

RIO GRANDE PROJECT - OPERATIONS MANUAL

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1 Disclaimer

This Rio Grande Project Water Accounting and Operations Manual (Operations Manual) contains detailed information regarding the methods, equations and procedures used by the United States Bureau of Reclamation (Reclamation), El Paso County Water Improvement District No. 1 (EPCWID), and Elephant Butte Irrigation District (EBID) to operate the Rio Grande Project and account for all water charges under the Rio Grande Project Operating Agreement. This Operations Manual is an addendum to the Rio Grande Project Operating Agreement and is intended to be consistent with the Project Storage, release and delivery and allocation provisions in the Rio Grande Project Operating Agreement; nothing in the Operations Manual modifies or changes the language and requirements set forth in the Operating Agreement. To the extent any provisions in this Operations Manual are inconsistent or incompatible with the Operating Agreement, such inconsistencies are superseded by the Operating Agreement and/or are null and void.

2 Definitions

Allocated Water: that portion of the project water supply, as defined in the Operating Agreement, which is determined to be available for diversion and use by EBID, EPCWID and the United States for delivery to Mexico during the primary irrigation season. Accounting of allocated water is subject to the time that it takes water to travel from Caballo Dam to each district's respective diversion points.

Primary Irrigation Season: the primary irrigation season is defined as that period of a year when water is being released from Caballo Reservoir for irrigation purposes.

Allocation Charge: the debit applied to EBID's, EPCWID's or Mexico's respective amount of allocated Allocation Water.

Non-Allocated Water: water in the Rio Grande, during non-irrigation season and after the closing of the Caballo Dam release gates and prior to opening of the Caballo Dam release gates for the subsequent primary irrigation season, which originates from drain flows and other sources which may be diverted by the irrigation districts for application to irrigable land area within their boundaries. All diversions made by the Districts during the non-irrigation season utilizing return flow waters shall not be charged against the District's respective allocations.

Operating Agreement: Agreement executed on March 10, 2008 between the United States, EBID and EPCWID.

3 Allocation of Project Water

3.1 EBID and EPCWID

The U.S. Bureau of Reclamation (Reclamation) shall, prior to the 2nd Tuesday of each month of, allocate Rio Grande Project water in accordance to the Operating Agreement to EBID, EPCWID, and the United States for delivery to Mexico. The final allocation for the year shall include storage and allocation accounting data through the month of October of such year.

3.2 Bonita Private Irrigation Canal

The Reclamation shall each month inform EBID, EPCWID, and US-IBWC of the amount of water diverted from Caballo Reservoir into the Bonita Private Irrigation Canal by the United States for use in New Mexico.

3.3 United States for Delivery to the Republic of Mexico

Reclamation shall advise US-IBWC based on the storage conditions at the end of November whether the project waters available for release from Project Storage for the following year are sufficient for a full allocation or whether a proportionally reduced allocation will be made. The initial allocation letter provided by the U.S. Bureau of Reclamation to the US-IBWC is received mid-December of each year, with projected storage conditions in Elephant Butte and Caballo reservoirs through the end of the year.

During drought years when proportionally reduced allotments are made, regular monthly meetings are held at the US-IBWC headquarters. Monthly updates based on the end of previous month reservoir storage conditions and allocation projections for the remainder of the year are presented by Reclamation to the US-IBWC, CILA, EBID, EPCWID and CONAGUA, Juarez irrigation district.

3.4 Diversion of Flood Water in Excess of Project Water Orders

Reclamation may declare that flood flows, in a specific amount and duration, entering the Rio Grande downstream of Caballo Dam and in amount in excess of Project Water Orders to be Non-Allocated Water and available for diversion by EBID and EPCWID.

4 Water Delivery and Accounting

4.1 Ordering of Water by the Districts

Figure 1 below shows the order forms to be completed by EPCWID and EBID for review by Reclamation. The amount of flow ordered for delivery to Mexico shall be specified by US-

IBWC. The data fields in Figure 1 shall be entered by EBID and EPCWID each order day during the primary irrigation season by 10:00 am. Based on the information entered into to Figure 1 and the “Flow Regulation Calibration at Caballo Dam” report contained in Appendix D, Prior to 11:00 am each order day, the low level gates at Caballo Dam shall be set to the opening values calculated in Figure 1. The official record of releases of Project Water from Caballo Reservoir shall be calculated by Reclamation and shall be based on the flows recorded by the metering station immediately downstream of Caballo Dam and operated by Reclamation. The amount of opening of the low-level gates shall not be changed if the difference in the amount of the gate opening is ± 0.02 feet from the prior gate setting. Reclamation will perform a flow measurement at the river station below Caballo Dam whenever there is a change in the release from Caballo Dam of ± 100 cfs.

Figure 1 - Internet-Based Order Forms

RIO GRANDE PROJECT ORDER

Ord:1124	Effective Date: 7/8/2008		Prior:1123	Effective Date: 7/7/2008	
BOR	Date/Time Received: 07/08/08 15:36	Received By: IO	BOR	Date/Time Received: 07/07/08 15:09	Received By: IO
EPCWID #1	Date/Time Entered: 07/08/08 08:39	Approved By: RR	EPCWID #1	Date/Time Entered: 07/07/08 09:49	Approved By: RR
EBID	Date/Time Entered: 07/08/08 08:49	Approved By: MJN	EBID	Date/Time Entered: 07/07/08 09:51	Approved By: MJN

Upper Valley			
From: 7/8/2008 To: 7/9/2008			
Location	Current	Prior	Change
Arrey Canal	140	140	0
(-) Bypass	0	0	0
River Pumps	0	0	0
Leasburg Canal	170	230	-60
(-) Bypass	0	0	0
California Ext.	0	0	0
Del Rio Lateral	0	0	0
Eastside Canal	110	140	-30
Westside Canal	380	400	-20
(-) Bypass WW32	-30	-70	40
Total Upper Valley	770	840	-70
State Line			
From: 7/8/2008 To: 7/9/2008			
Location	Current	Prior	Change
La Union West TX	20	30	-10
La Union West NM	20	30	-10
Gate Settings	Current	Prior	Change
East Gate Recommended	3.98	4.41	-0.43
West Gate Recommended	3.98	4.41	-0.43
EBID Comments			
-			

SUMMARY			
	Current	Prior	Change
RIVER BOOST	50	0	50
River Reaches/Stations	Current	Prior	Change
Caballo Release	1683	1873	-190
Flow below Percha Dam	1543	1733	-190
Gain/Loss (+/-) above Leasburg	50	0	50
Flow at Leasburg Cable	1423	1503	-80
Gain/Loss (+/-) Leasburg/Mesilla	0	0	0
Flow below Mesilla Dam	933	963	-30
Gain/Loss (+/-) Mesilla-American	0	0	0
Flow at American Dam	963	1033	-70
District Totals	Current	Prior	Change
Total for EBID	690	780	-90
Total for EPCWID #1	866	916	-50
Total for Both Districts	1556	1696	-140
Project Totals	Current	Prior	Change
Total Gains/Loss	50	0	50
Total EBID, EPCWID, Mexico	1733	1873	-140
Release	1683	1873	-190

State Line			
From: 7/10/2008 To: 7/12/2008			
Location	Current	Prior	Change
La Union East TX	60	30	30
La Union East NM	30	20	10
3 Saints East TX	0	0	0
3 Saints East NM	0	0	0
Total State Line	130	110	20
Lower Valley			
From: 7/11/2008 To: 7/13/2008			
Location	Current	Prior	Change
UR-WTP	56	56	0
Franklin Canal	160	130	30
JR-WTP	85	85	0
Riverside Canal	485	585	-100
Total Lower Valley	786	856	-70
Comments - EPCWID			
-			
Mexico			
From: 7/11/2008 To: 7/13/2008			
Location	Current	Prior	Change
Mexico	177	177	0
Total Mexico	177	177	0
Comments - Mexico			
-			

Reclamation			
			Order # 1124
	Current	Prior	Change
Caballo Elevation			
USBR Elevation (ft)	4148.58	4148.44	0.14
Recommended River Boost (cfs)	0.00	0.00	0
Accretions (cfs)	50.00	0.00	50
Gate Settings	Current	Prior	Change
East Gate (ft)	3.98	4.41	-0.43
West Gate (ft)	3.98	4.41	-0.43
Recommended Flow Setting	Current	Prior	Change
CFS	1683	1873	-190
Scheduled Time of Change	10:00		
USBR River Measurement	Date	Time	Flow
Measured Flow (cfs)	7/8/2008	13:15	1756
USBOR Confirmation of Mexico Order	Yes		
Comments			
BOR recom. gate settings @ 3.86 ea.=1683 Dist. recom. gate settings @ 3.98 ea.=1735			
Date/Time Received: 07/08/08 15:36	Received By: IO		

4.2 Estimate of the Time Required for Water Released from Caballo Reservoir to Travel in the Rio Grande to Diversion Dams

Project Water is released from Caballo Reservoir is diverted at the Percha, Leasburg, Mesilla, and American diversion dams located downstream of Caballo Dam on the Rio Grande. The time required for water released from Caballo Reservoir to travel to each of these dams varies with the amount of water in the Rio Grande, the amount of water released, the amount of change in the amount of water released (both magnitude and sign), the amount of water being diverted at each diversion point, and other considerations. As water released from Caballo travels from Caballo Dam towards American Dam in the Rio Grande it does such as a wave that is attenuated and modified with distance. For example, if the amount of flow released from Caballo Dam is changes from 1,000 cfs to 1,500 cfs, the 500 cfs increase occurs almost instantly, but assuming no water is lost or gained between Caballo Dam and American Dam, the arrival of the change-in-release would be gradual. Figure 2 below show the measured hydrographs during the initial release of water from Caballo Dam in 2007 at various locations on the Rio Grande downstream of Caballo Dam. Because the change-in-release is modified as it flows downstream, the estimated travel times are based on the time that 90% of the anticipated change arrives at the given diversion dam. For the above example of a 500 cfs change at Caballo with no loss or gain of water, the travel time would be that when 450 cfs of the change arrived at given location. Table 1 below lists the distance and average travel time for the Rio Grande Project diversion dams on the Rio Grande.

