NO. 141, ORIGINAL

IN THE SUPREME COURT OF THE UNITED STATES

STATE OF TEXAS, PLAINTIFF,

v.

STATE OF NEW MEXICO

AND

STATE OF COLORADO,

DEFENDANTS.

OFFICE OF THE SPECIAL MASTER

BRIEF OF *AMICUS CURIAE* CITY OF EL PASO ON THE JOINT MOTION OF THE COMPACTING STATES TO ENTER CONSENT DECREE

January 20, 2023

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I.

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BRIEF OF AMICUS CURIAE CITY OF EL PASO ON THE JOINT MOTION OF THE COMPACTING STATES TO ENTER CONSENT DECREE

Pursuant to the Special Master's Order of December 1, 2022, *amicus curiae* the City of El Paso (El Paso) submits this Brief on the Joint Motion of the Compacting States to Enter Consent Decree. El Paso is generally supportive of efforts to settle this litigation and generally supports the concept of an Effective El Paso Index (EEPI) to measure and determine Rio Grande Compact compliance; however, it is seriously concerned that the proposed Consent Decree may adversely impact the City of El Paso, depriving it of contractual rights and a critically needed water supply.

I. INTRODUCTION AND BACKGROUND

El Paso supplies water to approximately 750,000 people in the City and County of El Paso, Texas. In doing so, it works to maximize its surface water supply from the Rio Grande and minimize its reliance upon non-renewable groundwater resources. When surface water is available, El Paso Water Utilities Public Service Board (El Paso Water) is able to supply roughly one-half of its total demand from surface water, using groundwater primarily during the nonirrigation season (when Rio Grande Project water is unavailable to the City) and to supply areas to which treated surface water cannot be delivered at this time.

El Paso's surface water supply is purchased from El Paso County Water Improvement District No.1 (EPCWID) and the United States acting through the Bureau of Reclamation (USBR) pursuant to "conversion contracts" authorized under federal reclamation law and particularly the Act of February 25, 1920 (also referred to as the "Miscellaneous Purposes Act"), 43 U.S.C. § 521, which provides for conversion of Rio Grande Project water from irrigation to miscellaneous purposes (including municipal use) and uses other than irrigation. El Paso has a series of such conversion contracts with EPCWID and USBR, dating back to the 1940's,

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generally authorizing El Paso to receive water originally intended for irrigation of certain EPCWID acreage. Through lease or purchase El Paso has acquired rights to use the irrigation allotment from that acreage, now within the city limits, for municipal purposes.

The largest single conversion contract is El Paso's 2001 Rio Grande Project Implementing Third-Party Contract with EPCWID and USBR for up to 28,116 acre-feet of surface water per year, as originally adopted (2001 Contract).¹ The vast majority of this water comes from what the 2001 Contract refers to as the American Canal Extension (ACE) conservation credit.²

Deliveries under the 2001 Contract and El Paso's other conversion contracts are absolutely essential to El Paso's efforts to shift as much of its demand as possible away from groundwater. Since 2008 El Paso Water has received deliveries cumulatively totaling 275,360 acre-feet of water under the 2001 Contract. During that same time El Paso Water has paid EPCWID \$ 45,610,574 for this water.³ The 2001 Contract and the other conversion contracts are essential to El Paso Water's ability to supply customer demands and preserve long term supplies. Likewise, they are an essential source of income for EPCWID.

¹ The 2001 Contract has been admitted into the trial record as Trial Exhibit US-116, a copy of which is attached as Exhibit B to John Balliew's Declaration, attached hereto and incorporated as Exhibit 1. The original contract authorized El Paso to receive the irrigation water supply on 1000 acres of land; it was amended in 2010 to authorize the City receiving up to 4.0 acre-feet per acre, on an additional 250 acres. Other water supplied under the 2001 Contract is attributable to the ACE conservation credit and credits for El Paso Water's discharge of usable sewage effluent into EPCWID's system.

