethionine) and sources of selenium (i.e., water, sediment, or food) will be evaluated in these studies. Methods will be developed to quantify the distribution of selenium residues among tissue fractions (e.g., Fan et al. 2002, Wallace et al. 2003) and to speciate the Se according to organic or inorganic character (Cappon and Smith 1981). Tissue fractionation of Se-contaminated experimental diets will provide useful information for monitoring representative food items in pupfish habitats.

Status: Pending

Budget: \$30,000 funding has been obtained from FWS. An additional \$138,000 is required for selenium analyses and for the development and optimization of tissue fractionation and speciation methods. This is included in the fiscal year (FY) 2004-2005 budget.

5. Evaluate effects of dietary selenium exposure on selenium bioaccumulation and reproduction of desert pupfish

The objective of this task will be to evaluate the bioaccumulation of selenium from live Se-contaminated diets by juvenile and adult pupfish at a constant concentration of selenium in water. Dietary exposures will start with juvenile pupfish, about 3 months before the onset of reproduction, and will continue for about 2 months during active reproduction. These exposures will be in accordance with ASTM and EPA methods. Depending on the outcome of the studies conducted under Task 4, it is anticipated that a separate exposure system will be maintained to dose live oligochaetes for feeding the pupfish during this study.

Endpoints measured in the study will include: survival, growth, bioaccumulation of selenium before and during the period of reproduction. Fecundity, egg hatchability, teratogenesis, and viability of offspring will be evaluated. Viability will be determined by comparing responses of offspring to an additional stressor (e.g., sensitivity to a reference toxicant). Biochemical indicators of stress or histopathology will also be evaluated in adult pupfish or in offspring from these reproductive exposures. Measures of selenium in various tissue fractions in the diet and in the pupfish will also be performed on select samples (Task 4). Embryos produced from this study will be used to start the early-life-stage study (Task 6).

Status: It is anticipated that it would take about 3 months to conduct the pre-reproduction exposures, and about 2 months to conduct the reproduction studies, and an additional 6 months to complete the chemical analyses of the diets and tissue samples.

Budget: \$299,000. This is included in the FY 2004-2005 budget.

Experimental design: 6 treatments x 4 to 8 replicate chambers/treatment = 48 (2 diluters if 2 replicates/40-L aquaria). It is anticipated that a separate diluter would need to be maintained to dose the live diet. The number of replicates and treatments will likely be adjusted based on the logistics of producing the live diet dosed with selenium (Task 4).

6. Evaluate effects of dietary and maternal selenium exposure on early life-stage pupfish

The objective of this task will be to evaluate the toxic effects of dietary selenium on newly-hatched pupfish. Effects of dietary selenium exposure will be compared between cohorts of pupfish hatched from Se-exposed parents (Task 5) and cohorts hatched from uncontaminated eggs. Methods used to conduct these exposures will be in accordance with ASTM and EPA methods. Depending on the outcome of the studies conducted under Tasks 4, it is anticipated

that a separate exposure system will be maintained to dose live brine shrimp or live oligochaetes for feeding the pupfish during this study. Endpoints measured in the study will include: survival, growth, teratogenesis, biochemical indicators, and bioaccumulation of selenium by pupfish in exposures conducted for up to 90 days (e.g., samples collected for bioaccumulation on Day 0, 3, 7, 14, 28, 56, and 90).

Fractionation of selenium in tissues of diet organisms and pupfish will also be performed on select samples. Threshold concentrations for selenium toxicity will be determined based on Se concentrations in both tissue and diet for both cohorts of pupfish. Results of this selenium fractionation study will be used to develop methods for monitoring toxic forms of selenium in tissues of surrogate fish species (e.g., *Gambusia*) or of various invertebrates that make up the diet of fish inhabiting the Imperial Valley.

Status: It is anticipated that it would take about 3 months to conduct these exposures and an additional 3 months to complete the chemical analyses of the diets and tissue samples.

Budget: \$225,000. This will be included in the FY 2005-2006 budget.

Experimental design: 6 treatments x 3 replicates/sampling date x 7 sampling dates (0, 3, 7, 14, 28, 56, 90 days) = 126+3 controls = 129 samples (3 diluters if 4 replicates/aquaria). It is anticipated that 2 diluters would need to be maintained to dose the live diet. Fewer diluters may be used if subsamples are collected from replicates for bioaccumulation and growth measurements (e.g., thinning fish over time as they grow). The number of replicates and treatments will likely be adjusted based on the logistics of producing the live diet dosed with selenium (Task 4).

References cited

American Society for Testing and Materials (ASTM). 2003a. Standard guide for conducting acute toxicity tests on test materials with fishes, macroinvertebrates, and amphibians (E729-96), ASTM International, West Conshohocken, PA.

ASTM. 2003b. Standard guide for conducting early life-stage toxicity tests with fishes (E1241-98), ASTM International, West Conshohocken, PA.

Besser JM, Greer IE, Kunz JL, Ingersoll CG, Wang N. 2004. Development of methods for laboratory culture and toxicity testing of the endangered desert pupfish, *Cyprinodon macularius*, and evaluation of the acute toxicity of selenium Prepared for Scott Sobiech and Carol Roberts, U.S. Fish and Wildlife Service, Environmental Contaminants Division, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Rd., Carlsbad, CA 92009.

Cappon CJ, Smith JC. 1981. Mercury and selenium content and chemical form in fish muscle. *Arch Environ Contam Toxicol* 10:305-319.

Fan TW-M, Teh SJ, Hinton DE, Higashi RM. 2002. Selenium biotransformations into proteinaceous forms by foodweb organisms of selenium-laden drainage waters in California. *Aquatic Toxicology* 57:65-84.

Sappington KG. 2002. Development of aquatic life criteria for selenium: a regulatory perspective on critical issues and research needs. *Aquatic Toxicology* 57:101-113.

U.S. Environmental Protection Agency (EPA). 1993. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA 600/4-90/027F, Cincinnati, OH.

Wallace WG, Lee BG, Luoma SN. 2003. Subcellular compartmentalization of Cd and Zn in two bivalves. I. Significance of metals-sensitive fractions (MSF) and biologically detoxified metal (BDM). *Marine Ecology Progress Series* 249:183-197.