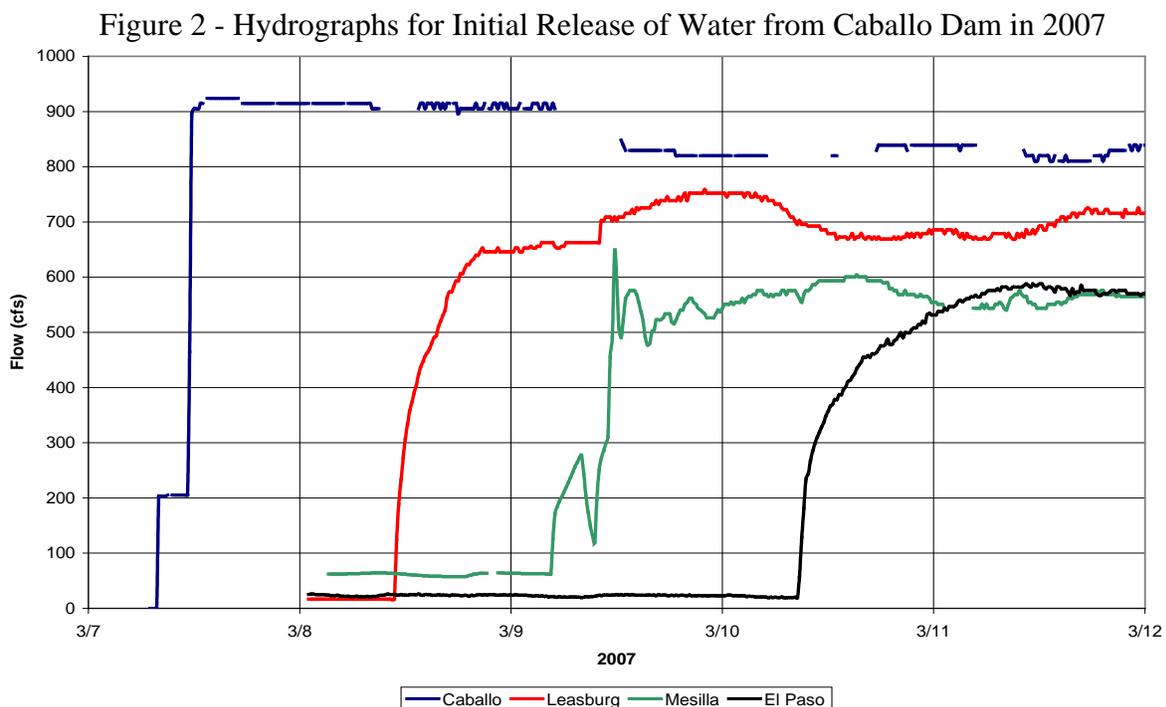


Table 1 - Average Travel from Caballo Dam to Various Diversion Dams

River Location / Reach	River Miles from Caballo Dam	River Reach Miles	Travel Velocity	Cumulative Travel Time in Hours	Travel Time per River Reach in Hours	Example Day of Week	Example Hour of Day
Rio Grande at Caballo Dam	0	-		0	0	Monday	11:00 AM
Percha Diversion Dam	1.2	1.2	0.6	2	2	Monday	1:00 PM
Leasburg Diversion Dam	44.8	43.6	2.4	20	18	Tuesday	7:00 AM
Mesilla Diversion Dam	67.5	22.7	2.3	30	10	Tuesday	5:00 PM
American Diversion Dam	106.8	39.3	1.1	66	36	Thursday	5:00 AM
International Diversion Dam	108.9	2.1	1.1	68	2	Thursday	7:00 AM

4.3 Sharing of Storages

Flows at American Canal Heading occasionally drop below the order of the EPCWID. At times when the actual flow at EPCWID delivery points is 100 CFS or more below the EPCWID's order, and at EPCWID option, the following method of sharing the shortage between EBID and EPCWID shall be implemented:

EBID shall release additional water through wasteways equal to one half of the amount of shortage at Riverside Canal Heading. EBID and EPCWID shall adjust the order for release from Caballo Reservoir to correct for such shortage. EBID shall receive credit against their allocation charge for the amount of additional water released through their wasteways because of such shortage.

4.4 Water Flow Measurement Stations

Each party shall maintain and operate the water flow measurement (metering) stations as listed in the Operating Agreement. Each station used in accounting of delivery of allocated water and listed in sections 4.5.2 and 4.5.3 shall be equipped with a Steven's Type F recorder and the water levels shall be continuously recorded on paper charts. A digital copy of the charts shall be made available by the party maintaining the metering station upon request by any other party.

4.5 Measurement of Flow and Volume

Water flow and volume measurement shall generally following procedures as outlined in USGS Water Supply Paper 2175. Rating tables for metering stations shall be determined at least annually by the party maintaining the station using previous flow measurements.

4.5.1 *United States Section of the International Boundary and Water Commission (US-IBWC)*

The US-IBWC measures twice a week at the Below American Dam gaging station and twice weekly at the headworks of the Acequia Madre, preferably on Mondays and Fridays each week

during the primary irrigation season. CILA measures the amount of water flowing in Acequia Madre at its headworks three times a week, usually on Mondays, Wednesdays and Fridays. All information regarding measurements are exchanged between the two sections. Based upon the latest US measurements, the US-IBWC determines the appropriate gage height setting at the metering station immediately downstream of American Dam on the Rio Grande and the corresponding gate setting at American Dam to deliver the requested flow rate into the Acequia Madre.

The water delivered to Mexico in the Rio Grande at the headworks of the Acequia Madre pursuant to the 1906 Convention is computed by subtracting 1) computed losses in the reach between Below American Dam gauging station and the Acequia Madre headworks and 2) estimated leakage through International Dam from the computed flows at the Below American Dam gauging station.

4.5.2 EBID

Figure 3 - Example of EBID's Monthly Water Allotment Charges Report

ELEPHANT BUTTE IRRIGATION DISTRICT WATER ALLOTMENT CHARGES (acre-feet) for Month of April 2008 SUBJECT TO REVISION						
	Gross Diversions		Diverted to Texas		Net Diversion	
	Month	Year to Date	Month	Year to Date	Month	Year to Date
ARREY CANAL	12,091	22,237			12,091	22,237
PERCHA LATERAL	67	71			67	71
LEASBURG CANAL	11,439	18,710			11,439	18,710
CALIFORNIA EXTENTION	0	0			0	0
EASTSIDE CANAL	7,771	11,954	-353	-514	7,418	11,441
DEL RIO LATERAL	466	823			466	823
WESTSIDE CANAL	20,594	38,029	-6,248	-13,019	14,347	25,010
PUMPED FROM RIVER**	0	0			0	0
GROSS TOTAL	52,429	91,824	6,601	13,533	45,828	78,292
TOTAL CHARGES					45,828	78,292
CREDIT AT ARREY (-)					-692	-763
CREDIT AT LEASBURG (-)					-87	-87
NET ALLOTMENT CHARGE					45,049	77,442
DISTRICT ALLOTMENT						198,384
DISTRICT BALANCE						120,942
** GREENWOOD AND DURAN RIVER PUMPS (EBID DATA)						

Charges to EBID are made using the following diversion points:

- a) Arrey Canal,
- b) Percha Lateral,
- c) Irrigations from Leasburg Canal above gauging station,
- d) Leasburg Canal,

- e) California Lateral,
- f) West Side Canal (NM portion),
- g) East Side Canal (NM portion),
- h) Del Rio Lateral, and
- i) the Greenwood, Duran, Roundtree, Dulin, Dorser, and Thurston pumps located in the Rincon Valley.

4.5.3 EPCWID

Figure 4 - Example of EPCWID's Monthly Water Allotment Charges Report

EPCWID Diversion Allocation Charges for Mar 2008					
Diversion Location	Metered Volume	Adjustment for Conveyance Losses for NM Deliveries	Diversion Allocation Charges for Month	Beginning-of-Month Totals	End-of-Month Totals
	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft
L U E Canal - TX	3,092	95%	2,937	0	2,937
L U W Canal - TX	1,096	95%	1,041	0	1,041
Three Saints Lateral	133	100%	133	0	133
Total Mesilla Valley (Texas)			4,112	0	4,112
Umbenhauer/Robertson Water Treatment Plant	1,820	100%	1,820	61	1,881
Franklin Canal	6,246	100%	6,246	256	6,502
United States - Ysleta del Sur Agreement	0	100%	0	0	0
United States Section - IBWC (Construction Water)	0	100%	0	0	0
Jonathan W. Rogers Water Treatment Plant	2,539	100%	2,539	0	2,539
Riverside Canal	21,751	100%	21,751	1,680	23,431
Haskell R. Street WWTP Effluent	-1,461	100%	-1,461	-239	-1,700
Credit for Diversions greater than Orders (El Paso Valley)	-200	100%	-200	0	-200
Total Allotment Diversions Charges			34,806	3,132	36,565
Diversion Allocation				232,339	257,951
Est. Annual Conservation Credit Diversion Allocation					16,207
Accrued Conservation Credit Diversion Allocation					2,297
Total Diversion Allocation				232,339	260,248
District Allotment Balance				229,207	223,684

Charges to EPCWID are made using the following diversion points:

- a) East Side Canal (Texas portion)
- b) La Union East Canal (Texas portion)
- c) La Union West Canal (Texas portion)
- d) Franklin Canal
- e) City of El Paso Water Treatment Plants
- f) American Canal Extension for the United States (Ysleta del Sur and US-IBWC)
- g) Riverside Canal

4.6 Water Order by Only One District

4.6.1

At the start of the Primary Irrigation Season and when one District orders water for diversion prior to the other, allocation charges to that District shall start on the date and time that water arrives to the delivery point and shall equal the greater of the amount of water ordered for delivery or the amount of water released from Caballo Dam. Any charges based on the amount of water released from Caballo Dam shall be discontinued upon the other district or Mexico ordering water for delivery.