² The ACE conservation credit is for water, in Texas, that would have been lost to evapotranspiration and seepage, but which is conserved by the ACE Project. It is estimated that up to 29,932 acre-feet per year can be conserved by the ACE Project. 2001 Contract at pp.47-48 of 74. This source of water accounts for the majority of deliveries to El Paso under the 2001 Contract.

³ See Balliew Declaration at ¶ 7.

Neither the proposed Consent Decree nor its appendices expressly address elimination of or reduction of deliveries under any of El Paso's conversion contracts, and El Paso believes that elimination of these credits provided under the 2001 Contract and reduction of deliveries to El Paso were not intended by the Compacting States. However, the Declaration of Margaret Barroll, Ph.D. included as part of the Compacting States' filing in support of their proposed Consent Decree interprets this issue in a way that negatively impacts El Paso, who does not want to waive any rights by not addressing this concern at this juncture.⁴

At paragraph 40(c) Dr. Barroll states that the American Canal Extension Credit and the credit for usable sewage effluent from El Paso's Haskell Street wastewater treatment plant have "become superfluous and should be eliminated." Similarly, at paragraph 40(b) Dr. Barroll states that "[m]oving the charge point to the El Paso Gage resolves New Mexico's First Counterclaim regarding unauthorized depletions in Texas, and New Mexico's Seventh Counterclaim regarding violations of the Miscellaneous Purposes Act." Presumably Dr. Barroll also bases this statement regarding resolution of New Mexico counterclaims upon her conclusion that "all Project accounting charges and credits associated with Texas actions downstream of the El Paso Gage would become superfluous and should be eliminated." (*Id.* ¶ 40(c)).

If the proposed Consent Decree operates, as suggested by Dr. Barroll, to impair El Paso's rights under any of its conversion contracts, El Paso believes that under applicable authorities, discussed below, the proposed Consent Decree should be limited to avoid impairing El Paso's contractual rights. However, El Paso submits, as discussed below, that a better reading of the proposed Consent Decree is that it does not address or compel reduction of El Paso's rights to

⁴ See Compacting States' Compendium of Exhibits, Exhibit 6, Declaration of Margaret Barroll, Ph.D. in Support of Joint Motion of the State of Texas, State of New Mexico, and State of Colorado to Enter Consent Decree Supporting the Rio Grande Compact (Barroll Declaration).

purchase water under *any* of its conversion contracts. Further, El Paso invites the Compacting States to respond specifically to this issue, stating whether their intent in drafting the proposed Consent Decree includes reduction or elimination of El Paso's rights under its conversion contracts.

II. ARGUMENT AND AUTHORITIES

A consent decree that impacts the interests of the public or third parties imposes a heightened responsibility on the Court to protect such interests. *U.S. v. Oregon*, 913 F.2d at 580. This requirement is intended to protect third parties who did not participate in negotiation of the compromise. *Id.*; *see also U.S. v. City of Miami*, 664 F.2d at 442 ("parts of the decree do affect

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the third party who did not consent to it, and these parts cannot properly be included in a valid consent decree.").

El Paso submits that if the Barroll Declaration is correct and El Paso loses much or all of its existing rights to receive water under the conversion contracts, its rights have been destroyed by the proposed Consent Decree, contrary to the standard announced by *U.S. v. Oregon*. El Paso has not consented to destruction of its rights, as required by *City of Haileah* and *City of Miami*. Fairness would not be accorded the City because it was both excluded from the ultimate settlement negotiations that produced the proposed Consent Decree and not advised that its water supply received under contract rights could be impacted. Until the Compacting States' filing of the Joint Motion for Entry of Consent Decree, including the Barroll Declaration, El Paso was completely uninformed of this potential impact.⁵

El Paso believes on several grounds, however, that Dr. Barroll's statement that the ACE credit and the effluent credit become superfluous and should be eliminated is incorrect. First, no other part of the proposed Consent Decree or its appendices makes a similar statement; only Dr. Barroll appears to advance this conclusion. Second, it makes no logical sense. The ACE credit (water salvaged by conservation) and the effluent return credit (water added by El Paso Water discharges) are both based on sources of water already in Texas, below the El Paso Gage. Recognition of these credits has no impact whatsoever on New Mexico's delivery obligations under the Consent Decree's EEPI. Finally, the fact that El Paso was never notified of its possible loss of contractual rights is evidence that the negotiating parties never intended to eliminate El Paso's rights to these credits.