4.6.2

During years with less than a full allocation and diversion have been discontinued for only one district because of insufficient diversion allocation balance and during the time prior to the termination of release of water from Caballo Dam at the end of the Primary Irrigation Season (when only one District orders water for diversion), the allocation charges shall equal the greater of the amount of diversion charges made in accordance with Appendices A, B, and C of this manual or the amount of water released from Caballo Dam.

4.7 End of Primary Irrigation Season

Except when Section 4.6.2 is in effect and after the gates at Caballo Dam have been closed, allocated water will be charged to the Districts until such time as the stored water is no longer available at their respective headings or the estimated travel times listed in Section 4.2 above have elapsed, whichever is less. If Section 4.6.2 is in effect, allocation charges for either district shall end at the date and time the gates at Caballo Dam are closed..

4.8 Emergency Conditions

Each Party shall be allowed to make changes to the water order in response to emergencies such as ditch breaks, flood flows, excessive arroyo inflows, or other accidents to the system.

Reclamation shall make the change in the release from Caballo Reservoir as soon as possible.

The order change for accounting purposes, at the respective diversion point, shall take effect as per the travel times in Section 4.2.

In the event of a total closing of the release gates from Caballo due to an emergency, accounting of delivered allocated water shall be in accordance with Section 6.5 Emergency Conditions (Force Majeure) of the Operating Agreement. Documentation of the changes in orders shall be completed utilizing the process in Section 4.1 as soon as possible and verified by each party.

4.9 Accounting Mistakes Regarding Mexico's Allocation

During an extraordinary drought or serious accident to the irrigation system in the United States, Mexico's delivery allocation (that has been diminished in the same proportion as the water delivered to lands in the irrigation districts in the United States) shall not be decreased during the calendar year except in the situation where an accounting or measurement mistake has been made resulting in an allocation to Mexico in an amount greater than would have been made if such error had not been made.

In November of each year, if under any situation Mexico's allocation is greater than the same proportion as the water delivered to lands in the irrigation districts in the United States, then the difference in the amount greater than the proportion as the water delivered to lands in the irrigation districts in the United States shall be charged against the delivery allocation of the irrigation districts in amounts proportional to their respective irrigable acres.

4.10 Correction of D2- Linear Regression Equation During Multi-Year Extreme Drought

The D2 Linear Regression Equation fails to accurately predict the measured amount of water that was diverted from the Rio Grande during consecutive calendar years when the total amount of water released from Caballo Reservoir is less than 400,000 acre-feet. For example during the years 1954 through 1957 the amount of water released from Caballo Reservoir was less than 400,000 acre-feet, and the amount of measured diversions was 88%, 78%, and 75% of the amount predicted by the D2 Linear Regression Equation for the years 1955, 1956, and 1957, respectively. During the 2nd consecutive year when the amount of water released from Caballo Reservoir is less than 400,000 acres feet the "Corrected D2 Linear Regression Equation" shall equal the value predicted by the D2 Linear Regression Equation multiplied by 0.88.

During the 3rd consecutive year when the amount of water released from Caballo Reservoir is less than 400,000 acres feet the “Corrected D2 Linear Regression Equation” shall equal the value predicted by the D2 Linear Regression Equation multiplied by 0.78.

During the 4th and all following consecutive years when the amount of water released from Caballo Reservoir is less than 400,000 acre feet the “Corrected D2 Linear Regression Equation” shall equal the value predicted by the D2 Linear Regression Equation multiplied by 0.75.

If the measured diversion ratio for a consecutive drought year in which the correction to the D2 Linear Regression Equation is applied, is higher than the diversion ratio predicted by the Corrected D2 Linear Regression Equation defined in this section, the measured diversion ratio shall be used for allocation purposes.

5 Exchange of Information

5.1 Allocation Water Charges

Reclamation will provide the EBID and the EPCWID written notification of allocation water charges by the 10th of each following month.

5.2 Communications

Reclamation will provide timely information on any unusual circumstances which could affect the water deliveries to the Districts or Mexico. EBID and EPCWID will immediately notify Reclamation concerning ditch breaks, unusual operating conditions, climatic conditions, or other major disruptions to orderly irrigation operations.

Reclamation will provide river status information daily to the Districts. Additional information or assistance may be requested at any time during Reclamation’s operation hours. Any requests for information or assistance during non-operating hours should be limited to emergencies and not routine items. Reclamation’s project water operations office and field operating hours during the irrigation season will be as follows:

	Office	Field
Weekdays	6:00 am to 4:30 pm	NM: 6:00 am to 6:00 pm TX: 6:00 am to 2:30 pm
Weekends	(none)	NM: 6:00 am to 2:30 pm TX: 6:00 am to 2:30 pm

A current roster of contact numbers for EBID, EPCWID, US-IBWC and Reclamation shall be distributed by each of the above entities to EBID, EPCWID, US-IBWC, and Reclamation. The roster shall be updated as necessary.

5.3 Information Provided to Reclamation

EBID and EPCWID shall provide to Reclamation and the other district the following:

- a) Water orders by 10:00 am on order days
- b) Average flow data (cfs) for all metering station listed in the Operating Agreement by the 2nd Monday of each month following the month in which the data was measured.
- c) Crop report information by January 15, each year.
- d) Water charges to the farms by January 15, each year.

Reclamation shall obtain the following from US-IBWC:

- a) Water orders by 10:00 am on order days.
- b) Preliminary average flow data (cfs) for the Acequia Madre listed in the Operating Agreement by the 2nd Monday of each month following the month in which the data was measured.
- c) Final average flow data (cfs) by the last day of each month following the month in which the data was measured.

5.4 Information Provided by Reclamation

Reclamation shall provide to EBID, EPCWID, and US-IBWC the following information by the 2nd Tuesday of each month.

- a. Amount of water stored in Elephant Butte and Caballo Reservoirs
- b. Amount of non-project water storage
- c. Amounts of project water stored above Elephant Butte in the Upper Rio Grande Basin
- d. Cumulative annual amount of water released from Elephant Butte and Caballo Reservoir
- e. Current inflow to Elephant Butte and Caballo Reservoir

In addition to the above information, Reclamation shall, by January 15 of each year, provide to all parties documentation of compliance, during the previous year, by the City of El Paso with terms of “Exhibit C – Determination of Underflow of the Rio Grande Captured by the City of El

Paso’s Groundwater Withdrawal” of the contract among the City of El Paso, EPCWID, the United States numbered 01-WC-40-6760 (2001 Implementing Contract).

6 Updating of Operations Manual

EBID, EPCWID, and Reclamation (including representation from US-IBWC under the auspice of Reclamation) will meet once a year in January, or more frequently if requested by one of the three parties, to review this operating manual. The Parties may modify any provisions of this manual upon having reached unanimous consent. No unilateral departure from this manual is allowed. Proposals for updates shall be submitted to all parties by January 1st of each year for review during the January meeting. The proposal shall consist of a detailed description of the proposed update with a justification for the update. Adoption of the update shall be by unanimous consent for the start of the irrigation season agreed to by the parties. At any time during the year any party may submit proposal for updating this manual. The proposal shall consist of a detailed description of the proposed update with a justification for the update.

Adoption of the update shall be by unanimous consent on the date agreed to by the parties. Consent of adoption of the update shall communicated by letter to each party. The Bureau of Reclamation shall make the updated manual available to the general public upon implementation. No unilateral departure from this manual is allowed.

7 Record of Changes Made to This Operating Manual

August 13, 2008	Original Manual
January 15, 2009	No changes made.
January 12, 2010	Deletions, additions, revisions, and changes made to sections 3.1, 3.3, 4.1,4.5.1, 4.6,1, 4.6.2, 4.7, 4.9, 5.2, 5.3, and 6. as shown in the redline version dated January 12, 2010. No changes made to appendices.
May 8, 2012	Addition of Section 4.10. No changes made to appendices.

APPENDIX A – RIO GRANDE PROJECT OPERATING AGREEMENT

APPENDIX B – EXAMPLE OF EPCWID’S MONTHLY CHARGES

The following descriptions are provided for convenience only. The actual equations, procedures, and representations contained in the electronic spreadsheet named EPCWID_Charges_2008.xls and attached to this document as Exhibit 1 shall be used for determining EPCWID charges.

Description of Calculations used to determine EPCWID’s Allocation Charges

Overview: EPCWID monthly allocation charge are calculated using information from Table B-1 –Monthly Summary, Table B-2 – Average Daily CFS Values, and Table B-3 – El Paso Valley Spills. Each of the three tables is specific for each month of the year and a single spreadsheet file (MS-EXCEL) shall be distributed by EPCWID to the other parties each month that contains the tables. Table B-1 is linked to Tables B-2 and B-3 and previous monthly tables to provide the summary of the allocation charges and a running balance of the amount of Project Water available for diversion by EPCWID. Table B-2 contains the daily flow (average cfs) values for each of the flow metering sites that is used in the calculations of charges and the respective amount of water ordered by EPCWID or EPCWID and EBID at La Union East, La Union West, and Three Saints irrigation canals. Table B-3 contains the daily volumes of water flowing out of EPCWID wasteways and spillways in the El Paso Valley. Table B-3 is used to determine the amount of water that is eligible for evaluation in Table B-2 for an allocation credit to EPCWID. The purpose of the allocation credit is to provide an accounting procedure that promotes conservation by allowing EPCWID to attempt to use water that is in excess of EPCWID’s order for Project Water on any given day and is diverted at the American Diversion Dam into the American Canal.

Table B-1: EPCWID Diversion Allocation Charges Summary

Row 4: The La Union East irrigation canal supplies water to irrigable lands in both Texas and New Mexico. The metered volume for the La Union East irrigation canal is obtained from Table B-2. The EPCWID allocation charge is 95% of the metered volume. The 5% reduction is in consideration of the transportation losses associated with the water delivered to lands in New Mexico.

Row 5: The La Union West irrigation canal supplies water to irrigable lands in both Texas and New Mexico. The metered volume for the La West East irrigation canal is obtained from Table B-2. The EPCWID allocation charge is 95% of the metered volume. The 5% reduction is in consideration of the transportation losses associated with the water delivered to lands in New Mexico.