⁵ Balliew Declaration at ¶ 9.

El Paso is not opposed to entry of the proposed Consent Decree if by order of the Special Master or some other appropriate means, it can be clarified that the proposed Consent Decree does not invalidate or reduce El Paso's rights to receive water under any of its conversion contracts. Failing such a determination, El Paso requests the opportunity to provide evidence that Dr. Barroll's conclusion is incorrect and that the proposed Consent Decree does not deprive El Paso of its rights under the conversion contracts.

III. CONCLUSION

El Paso generally supports the Compacting States' efforts to settle this litigation through negotiation and believes the EEPI is a reasonable approach. El Paso requests that the Compacting States in their joint reply to this brief indicate their intent as to whether or not the proposed Consent Decree impacts El Paso's rights to receive water under the 2001 Contract or any of its conversion contracts. Failing such a response in the reply of the Compacting States, El Paso requests that the Special Master address this issue in any order approving or recommending the proposed Consent Decree, and rule that the Consent Decree does not eliminate or reduce El Paso's rights to receive water under the conversion contracts. Failing that, El Paso requests an evidentiary hearing on the issue.

Respectfully submitted,

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CERTIFICATE OF SERVICE

This is to certify that on the 20th of January, 2023, I caused a true and correct copy of the following document, **Brief of** *Amicus Curiae* **City of El Paso on the Joint Motion of the Compacting States to Enter Consent Decree**, to be served by e-mail upon all counsel of record and interested parties on the Service List in this matter, attached hereto.

Respectfully submitted,

/s/ Susan M. Maxwell

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EXHIBIT 1

DECLARATION OF JOHN E. BALLIEW, P.E.

- 1. My name is John E. Balliew. I am over the age of 18 and fully qualified to make this declaration. Matters stated below are based upon my personal knowledge.
- A true and correct copy of my current resume is attached hereto as Exhibit A. As it indicates, I am a professional engineer, have worked for El Paso Water Utilities Public Service Board ("El Paso Water") since 1983, and served as El Paso Water President and CEO for the last ten years.
- 3. I am thoroughly familiar with El Paso Water's water supply operations, including its sources of surface and groundwater.
- 4. Attached hereto as Exhibit B is a true and correct copy of the City of El Paso's Rio Grande Project Implementing Third-Party Contract, with El Paso County Water Improvement District No. 1 (EPCWID) and the United States of America Department of the Interior Bureau of Reclamation (USBR), executed in 2001 (the "2001 Contract").
- 5. The 2001 Contract, as originally adopted, beginning in 2002 entitles El Paso Water to receive up to 28,116 acre-feet of surface water per year, as determined by the EPCWID Board of Directors. (See Exh. B, § 7A(1)). The contract allows El Paso Water to purchase water salvaged by the American Canal Extension (ACE) Project and also to obtain a credit for usable sewage effluent discharged into EPCWID's system.
- 6. According to the engineer's report attached as Exhibit D to the 2001 Contract, much of the water available under the 2001 Contract comes from the ACE conservation credit, which reflects water salvaged in Texas primarily due to reduced seepage and evapotranspiration losses attributable to the ACE Project. (Exh. B, Exh. D, at p. 47 of 74). It is estimated that the ACE Project salvages up to almost 30,000 acre-feet per year, of which up to 21,883 acre-feet per year can be made available to El Paso Water under the 2001 Contract. (*Id.* at p. 48 of 74 and p. 59 of 74). El Paso Water has had an equitable interest in water salvaged by the ACE Project since it paid EPCWID \$5 million to fund payment of the local share of that Project.
- During the last fifteen years, from 2008-2022, El Paso Water has received under the 2001 Contract 275,360 acre-feet of water from EPCWID. For this water El Paso Water has paid EPCWID \$ 45,610,704. The 2001 Contract and all the other conversion contracts are essential to El Paso Water's ability to supply customer demands and preserve long term supplies.
- 8. Water received under the conversion contracts is absolutely essential to El Paso Water and its efforts to supply water to its roughly 750,000 customers within the City of El Paso and El Paso County. It is El Paso Water's strategy to rely on as much surface water as possible and conserve underground water to the maximum extent possible. The 2001 Contract is the

EXHIBIT 1

largest single source of this surface water, making up roughly one-third of the City's total surface water supply in non-drought years.

- 9. While El Paso Water was not directly involved in the parties' settlement negotiations, it stayed involved and informed of the progress of negotiations to the extent possible. El Paso Water was never advised that the Compacting States' proposed settlement would affect its rights to receive water under its conversion contracts. For this reason I was extremely concerned when I reviewed the Margaret Barroll declaration that accompanied the proposed Consent Decree. Dr. Barroll's Declaration, at Paragraph 40(c), states the ACE conservation credit and the credit for usable sewage effluent are "superfluous and should be eliminated."
- 10. El Paso Water disagrees with Dr. Barroll's statements and believes that even if the proposed Consent Decree is adopted, the ACE conservation credit continues to be an important and significant source of surface water for El Paso in accordance with the 2001 Contract. If this is not the case, and no replacement surface water supply is made available, I will be seriously opposed to the Consent Decree.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 20th day of January, 2023 in El Paso, Texas.

John E. Balliew, P.E. President and CEO, El Paso Water

Exhibit A

John E. Balliew, P.E. El Paso Water 1154 Hawkins Blvd. El Paso, Texas 79925 915.594.5595

Education

B.S. Chemical Engineering Texas A&M University, 1982

Career Highlights

President – El Paso Water Utilities Public Service Board 01/10/2013 – Present

> Manage operation of a complex water, wastewater, reclaimed water and stormwater utility for a service area population of approximately 800,000

Vice President – Operations and Technical Services El Paso Water Utilities Public Service Board 12/03/07 – 01/01/13

> Manage operation of six water treatment plants, 150 wells, numerous pump stations and reservoirs along with three wastewater treatment plants and one water reclamation plant.

> Conducted numerous Operational Site Visits in conjunction with the Department of Homeland Security as a follow up to the Vulnerability Assessment

Manage the operation and maintenance of a stormwater system consisting of 108 channels, 41 drains, 277 ponds, 23 large dams and 16 pump stations.

> Manage the construction of approximately \$128 million of capital facilities each year.

Manage a staff of 594 dedicated public servants.

Manage \$125 million in O&M expenses.

Water Systems Division Manager El Paso Water Utilities Public Service Board 08/01/01 – 12/03/07

> Conducted the first Vulnerability Assessment for El Paso Water Utilities and hired the first full-time Security Manager

Exhibit A

> Manage operation of six water treatment plants, approximately 150 wells – The challenge of managing the operation of two surface water treatment plants which must run at full capacity for 210 days per year and which conduct all preventive maintenance during the remaining 155 days is daunting. Determining what corrective maintenance must unavoidably be done during the operational period is a skill developed by working directly at the plant.

> Operation of one of the most complex storage, transmission and distribution systems - There are few more complex water systems in the country. Our system of 56 pressure planes including 34 intermediates is very complex. Management of a complex water system requires many years of direct experience. The ability to move water when primary routes are disrupted by main breaks or other outages is a skill that develops over time. Furthermore, system knowledge is critical to controlling CIP expenditures to eliminate unnecessary construction and to defer what construction can be deferred.

> Manage the construction of approximately \$20 million of capital facilities each year - Although there are many people involved in the CIP, someone must determine what problems and opportunities exist initially. I have played a key roll in early identification of key issues. For example, I followed the arsenic regulatory development process for many years and participated in key work to shape the final form of the regulation to directly lower the CIP expended by EPWU. Thus, my influence over the CIP is much greater than the actual dollar amount of projects directly managed.

> Manage a staff of 224 employees - EPWU has a core of the most dedicated workers employed anywhere. It has been my pleasure to assist them in improving their lives through continuing education, obtaining "A" level certifications, assisting their families obtain scholarships and funding for their children's education.