Row 6: The Three Saints irrigation canal downstream of the Texas state line only supplies water to irrigable lands in Texas. The metered volume for the La Union East irrigation canal is obtained from Table B-2.

Row 7: EPCWID total allocation charges for the Mesilla Valley equal the sum of charges for rows 4, 5, and 6.

Row 8: The Umbenhaur-Robertson WTP diverts water from the American Canal Extension upstream of the Franklin Canal Heading. The amount of water diverted is measured by the City of El Paso and Reported to EPCWID. The gross amount of the measured volume is used as the allocation charge.

Row 9: EPCWID diverts water from the American Canal Extension upstream at the Franklin Canal Heading. The amount of water diverted is measured by EPCWID. The gross amount of the measured volume is used as the allocation charge.

Row 10: The United States on behalf of the Ysleta del Sur Nation diverts water from the American Canal Extension into the Rio Grande immediately upstream of the former Riverside Diversion Dam. The Ysleta del Sur Nation owns irrigable land within EPCWID that receives and allocation of water from EPCWID.

Row 11: During maintenance of the Rio Grande levee system and other work, the US-IBWC uses water pumped from the American Canal Extension.

Row 12: The Jonathan Rogers WTP diverts water from the Riverside Canal upstream of the Riverside Canal metering station. The amount of water diverted is measured by the City of El Paso and Reported to EPCWID. The gross amount of the measured volume is used as the allocation charge.

Row 13: The American Canal Extension terminates in the Riverside Canal. EPCWID measures the amount of water in the Riverside Canal immediately downstream of the City of El Paso's diversion point for the Jonathan Rogers WTP. The amount of water diverted is measured by EPCWID. The gross amount of the measured volume is used as the allocation charge.

Row 14: In accordance with the 2001 Implement Agreement among the United States, EPCWID, and the City of El Paso, EPCWID receives credit for non-project water discharged into the American Canal Extension by the City of El Paso at their Haskell Street WWTP upstream of the Riverside Canal and downstream of the Franklin Canal Heading. The amount of water discharge is measured by the City of El Paso and reported to EPCWID.

Row 15: Tables B-2 and B-3 contain measurements and calculations required to determine the volume of credit to be applied to EPCWID allocation charges for water diverted into the Franklin

or Riverside canals that is greater than the amount of water ordered by EPCWID for diversion and is not used by EPCWID. Details of the calculations are provided in the section regarding Tables B-2 and B-3 below.

Row 16: The total diversion allocation charges equal the sum of rows 7 through 15.

Row 17: Reclamation, in accordance with this manual and the Operating Agreement, provides EPCWID with its total diversion allocation.

Row 18: The maximum amount of diversion allocation that is eligible for determining the American Canal Extension Conservation Credit is 376,863 acre-feet per year.

Row 19: The estimated annual American Canal Extension Conservation Credit is calculated using the following formula:

$$\begin{aligned} & [(-0.7908 \times 0.8 \times \text{Estimated Annual Diversion} / 376,840)^2 \\ & + (1.6477 \times 0.8 \times \text{Estimated Annual Diversion} / 376,840) + 0.1431] \times 20,052 \end{aligned}$$

Where the Estimated Annual Diversion equals the Diversion Allocation for Conservation Credit – Estimate of Balance of Allocation at End-of-Year; that is, (Row 18 – Row 23)

Row 20: The accrued annual American Canal Extension Conservation Credit is calculated using the following formula:

$$\begin{aligned} & \text{Total Allotment Diversions Charge} / \text{Diversion Allocation for Conservation Credit} \times \\ & \text{Estimated Annual Conservation Credit Diversion Allocation; that is,} \\ & \text{(Row 16} / \text{Row 18} \times \text{Row 19)} \end{aligned}$$

Row 21: The total diversion allocation for EPCWID equals the sum of rows 17 and 20.

Row 22: EPCWID's end-of-month allocation balance equals Row 21 minus Row 16.

Row 23: At various times during the Primary Irrigation Season, EPCWID estimates the District Allocation Balance at the end-of-year. This estimate is subject to the limitation on the amount of Project Water that can be carried over from one year to the next as set forth in the Operating Agreement.

Table B-2: Average Daily CFS and Allocation Charges by Diversion Site

La Union East Canal (Texas Portion): The determination of EPCWID allocation charges for La Union East Canal (LUE) is complex and requires 11 columns of measured or calculated values. The complex calculations are a result of the fact that the LUE canal services land in both Texas and New Mexico. Also, water flows in the LUE canal for bypass to the Rio Grande

through WW32 and downstream diversion into the American Canal, and WW32 is used to discharge excess flow from EBID. In general the allocations charges for LUE are based on the net amount of water measured by EPCWID at the LUE metering station multiplied (prorated) by the ratio of the EPCWID order to the total order for LUE. The net amount of water measured at LUE is equal to the gross amount of water metered at LUE minus the gross amount of water metered at WW32.

La Union West Canal (Texas Portion): EPCWID allocation charges for La Union West Canal are equal to the gross amount of water measured by EBID at the LUW metering station multiplied (prorated) by the ratio of EPCWID LUW order to the total order for LUW.

Three Saints Lateral Canal (Texas Portion): EPCWID's allocation charges for the Three Saints Lateral (TSL) are equal to net amount of water measured by EBID at the TSL metering station multiplied (prorated) by the ratio of EPCWID TSL order to the total order for TSL. The net amount of water measured at TSL is equal to the gross amount of water metered at TSL minus the gross amount of water metered at WW23A. If there is no order for water at TSL and the gross amount of flow at TSL is less than or equal to 5 cfs, then the gross amount of flow is assumed to be equal to zero.

Umbenhaur-Robertson WTP: The values in this column are the daily gross amount of water metered by the City of El Paso as it is diverted from the American Canal Extension for the Umbenhaur-Robertson WTP.

Franklin Canal: The values in this column are the daily gross amount of water metered by EPCWID as it is diverted from the American Canal Extension.

Jonathan Rogers WTP: The values in this column are the daily gross amount of water metered by the City of El Paso as it is diverted from the Riverside Canal for the Jonathan Rogers WTP.

Riverside Canal: The values in this column are the daily gross amount of water metered by EPCWID flowing in the Riverside Canal immediately downstream of the Jonathan Rogers WTP.

Haskell Street WWTP Water Credit: The values in this column are the daily gross amount of water metered by the City of El Paso as it is discharged into the American Canal Extension from the Haskell Street WWTP.

Total El Paso Valley Order: The values in this column are equal to the sum of the orders and diversion for all of the diversion sites described above.

Table B-3: EPCWID El Paso Valley Daily Spills

Riverside WW1: The estimate of the amount of flow discharged from the Riverside Canal through WW1 to the Rio Grande. The estimate is made based on cfs per inch of gate setting and the duration of flow. Normally all gates at WW1 are closed.

Riverside WW2: The estimate of the amount of flow discharge from the Riverside Canal through WW2 to the Rio Grande. The estimate is made based on cfs per inch of gate setting and the duration of flow. Normally all gates at WW2 are closed.

Fabens Waste Drain: The flow in Fabens Waste Drain has both agricultural drain water (groundwater water) and water discharge through upstream wasteways. The amount of waste water varies from hour to hour while the amount of drain flow is more steady and varies from week to week. The drain flow is estimated by inspection of the flow hydrographs. The Fabens Waste Drain flows into the Fabens Waste Channel.

Fabens Waste Channel: The Fabens Waste Channel flow includes both wasteway water and the Fabens Waste Drain drainage water. The net spill water is calculated by subtracting the Fabens Waste Drain agricultural drainage flow from the gross measure flow for the Fabens Waste Channel.

Tornillo WW2: Tornillo WW2 is near the El Paso / Hudspeth County Line and at the terminus of the Tornillo Canal. The waste flow is measured by EPCWID.

Total Spills: The values in this column equal the sum of the flows at Riverside WW1, Riverside WW2, Fabens Waste Channel, and Tornillo WW2.

Adjustment for Bustamante and Haskell WWTP: The sum of the gross amount of water discharged into the American Canal Extension from the Haskell WWTP and the gross amount of water discharged into the Riverside Canal from the Bustamante WWTP.

EP Valley Spills: This column equals the Total Spills minus the Adjustment for Bustamante and Haskell WWTP.

APPENDIX B – EXAMPLE OF EPCWID’S MONTHLY CHARGES (cont.)

Table B-1: EPCWID Diversion Allocation Charges Summary

Row	EPCWID Diversion Allocation Charges for May 2008					
	Metered Volume	Adjustment for Conveyance Losses for NM Deliveries	Diversion Allocation Charges for Month	Beginning-of-Month Totals	End-of-Month Totals	
2	Diversion Location					
3		ac-ft	ac-ft	ac-ft	ac-ft	
4	L U E Canal - TX	2,542	95%	2,414	5,338	7,752
5	L U W Canal - TX	971	95%	923	2,140	3,063
6	Three Saints Lateral	184	100%	184	308	493
7	Total Mesilla Valley (Texas)			3,521	7,786	11,308
8	Umbenhauer/Robertson Water Treatment Plant	3,592	100%	3,592	5,114	8,707
9	Franklin Canal	6,415	100%	6,415	12,738	19,153
10	United States - Ysleta del Sur Agreement	0	100%	0	0	0
11	United States Section - IBWC (Construction Water)	0	100%	0	0	0
12	Jonathan W. Rogers Water Treatment Plant	4,631	100%	4,631	6,895	11,525
13	Riverside Canal	19,105	100%	19,105	44,006	63,111
14	Haskell R. Street WWTP Effluent	-1,460	100%	-1,460	-3,058	-4,519
15	Credit for Diversions greater than Orders (El Paso Valley)	-163	100%	-163	-814	-977
16	Total Allotment Diversions Charges			35,641	72,667	108,308
17	Diversion Allocation				300,239	380,012
18	Diversion Allocation for Conservation Credit					376,863
19	Est. Annual Conservation Credit Diversion Allocation					19,008
20	Accrued Conservation Credit Diversion Allocation					5,463
21	Total Diversion Allocation				300,239	385,475
22	District Allotment Balance				227,572	277,167
23	Estimate of Balance of 2008 Allocation at End-of-Year					8,612

APPENDIX B – EXAMPLE OF EPCWID’S MONTHLY CHARGES (cont.)

Table B-2: Average Daily CFS and Allocation Charges by Diversion Site

EL PASO COUNTY WATER IMPROVEMENT DISTRICT Diversion Allocation Charges May 08

Day	La Union East Canal (Texas Portion)											La Union West Canal (Texas Portion)				Three Saints Lateral Canal (Texas Portion)					Umbenhaur-Robertson WTP			Franklin Canal			Jonathan Rogers WTP			Riverside Canal			Haskell Street WWTP Water Credit		Total El Paso Valley Order					
	NM Order	TX Order	WW32 Bypass	Total Order + Bypass	LUE Avg. CFS	Excess Flow	WW32 Avg. CFS	WW32 Spill	WW32 Spill Charge	Net. Avg. CFS	Alloc. Charge	NM Order	TX Order	Avg. CFS	Alloc. Charge	NM Order	TX Order	Avg. CFS	WW23A	Net CFS	Alloc. Charge	Order	Avg. CFS	Alloc. Charge	Order	Avg. CFS	Alloc. Charge	Order	Avg. CFS	Alloc. Charge	Order	Avg. CFS	Alloc. Charge	Avg. CFS	Credit	Order	Project Water	Potential Credit	Spill	Actual Credit
	1	15	25	60	100	106	6	56	0	0	50	31	30	10	46	12	15	0	17	6	11	0	43	56	56	70	71	71	65	67	67	330	322	322	24	24	508	492	0	0
2	15	25	30	70	76	6	59	29	23	17	25	30	10	40	10	0	0	6	6	0	0	43	56	56	50	75	75	59	66	66	290	268	268	25	25	442	441	0	0	0
3	0	0	70	70	75	5	69	0	0	6	6	30	10	31	8	0	0	3	3	0	0	43	57	57	50	71	71	59	66	66	290	285	285	23	23	442	456	14	22	14
4	0	0	70	70	79	9	66	0	0	13	13	40	0	41	0	0	0	4	4	0	0	43	56	56	50	53	53	59	67	67	290	320	320	23	23	442	472	30	0	0
5	0	0	70	70	66	0	58	0	0	8	8	40	0	40	0	0	0	2	2	0	0	46	57	57	60	83	83	65	68	68	380	381	381	23	23	551	567	16	0	0
6	0	0	70	70	75	5	15	0	0	60	60	40	0	41	0	0	0	11	2	9	0	46	56	56	60	105	105	65	70	70	380	335	335	25	25	551	540	0	0	0
7	20	40	40	100	109	9	16	0	0	93	62	50	10	39	7	10	15	22	0	22	13	46	58	58	60	103	103	65	70	70	380	294	294	25	25	551	500	0	0	0
8	20	40	40	100	114	14	2	0	0	112	75	50	10	57	10	10	15	27	2	25	16	46	56	56	60	127	127	65	71	71	380	263	263	24	24	551	493	0	0	0
9	30	60	10	100	99	0	0	0	0	99	66	50	10	55	9	10	15	10	6	4	6	51	54	54	160	142	142	68	70	70	370	337	337	25	25	649	577	0	0	0
10	30	60	10	100	100	0	0	0	0	100	67	50	10	59	10	0	0	10	8	2	0	51	59	59	160	125	125	68	73	73	330	305	305	24	24	609	538	0	0	0
11	20	40	60	120	100	0	7	0	0	93	62	50	20	56	16	0	0	0	0	0	0	51	58	58	60	99	99	68	72	72	330	279	279	23	23	509	486	0	0	0
12	20	40	60	120	112	0	40	0	0	72	48	50	20	51	15	0	0	0	0	0	0	51	59	59	60	73	73	68	74	74	360	325	325	23	23	539	508	0	0	0
13	20	40	60	120	121	1	43	0	0	78	52	50	20	51	15	0	0	0	0	0	0	51	58	58	60	107	107	68	73	73	420	365	365	23	23	599	581	0	0	0
14	20	40	60	120	116	0	39	0	0	77	51	50	20	61	17	0	0	3	1	2	0	51	58	58	60	100	100	68	71	71	420	370	370	23	23	599	576	0	29	0
15	30	60	30	120	108	0	31	1	1	77	52	40	40	57	29	0	0	7	3	4	0	51	58	58	60	102	102	68	71	71	420	356	356	24	24	599	563	0	109	0
16	30	60	30	120	118	0	32	2	2	86	59	40	40	70	35	0	0	5	4	1	0	51	54	54	160	151	151	68	70	70	300	337	337	25	25	579	587	8	85	8
17	30	60	30	120	117	0	27	0	0	90	60	40	40	66	33	0	0	10	3	7	0	51	47	47	160	141	141	68	68	68	300	323	323	23	23	579	556	0	69	0
18	20	30	70	120	124	4	28	0	0	96	58	30	50	63	39	15	0	18	18	0	0	51	48	48	60	102	102	68	69	69	240	256	256	23	23	419	453	34	64	34
19	20	30	70	120	124	4	58	0	0	66	40	20	20	66	33	0	0	12	12	0	0	51	56	56	70	100	100	68	69	69	315	372	372	23	23	504	574	70	15	15
20	20	30	70	120	121	1	66	0	0	55	33	20	20	70	35	0	0	13	10	3	0	51	59	59	70	101	101	68	70	70	315	341	341	23	23	504	547	43	0	0
21	20	30	70	120	117	0	75	5	5	42	28	20	20	50	25	0	0	11	13	0	0	51	62	62	70	101	101	68	71	71	315	289	289	24	24	504	499	0	49	0
22	20	20	80	120	115	0	75	0	0	40	20	20	20	48	24	0	15	17	10	7	17	51	64	64	70	103	103	68	82	82	315	243	243	24	24	504	468	0	0	0
23	20	20	80	120	121	1	62	0	0	59	30	50	10	68	11	0	0	8	4	4	0	51	64	64	50	97	97	68	90	90	270	200	200	23	23	439	428	0	0	0
24	20	20	80	120	120	0	63	0	0	57	29	50	10	76	13	0	0	9	5	4	0	51	63	63	50	78	78	68	90	90	270	231	231	23	23	439	439	0	30	0
25	20	20	80	120	120	0	65	0	0	55	28	50	10	67	11	0	0	10	5	5	0	51	61	61	50	77	77	68	90	90	270	246	246	23	23	439	451	12	33	12
26	20	20	80	120	125	5	50	0	0	75	38	50	10	68	11	0	0	9	2	7	0	54	63	63	60	84	84	73	89	89	450	388	388	25	25	637	600	0	0	0
27	20	20	80	120	116	0	66	0	0	50	25	50	10	64	11	0	0	1	0	1	0	54	63	63	60	115	115	73	78	78	450	403	403	25	25	637	634	0	0	0
28	20	20	80	120	113	0	59	0	0	54	27	50	10	60	10	0	0	4	1	3	0	54	62	62	60	129	129	73	87	87	450	390	390	26	26	637	643	6	0	0
29	20	20	80	120	108	0	49	0	0	59	30	50	10	58	10	15	15	33	1	32	17	54	63	63	60	129	129	73	86	86	450	322	322	24	24	637	576	0	0	0
30	30	50	40	120	126	6	43	3	0	83	52	50	20	58	17	15	15	33	7	26	17	56	63	63	160	155	155	85	87	87	305	264	264	25	25	606	544	0	0	0
31	30	50	40	120	115	0	35	0	0	80	50	50	20	58	17	15	15	15	15	0	8	56	62	62	160	135	135	85	88	88	250	222	222	21	21	551	487	0	0	0
SFD	600	970	1,800	3,370	3,356	76	1,354	40	31	2,002	1,281	1,290	510	1,735	490	105	105	330	153	179	93	1,551	1,811	1,811	2,450	3,234	3,234	2,120	2,335	2,335	10,635	9,632	9,632	736	736	16,756	16,275	232	505	82
AF	1,190	1,924	3,570	6,684	6,657	151	2,686	79	61	3,971	2,542	2,559	1,012	3,441	971	208	208	655	303	355	184	3,076	3,592	3,592	4,860	6,415	6,415	4,205	4,631	4,631	21,095	19,105	19,105	1,460	1,460	33,236	32,282	460	1,002	163

APPENDIX B – EXAMPLE OF EPCWID MONTHLY CHARGES (cont.)

Table B-3: EPCWID El Paso Valley Daily Spills

EL PASO COUNTY WATER IMPROVEMENT DISTRICT Diversion Allocation May 08

Day	Riverside WW1		Riverside WW2		Fabens Waste Drain		Fabens Waste Channel		Tornillo WW2		Total Spills	Adjustment for Bustamonte and Haskill WWTP	EP Valley Spills
	Avg CFS	Spill	Avg CFS	Spill	Avg CFS	Drain Flow	Avg CFS	Spill	Avg CFS	Spill	Avg CFS	Avg CFS	Avg CFS
	1	0	0		0	64	40	56	0	45	45	45	65
2	0	0		0	45	40	48	8	44	44	52	65	0
3	0	0		0	44	44	42	0	16	16	16	65	0
4	0	0		0	56	40	90	50	37	37	87	65	22
5	0	0		0	43	40	74	34	29	29	63	65	0
6	0	0		0	44	45	48	3	3	3	6	65	0
7	0	0		0	37	45	48	3	5	5	8	65	0
8	0	0		0	41	45	51	6	2	2	8	65	0
9	0	0		0	49	45	52	7	0	0	7	65	0
10	0	0		0	62	45	59	14	14	14	28	65	0
11	0	0		0	64	45	63	18	27	27	45	65	0
12	0	0		0	56	45	57	12	4	4	16	65	0
13	0	0		0	47	45	52	7	3	3	10	65	0
14	0	0		0	46	45	57	12	4	4	16	65	0
15	0	0		0	46	45	117	72	22	22	94	65	29
16	0	0		0	46	45	178	133	41	41	174	65	109
17	0	0		0	46	45	153	108	42	42	150	65	85
18	0	0		0	46	45	117	72	62	62	134	65	69
19	0	0		0	46	45	118	73	56	56	129	65	64
20	0	0		0	82	45	104	59	21	21	80	65	15
21	0	0		0	64	45	78	33	30	30	63	65	0
22	0	0		0	77	45	109	64	50	50	114	65	49
23	0	0		0	46	45	46	1	28	28	29	65	0
24	0	0		0	60	45	57	12	26	26	38	65	0
25	0	0		0	72	45	98	53	42	42	95	65	30
26	0	0		0	76	45	106	61	37	37	98	65	33
27	0	0		0	53	45	58	13	15	15	28	65	0
28	0	0		0	51	45	69	24	10	10	34	65	0
29	0	0		0	54	45	65	20	5	5	25	65	0
30	0	0		0	55	45	52	7	2	2	9	65	0
31	0	0		0	54	45	53	8	5	5	13	65	0
1	0	0		0	54	45	53	8	5	5	13	65	0
CFS	0	0	0	0	1,672	1,374	2,375	987	727	727	1,714	2,015	505
AF	0	0	0	0	3,316	2,725	4,711	1,958	1,442	1,442	3,400	3,997	1,002