> Manage pilot plant operations for arsenic and desalination facilities -Treatment plants get designed based on pilot plant testing. I directly ran pilot testing for the Jonathan W. Rogers plant, the four arsenic plants and the Kay Bailey Hutchison desalination facility. Good pilot plants make good plant designs. Good pilot plants also make for cost-effective CIP.

> Manage \$34.5 million in O&M expenses - Management of O&M expenses is very difficult in an organization that values getting the job done. This includes balancing many priorities to maintain customer satisfaction.

> Participated in the Public Working Group process for seven years - The development of the PWG to steer EPWU has been effective and rewarding. Obtaining the backing of key individuals improves the successful outcome of many projects. This requires being able to get along well with an assortment of difficult people.

> Developed and managed the programs to reduce unbilled water from 14 to 8% - I conducted a pilot test of the Permalog system and developed an analysis of the systems effectiveness. I overcame intense internal opposition to the system and successfully implemented the program which has saved 6 MGD of water. I also conducted the first pipe internal acoustic leak monitoring for large diameter mains. I conducted the first electromagnetic condition assessment of steel cylinder concrete pipe. I pilot tested the Smart-ball leak detection system, only the second water system pilot test in the nation. > Oversee design of all water facilities to ensure compliance with TCEQ regulations - Maintaining a good relationship with TCEQ is key to a successful and cost-effective operation. Although there is black and white in the regulatory arena, there is a considerable amount of grey that requires relationship to sort through without confrontation.

Environmental Compliance Manager El Paso Water Utilities Public Service Board 04/27/92 – 07/31/01

- Analyzed proposed and recently enacted environmental legislation for impact on water and wastewater treatment processes
- Manage a staff of 36 employees including 25 professionals
- Conducted research on various chemicals to determine their affects on treatment plant effluent toxicity
- > Applied for and obtained EPA NPDES wastewater discharge permits
- > Represented El Paso Water Utilities at public hearings
- > Managed Citizen's Advisory Committees for various projects
- Managed the EPWU laboratory

Planning and Development Manager El Paso Water Utilities Public Service Board 01/14/91 - 04/27/92

- > Managed all technical aspects of the Water Resources 50 Year Master Plan
- > Testified before the Texas Natural Resources Conservation Commission regarding proposed legislation
- Developed and implemented staffing re-organization for laboratory and inspector personnel
- Developed numerous water reclamation, wastewater and water treatment feasibility and treatment studies
- > Developed public information brochures and conducted public information programs

Chemical Engineering Associate and other positions El Paso Water Utilities Public Service Board 04/04/83 - 01/14/91

- > Supervised daily operations, maintenance, and quality control of a laboratory
- > Designed and installed distributed process control instrumentation systems
- > Designed a heat exchange system for ozone generators with closed loop cooling
- > Served as a staff engineer to the water distribution division
- > Designed pumping, storage and other water distribution facilities for critical areas
- > Analyzed pumping stations and reservoir operations for compliance with TNRCC standards
- > Designed and installed distributed process control and instrumentation systems
- > Optimized treatment systems at a 40 MGD potable water treatment

Awards

El Paso Engineering of the Year 2012 El Paso Young Engineer of the Year 1992

Organizations

RESOLUTION

A RESOLUTION AUTHORIZING THE MAYOR TO SIGN THE RIO GRANDE PROJECT IMPLEMENTING THIRD-PARTY CONTRACT AMONG THE UNITED STATES OF AMERICA DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION, THE EL PASO WATER IMPROVEMENT DISTRICT #1 (DISTRICT), AND THE CITY OF EL PASO JOINED BY ITS PUBLIC SERVICE BOARD (PSB) FOR CONVERSION OF RIO GRANDE PROJECT WATER TO MUNICIPAL USE; DELIVERY OF DISTRICT WATER TO THE PSB JONATHAN ROGERS WATER TREATMENT PLANT; AND DELIVERY BY THE PSB OF USABLE EFFLUENT TO THE DISTRICT.