APPENDIX C – EXAMPLE OF EBID’S MONTHLY CHARGES

The following descriptions are provided for convenience only. The actual equations, procedures, and representations contained in the electronic spreadsheet named EBID_Charges_2008.xls and attached to this document as Exhibit 1 shall be used for determining EBID charges.

Description of Calculations used to determine EBID’s Allocation Charges

Overview: EBID monthly allocation charge are calculated using information from Table C-1 – Monthly Summary, Table C-2 – Westside Canal Charge Summary, Table C-3 – Eastside Canal Charge summary, Table C-4 La Union West Charge Summary, Table C-5 – La Union East Charge Summary, Table C-6 - Bypass Summary, Table C-7 – Actual Charge Summary and Table C-8-Daily Flows. Each of the seven tables is specific for each month of the year and a single spreadsheet file (MS-EXCEL) shall be distributed by EBID to the other parties each month that contains the tables. Table C-1 is linked to Tables C-2, C-3, C-4, C-5, C-6, C-7, C-8 and previous monthly tables to provide the summary of the allocation charges and a running balance of the amount of Project Water available for diversion by EBID. Table C-8 contains the daily flow (average cfs) values for each of the flow metering sites that is used in the calculations of charges and the respective amount of water ordered by EBID and EBID and EPCWID at La Union East, La Union West, and Three Saints irrigation canals. Table C-6 contains the daily volumes of water flowing out of EBID designated Spillways and water ordered for Bypass. Table C-6 is used to determine the amount of water that is eligible for an allocation credit to EBID. The purpose of the allocation credit is to provide an accounting procedure that promotes conservation by allowing EBID to attempt to use bypass water within EBID’s order to manage its total release efficiently.

Table C-1: EBID Diversion Allocation Charges Summary

The Total Order for EBID is the sum of the orders for diversion from the Rio Grande at Arrey Canal, Percha Lateral, Leasburg Canal, Eastside Canal, Westside Canal, Del Rio Lateral, California Extension, and the Greenwood, Duran, Roundtree, Dulin, Dorser, and Thurston pumps located in the Rincon Valley. The orders for each heading are lagged in time from release based on the estimated travel times. The order listed for a given diversion point is for diversion on the day that it is listed. Changes in diversion orders after the corresponding release is made shall be documented with a change order, and diverted after the appropriate travel time from the release.

The daily diversion for EBID is the sum of the actual diversions from the above listed diversion points. The minimum daily charge to EBID is 95 percent of the Total Order for the given day. The actual daily charge to EBID is the larger of the daily diversion and the minimum daily charge. The monthly charge to EBID is the sum for the month of the actual daily charges to EBID.

Row 1: Total actual diversion acre feet for the current month and the year to date at the Arrey Canal Diversion.

Row 2: Total actual diversion acre feet for the current month and the year to date at the Percha Lateral.

Row 3: Total actual diversion acre feet for the current month and the year to date at the Leasburg Canal Diversion.

Row 4: Total actual diversion acre feet for the current month and the year to date at the California Extension Lateral.

Row 5: Total actual diversion acre feet for the current month and the year to date at the Eastside Canal Diversion. Row 5 also contains the State line diversion totals for the EPCWID at the Three Saints East Lateral. EBID charge is the Gross Total column subtracting out the Diverted to Texas column. The amount diverted to EPCWID at the Three Saints East Lateral is determined in Table C- 3. Detailed equation that determines the amount Diverted to Texas is described in the Table C-3 Summary detail.

Row 6: Total actual diversion acre feet for the current month and the year to date at the Del Rio Lateral.

Row 7: Total actual diversion acre feet for the current month and the year to date at the Westside Canal Diversion. Row 7 also contains the State line diversions totals to EPCWID at the La Union East and La Union West Canals. EBID charge is the Gross Total column subtracting

out the Diverted to Texas column. The amount diverted to EPCWID in the La Union East Canal is determined in Table C-5 and the amount diverted to EPCWID in the La Union West Canal is determined in Table C- 4. Detailed equation that determines the amount Diverted to Texas is described in the Table C-2 Summary detail.

Row 8: Total actual diversion acre feet for the current month and the year to date for the River Pumps.

Row 9: Totals for Gross and Net diversions for Rows 1 through 8.

Row 10: Totals for Net diversion current month and year to date.

Row 11: Bypass water through designated spillways from the Arrey Canal Diversion. Totals come from Table C-6 Bypass Summary.

Row 12: Bypass water through designated spillways from the Leasburg Canal Diversion. Totals come from Table C-6 Bypass Summary.

Row 13: Adjustment for Diversion vs Delivery. This value is the difference of the Actual Monthly charge and the Actual Monthly Diversion.

Row 14: Total monthly and year to date allotment charge. This value is the sum of Rows 10, 11, 12 and 13.

Row 15: Reclamation, in accordance with this manual and the Operating Agreement, provides EBID with its total diversion allocation.

Row 16: EBID end of month allotment balance. Row 15 minus Row 14

Table C-2: Average Daily CFS and Allocation Charges Westside Canal Texas and New Mexico Portions

EBID's Allocation charge for the Westside canal is determined in this table. In order to determine the New Mexico Portion of the diversion, Texas calculations occur in Tables C-4 and C-5. The Westside canal delivers water to Texas lands through both the La Union West and the La Union East. The Texas portions are calculated in both Table C-4 for the La Union West and Table C-5 for the La Union West. Totals for each day from both Canals are added together and then a 15% carriage charge is applied. This amount is subtracted from the Westside diversion for that same day. This table also calculates the Texas Spillway 32 bypass amount. Spillway 32 initial calculation occurs in Table C-5. The initial calculation evaluates the amount of water ordered for bypass, the amount actually bypassed and the amount delivered to the La Union East. This evaluation results in the amount of water to be charged to Texas. A 15% carriage charge is also applied, then subtracted from the Westside Canal.

Table C-3: Average Daily CFS and Allocation Charges for Eastside Canal and the Three Saints East Lateral Texas Portion

EBID allocation charge for the Eastside Canal is determined in this table. In order to determine New Mexico portion of the diversion Texas portions are calculated in this table as well. EBID delivers water to Texas lands through the Three Saints East Canal. EPCWID's allocation charges (Texas Portion) for the Three Saints Lateral (TSL) are equal to net amount of water measured by EPCWID at the TSL metering station multiplied (prorated) by the ratio of EPCWID TSL order to the total order for TSL. The net amount of water measured at TSL is equal to the gross amount of water metered at TSL minus the gross amount of water metered at WW23A. If there is no order for water at TSL and the gross amount of flow at TSL is less than or equal to 5 cfs, then the gross amount of flow is assumed to be equal to zero. Once the Texas Portion is determined a 20% carriage charge is applied, then subtracted from the Eastside Canal Diversion leaving only the New Mexico Portion.

Table C-4: Average Daily CFS and Allocation Charges La Union West Diversion Site

La Union West Canal (Texas Portion): This table is used to determine the Texas Portion of the La Union West Order and Diversion. EPCWID allocation charges for La Union West Canal are equal to the gross amount of water measured by EBID at the LUW metering station multiplied (prorated) by the ratio of EBID LUW order to the total order for LUW. This prorated amount is then added to the La Union East total for the same day and displayed in Table C-2 Westside canal. These totals will be used to determine the total Diverted to Texas where it will then be subtracted from the Westside Canal Diversion leaving only the New Mexico Portion.

Table C-5: Average Daily CFS and Allocation Charges La Union East Diversion Site

La Union East Canal (Texas Portion): This table is used to determine the Texas Portion of the La Union East Canal. The determination of EPCWID allocation charges for La Union East Canal (LUE) is complex and requires 11 columns of measured or calculated values. The complex calculations are a result of the fact that the LUE canal services land in both Texas and New Mexico. Also, water flows in the LUE canal for bypass to the Rio Grande through WW32 and downstream diversion into the American Canal, and WW32 is used to discharge excess flow from EPCWID. In general the allocations charges for LUE are based on the net amount of water measured by EPCWID at the LUE metering station multiplied (prorated) by the ratio of the EPCWID order to the total order for LUE. The net amount of water measured at LUE is equal to the gross amount of water metered at LUE minus the gross amount of water metered at WW32. This prorated is then added to the La Union West total for the same day and displayed in Table C-2 Westside canal. These totals are used to determine the total Diverted to Texas where it will then be subtracted from the Westside Canal Diversion leaving only the New Mexico Portion.

Table C-6: Average Daily CFS and Bypass Credit Summary

This table contains the Amount of Bypass Ordered and Diverted for designated spillways in the Arrey and Leasburg Canals. Bypass is only a credit when an order for Bypass is made. Credit is limited to the amount of the bypass ordered. A travel time for the order is applied, then the actual diversion is used to determine whether a credit for bypass is applied. The Monthly total is used in Table C-1 if a credit is due.

Table C-7: Actual charge

This table contains each of the EBID diversion sites. Each site has the amount ordered and the actual amount diverted. The Total Order for EBID is the sum of the orders for diversion at Arrey Canal, Percha Lateral, Leasburg Canal, Eastside Canal, Westside Canal, Del Rio Lateral, California Extension, and the Greenwood, Duran, Roundtree, Dulin, Dorser, and Thurston pumps that divert water from the Rio Grande in the Rincon Valley. The orders for each heading are lagged in time from release based on the estimated travel times. The order listed for a given diversion point is for diversion on the day that it is listed. The daily diversion for EBID is the sum of the actual diversions from the above listed diversion points. The minimum daily charge to EBID is 95 percent of the Total Order for the given day. The actual daily charge to EBID is the larger of the daily diversion and the minimum daily charge. The monthly charge to EBID is the sum for the month of the actual daily charges to EBID. The Actual Charge is subtracted from the Total Diversion to determine the adjustment amount Row 13 of Table C-1.

Table C-8: Average Daily CFS Daily Flows

This contains the daily flow (average cfs) values for each of the flow metering sites that is used in the calculations of charges and the respective amount of water ordered by EBID and EBID and EPCWID at La Union East, La Union West, and Three Saints irrigation canals.

Table C-1 EBID Allocation Charges Summary

ELEPHANT BUTTE IRRIGATION DISTRICT

WATER ALLOTMENT CHARGES

May-08

SUBJECT TO REVISION

Row	GROSS DIVERSIONS (AC-FT)	TO DATE	DIVERTED TO TEXAS (AC-FT)	TO DATE	NET DIVERSIONS (AC-FT)	TO DATE
1 ARREY CANAL	12700	34941			12700	34941
2 PERCHA LATERAL	115	186			115	186
3 LEASBURG CANAL	14884	33594			14884	33594
4 CALIFORNIA EXTENTION	0	0			0	0
5 EASTSIDE CANAL	8519	20473	-363	-877	8156	19597
6 DEL RIO LATERAL	496	1319			496	1319
7 WESTSIDE CANAL	22534	60563	-6811	-19830	15723	40733
8 PUMPED FROM RIVER**	0	0			0	0
9 GROSS TOTAL	59248	151077	-7174	-20707	52074	130370
10 TOTAL CHARGES (AC-FT)			NET DIVERSION	TO DATE		
			52078	130370		
11 CREDIT AT ARREY (-)			0	-763		
12 CREDIT AT LEASBURG (-)			-28	-115		
13 ADJUSTMENT FOR CHARGE AT HEADING (+)			10	10		
14 NET ALLOTMENT CHARGE			52,060	129,502		
15 DISTRICT ALLOTMENT				280,764		
16 DISTRICT BALANCE				151,262		

** GREENWOOD, DURAN, ROUNTREE, DULIN, DORSAR AND THURSTON RIVER PUMPS (EBID DATA)

Table C-2 Westside Canal Diversion Charge Summary

WESTSIDE DIVERSION CHARGE SUMMARY

EBID

May-08

DAY	WESTSIDE CANAL (1)	TX CHARGE LUE+LUW (2)	W.W. 32 SFD*1.15 (3)	115% OF 2 (4)	EBID WATER [1-(3+4)]
1	297	43	64	49	183
2	263	35	35	40	188
3	307	6	79	7	221
4	292	0	76	0	216
5	292	0	67	0	225
6	310	0	17	0	293
7	340	63	18	72	249
8	327	85	2	98	227
9	327	75	0	86	241
10	327	77	0	89	238
11	320	73	8	84	228
12	314	58	46	67	201
13	376	62	49	71	255
14	406	68	45	78	283
15	438	68	35	78	325
16	502	94	35	108	359
17	465	93	31	107	327
18	444	97	32	112	300
19	453	81	67	93	293
20	418	77	76	89	254
21	398	53	81	61	257
22	406	44	86	51	269
23	406	41	71	47	288
24	401	42	72	48	280
25	317	39	75	45	197
26	317	49	58	56	203
27	312	36	76	41	195
28	307	37	68	43	197
29	370	40	56	46	268
30	444	69	46	79	319
31	465	67	40	77	348
SFD	11361	1672	1511	1923	7927
AC-FT	22534	3316	2997	3814	15723

Table C-3 Eastside Canal Diversion Charge Summary

EASTSIDE DIVERSION CHARGE SUMMARY

EBID

May-08

DAY	EASTSIDE 3 SAINTS E CANAL SFD	W.W. 23 SFD	ADJUSTED3 SAINTS E SFD	3 SAINTS E. TX-ORDER	3 SAINTS E. NM-ORDER	% TX	TX CHARGE *1.20%	EBID WATER	
1	122	17	6	15	0	15	0%	0	122
2	146	6	6	0	0	0	0%	0	146
3	124	3	3	0	0	0	0%	0	124
4	80	4	4	0	0	0	0%	0	80
5	80	2	2	0	0	0	0%	0	80
6	107	11	2	9	0	0	0%	11	96
7	163	22	0	22	15	10	60%	16	147
8	172	27	2	25	15	10	60%	18	154
9	195	10	6	10	15	10	60%	7	188
10	171	10	8	2	0	0	0%	2	169
11	160	0	0	0	0	0	0%	0	160
12	159	0	0	0	0	0	0%	0	159
13	125	0	0	0	0	0	0%	0	125
14	96	3	1	2	0	0	0%	2	94
15	132	7	3	4	0	0	0%	5	127
16	160	5	4	1	0	0	0%	1	159
17	154	10	3	7	0	0	0%	8	146
18	136	18	18	15	0	15	0%	18	118
19	132	12	12	0	0	0	0%	0	132
20	130	13	10	3	0	0	0%	4	126
21	143	11	13	0	0	0	0%	0	143
22	150	17	10	15	15	0	100%	18	132
23	148	8	4	4	0	0	0%	5	143
24	136	9	5	4	0	0	0%	5	131
25	109	10	5	5	0	0	0%	6	103
26	108	9	2	7	0	0	0%	8	100
27	110	1	0	1	0	0	0%	1	109
28	136	4	1	4	15	15	50%	2	134
29	163	33	1	32	15	15	50%	19	144
30	193	33	7	30	15	15	50%	18	175
31	155	15	15	15	15	15	50%	9	146
SFD	4295	330	153	232	120	120	50%	183	4112
AC-FT	8519	655	303	460	238	238		363	8156

**ADJUSTED SFD=TOTAL ORDER OR 3SE SFD, WHICHEVER IS LESS

Table C-4 La Union West Canal Diversion Charge Summary

LA UNION WEST ORDER, DIVERSION, AND CHARGE SUMMARY

EBID

May-08

DAY	N.M. ORDER	TEXAS ORDER	TOTAL ORDER	% N.M.	% TEX	LA UNION W. SFD	N.M. CHARGE	TEXAS CHARGE
1	30	10	40	75%	25%	46	35	12
2	30	10	40	75%	25%	40	30	10
3	40	10	50	80%	20%	31	25	6
4	60	0	60	100%	0%	41	41	0
5	60	0	60	100%	0%	40	40	0
6	60	0	60	100%	0%	41	41	0
7	50	10	60	83%	17%	39	33	7
8	50	10	60	83%	17%	57	48	10
9	50	10	60	83%	17%	55	46	9
10	50	10	60	83%	17%	59	49	10
11	40	10	50	80%	20%	56	45	11
12	40	10	50	80%	20%	51	41	10
13	40	10	50	80%	20%	51	41	10
14	50	20	70	71%	29%	61	44	17
15	50	20	70	71%	29%	57	41	16
16	40	40	80	50%	50%	70	35	35
17	40	40	80	50%	50%	66	33	33
18	30	50	80	38%	63%	63	24	39
19	30	50	80	38%	63%	66	25	41
20	30	50	80	38%	63%	70	26	44
21	20	20	40	50%	50%	50	25	25
22	20	20	40	50%	50%	48	24	24
23	50	10	60	83%	17%	68	57	11
24	50	10	60	83%	17%	76	63	13
25	50	10	60	83%	17%	67	56	11
26	50	10	60	83%	17%	68	57	11
27	50	10	60	83%	17%	64	53	11
28	50	10	60	83%	17%	60	50	10
29	50	10	60	83%	17%	58	48	10
30	50	20	70	71%	29%	58	41	17
31	50	20	70	71%	29%	58	41	17
TOTAL SFD	1360	520	1880	72%	28%	1735	1258	480
TOTAL AF	2698	1031	3729			3441	2495	952

Table C-5 La Union East Canal Diversion Charge Summary

LA UNION EAST ORDER, DIVERSION, BYPASS, AND CHARGE SUMMARY											EBID
May-08											
	N.M. ORDER	TEXAS ORDER	BYPASS ORDER	TOTAL ORDER	LA UNION E SFD	W.W. 32 SFD	NET DELIVERY	% N.M.	% TEX	N.M. CHARGE	TEXAS CHARGE
1	15	25	60	100	106	56	50	38%	63%	19	31
2	15	25	30	70	76	59	40	38%	63%	15	25
3	0	0	70	70	75	69	6	0%	0%	0	0
4	0	0	70	70	79	66	13	0%	0%	0	0
5	0	0	70	70	66	58	8	0%	0%	0	0
6	0	0	70	70	75	15	60	0%	0%	0	0
7	20	40	40	100	100	16	84	33%	67%	28	56
8	20	40	40	100	114	2	112	33%	67%	37	75
9	30	60	10	100	99	0	99	33%	67%	33	66
10	30	60	10	100	100	0	100	33%	67%	33	67
11	20	40	60	120	100	7	93	33%	67%	31	62
12	20	40	60	120	112	40	72	33%	67%	24	48
13	20	40	60	120	121	43	78	33%	67%	26	52
14	20	40	60	120	116	39	77	33%	67%	26	51
15	30	60	30	120	108	31	78	33%	67%	26	52
16	30	60	30	120	118	32	88	33%	67%	29	59
17	30	60	30	120	117	27	90	33%	67%	30	60
18	20	30	70	120	124	28	96	40%	60%	38	58
19	20	30	70	120	124	58	66	40%	60%	26	40
20	20	30	70	120	121	66	55	40%	60%	22	33
21	20	30	70	120	117	75	47	40%	60%	19	28
22	20	20	80	120	115	75	40	50%	50%	20	20
23	20	20	80	120	121	62	59	50%	50%	30	30
24	20	20	80	120	120	63	57	50%	50%	29	29
25	20	20	80	120	120	65	55	50%	50%	28	28
26	20	20	80	120	125	50	75	50%	50%	38	38
27	20	20	80	120	116	66	50	50%	50%	25	25
28	20	20	80	120	113	59	54	50%	50%	27	27
29	20	20	80	120	108	49	59	50%	50%	30	30
30	30	50	40	120	126	43	83	38%	63%	31	52
31	30	50	40	120	115	35	80	38%	63%	30	50
SFD	600	970	1800	3370	3347	1354	2024	38%	62%	750	1192
AC-FT	1190	1924	3570	6684	6639	2686	4015			1488	2364

Table C-6 Bypass Credit Summary

ELEPHANT BUTTE IRRIGATION BYPASS SUMMARY
BYPASS SUMMARY
May-08

Day	Ordered Arrey Bypass	Arrey W.W. 5	Arrey W.W. 16	Actual Arrey Bypass	Actual Arrey Spill	Ordered Leasburg Bypass	Leasburg W.W. 8	Actual Leasburg Bypass	Actual Leasburg Spill	Ordered Eastside Bypass	Eastside W.W. 18	Actual Eastside Bypass	Actual Eastside Spill	Ordered Westside Bypass	Westside W.W. 31	Actual Westside Bypass	Actual Westside Spill
1	0	1	3	0	4	0	5	0	5	0	0	0	0	0	0	0	0
2	0	1	3	0	4	0	4	0	4	0	0	0	0	0	0	0	0
3	0	1	3	0	4	0	7	0	7	0	0	0	0	0	0	0	0
4	0	1	1	0	2	0	23	0	23	0	0	0	0	0	0	0	0
5	0	1	3	0	4	0	20	0	20	0	0	0	0	0	0	0	0
6	0	1	2	0	3	0	4	0	4	0	0	0	0	0	0	0	0
7	0	1	2	0	3	0	3	0	3	0	0	0	0	0	0	0	0
8	0	1	2	0	3	30	14	14	0	0	0	0	0	0	0	0	0
9	0	1	1	0	2	0	15	0	15	0	0	0	0	0	0	0	0
10	0	1	1	0	2	0	8	0	8	0	0	0	0	0	0	0	0
11	0	1	2	0	3	0	16	0	16	0	0	0	0	0	0	0	0
12	0	1	2	0	3	0	5	0	5	0	0	0	0	0	0	0	0
13	0	1	1	0	2	0	4	0	4	0	0	0	0	0	0	0	0
14	0	1	1	0	2	0	3	0	3	0	0	0	0	0	0	0	0
15	0	1	1	0	2	0	6	0	6	0	0	0	0	0	0	0	0
16	0	1	1	0	2	0	9	0	9	0	0	0	0	0	0	0	0
17	0	1	1	0	2	0	4	0	4	0	0	0	0	0	0	0	0
18	0	1	1	0	2	0	7	0	7	0	0	0	0	0	0	0	0
19	0	0	1	0	1	0	12	0	12	0	0	0	0	0	0	0	0
20	0	0	1	0	1	0	10	0	10	0	0	0	0	0	0	0	0
21	0	0	1	0	1	0	5	0	5	0	0	0	0	0	0	0	0
22	0	0	1	0	1	0	5	0	5	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0
24	0	1	0	0	1	0	6	0	6	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0
27	0	5	0	0	5	0	9	0	9	0	0	0	0	0	0	0	0
28	0	5	0	0	5	0	7	0	7	0	0	0	0	0	0	0	0
29	0	1	0	0	1	0	5	0	5	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0
SFD	0	30	35	0	65	30	244	14	230	0	0	0	0	0	0	0	0
ACFT	0	60	69	0	129	60	484	28	456	0	0	0	0	0	0	0	0

Table C-7 Allocation Charges Adjustment for Amount of Water Ordered

EBID Actual Charges for May 2008

	Orders										Diversions								Minimum Charge	Actual Charge		
	Arrey	Percha	Leasburg	Eastside	Westside	Del Rio	California	Pumpers	Total	Arrey	Percha	Leasburg	Eastside	Westside	Del Rio	California	Pumpers	Total				
1	200	0	252	100	285	0	0	0	837	202	1	254	122	297	24	0	0	900	795	900		
2	165	0	260	139	268	0	0	0	832	156	0	275	146	263	0	0	0	840	790	840		
3	130	0	238	144	332	0	0	0	844	134	0	246	124	307	0	0	0	811	802	811		
4	130	0	230	80	280	0	0	0	720	134	0	232	80	292	0	0	0	738	684	738		
5	145	0	230	80	280	0	0	0	735	153	0	226	80	292	0	0	0	751	698	751		
6	160	0	192	101	292	0	0	0	745	168	4	192	107	310	0	0	0	781	708	781		
7	190	0	180	165	330	0	0	0	865	202	3	185	163	340	24	0	0	917	822	917		
8	220	0	232	174	330	0	0	0	956	216	2	226	172	327	0	0	0	943	908	943		
9	220	0	250	194	330	0	0	0	994	206	8	239	195	327	0	0	0	975	944	975		
10	220	0	250	172	328	0	0	0	970	212	5	245	171	327	0	0	0	960	922	960		
11	220	0	205	165	320	0	0	0	910	215	5	215	160	320	0	0	0	915	865	915		
12	220	0	190	165	320	0	0	0	895	218	0	200	159	314	20	0	0	911	850	911		
13	220	0	212	150	344	0	0	0	926	219	0	221	125	376	0	0	0	941	880	941		
14	220	0	220	105	415	0	0	0	960	226	2	229	96	406	0	0	0	959	912	959		
15	220	0	265	118	435	0	0	0	1,038	223	0	264	132	438	23	0	0	1,080	986	1,080		
16	185	0	280	155	495	0	0	0	1,115	153	7	285	160	502	23	0	0	1,130	1,059	1,130		
17	150	0	242	152	481	0	0	0	1,025	157	0	254	154	465	0	0	0	1,030	974	1,030		
18	150	0	230	141	440	0	0	0	961	157	0	241	136	444	0	0	0	978	913	978		
19	215	0	230	130	440	0	0	0	1,015	252	4	243	132	453	0	0	0	1,084	964	1,084		
20	280	0	230	130	422	0	0	0	1,062	287	3	246	130	418	10	0	0	1,094	1,009	1,094		
21	280	0	230	134	370	0	0	0	1,014	272	3	244	143	398	26	0	0	1,086	963	1,086		
22	280	0	282	146	375	0	0	0	1,083	272	4	268	150	406	26	0	0	1,126	1,029	1,126		
23	245	0	300	150	390	0	0	0	1,085	273	0	287	148	406	13	0	0	1,127	1,031	1,127		
24	210	0	278	140	375	0	0	0	1,003	206	0	269	136	401	0	0	0	1,012	953	1,012		
25	210	0	270	110	330	0	0	0	920	191	3	249	109	317	0	0	0	869	874	874		
26	210	0	270	110	330	0	0	0	920	191	4	255	108	317	13	0	0	888	874	888		
27	210	0	270	110	330	0	0	0	920	189	0	260	110	312	8	0	0	879	874	879		
28	205	0	270	118	330	0	0	0	923	190	0	259	136	307	8	0	0	900	877	900		
29	210	0	232	152	371	0	0	0	965	221	0	229	163	370	25	0	0	1,008	917	1,008		
30	235	0	220	190	495	0	0	0	1,140	253	0	211	193	444	2	0	0	1,103	1,083	1,103		
31	250	0	250	172	490	0	0	0	1,162	255	0	255	155	465	5	0	0	1,135	1,104	1,135		
																		SFD:	29,871		29,876	5
																		Acre-feet	59,248		59,258	10

Table C-8 EBID Allocation Charge Summary

ELEPHANT BUTTE IRRIGATION DISTRICT

DAILY FLOW FOR MAY-07

DAY	PERCHA	ARREY	LEASBURG	DEL RIO	EASTSIDE	WESTSIDE	L.U.EAST	L.U.WEST
	EBID	EFAS	EBID	EBID	EFAS	EFAS	EBID	EBID
1	1	202	254	24	122	297	106	46
2	0	156	275	0	146	263	76	40
3	0	134	246	0	124	307	75	31
4	0	134	232	0	80	292	79	41
5	0	153	226	0	80	292	66	40
6	4	168	192	0	107	310	75	41
7	3	202	185	24	163	340	100	39
8	2	216	226	0	172	327	114	57
9	8	206	239	0	195	327	99	55
10	5	212	245	0	171	327	100	59
11	5	215	215	0	160	320	100	56
12	0	218	200	20	159	314	112	51
13	0	219	221	0	125	376	121	51
14	2	226	229	0	96	406	116	61
15	0	223	264	23	132	438	108	57
16	7	153	285	23	160	502	118	70
17	0	157	254	0	154	465	117	66
18	0	157	241	0	136	444	124	63
19	4	252	243	0	132	453	124	66
20	3	287	246	10	130	418	121	70
21	3	272	244	26	143	398	117	50
22	4	272	268	26	150	406	115	48
23	0	273	287	13	148	406	121	68
24	0	206	269	0	136	401	120	76
25	3	191	249	0	109	317	120	67
26	4	191	255	13	108	317	125	68
27	0	189	260	8	110	312	116	64
28	0	190	259	8	136	307	113	60
29	0	221	229	25	163	370	108	58
30	0	253	211	2	193	444	126	58
31	0	255	255	5	155	465	115	58
SFD	58	6403	7504	250	4295	11361	3347	1735
AC-FT	115	12700	14884	496	8519	22534	6639	3441

APPENDIX D – Flow Regulation Calibration at Caballo Dam

(See Excel File)