WHEREAS, the PSB held a special meeting February 1, 2001 approving the Rio Grande Project Implementing Third-Party Contract and adopting a resolution requesting the City of El Paso to sign said contract; and,

WHEREAS, the City Council finds it to be in the public interest for the City of El Paso to enter into the Rio Grande Project Implementing Third-Party Contract, NOW THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF EL PASO THAT:

The Mayor is hereby authorized to sign on behalf of the City of El Paso, the Rio Grande Project Implementing Third-Party Contract among the United States of America Department of the Interior Bureau of Reclamation, the El Paso Water Improvement District #1 (District) and the City of El Paso joined by it Public Service Board for conversion of Rio Grande Project Water to Municipal Use and providing for delivery of District water to the Public Service Board's Jonathan Rogers Water Treatment Plant and delivery by the Public Service Board of usable effluent to the District.

ADOPTED and EFFECTIVE this the 6th day of February, 2001.

THE CITY OF EL PASO:

Carlos M. Ramirez, P.E. Mayor



anderthentor

Carole Hunter City Clerk

APPROVED AS TO FORM:

Robert D. Andron Assistant City Attorney

DOC #75629/RDA/FEB2001/Water Y35.





EPWU000238351

RESOLUTION

A RESOLUTION APPROVING THE RIO GRANDE PROJECT IMPLEMENTING THIRD-PARTY CONTRACT AMONG THE UNITED STATES OF AMERICA DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION, THE EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1, AND THE CITY OF EL PASO JOINED BY ITS PUBLIC SERVICE BOARD FOR CONVERSION OF RIO GRANDE PROJECT WATER TO MUNICIPAL USE; DELIVERY OF DISTRICT WATER TO THE JONATHAN ROGERS WATER TREATMENT PLANT; AND DELIVERY BY THE CITY OF EL PASO OF USABLE SEWAGE EFFLUENT TO THE EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1; AUTHORIZING THE BOARD CHAIR TO EXECUTE THE CONTRACT; AND REQUESTING THE CITY COUNCIL TO AUTHORIZE THE MAYOR TO EXECUTE THE CONTRACT.

RESOLVED, that the Board Chair is authorized to execute the the Rio Grande Project Implementing Third-Party Contract among the United States of America Department of the Interior Bureau of Reclamation, the El Paso County Water Improvement District No. 1, and the City of El Paso joined by its Public Service Board for Conversion of Rio Grande Project Water to Municipal Use; Delivery of District Water to the Jonathan Rogers Water Treatment Plant; and Delivery by the City of El Paso of Usable Sewage Effluent to the El Paso County Water Improvement District No. 1, and the City Council is requested to authorize the Mayor to execute the Contract.

PASSED AND APPROVED at a special meeting of the Public Service Board of the City of El Paso Texas, this 1st day of February, 2001, at which meeting a quorum was present, held in accordance with the provisions of V.T.C.A. Government Code, Sections 551.001 et. seq.

PUBLIC SERVICE BOARD

ATTEST:

Secretary-Treasurer

P:\4THQ0001\RESOS\WIDIMPLK.RES 01/30/01

A Pation Chair

APPROVED AS TO FORM:

Michael Spurlock, General Counsel

EPWU000238352

US0808520

Contract No. 01-WC-40-6760

RIO GRANDE PROJECT IMPLEMENTING THIRD-PARTY CONTRACT

among the

UNITED STATES OF AMERICA DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION,

the

EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1,

and the

CITY OF EL PASO JOINED BY ITS PUBLIC SERVICE BOARD

for

CONVERSION OF RIO GRANDE PROJECT WATER TO MUNICIPAL USE; DELIVERY OF DISTRICT WATER TO THE JONATHAN ROGERS WATER TREATMENT PLANT; AND DELIVERY BY THE CITY OF EL PASO OF USABLE SEWAGE EFFLUENT TO THE EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1

EPWU000238353

US0808521

Contract No. 01-WC-40-6760

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Contract No. 01-WC-40-6760

i	RIO GRANDE PROJECT
2	IMPLEMENTING THIRD-PARTY CONTRACT
3	
4	among the
5	
6	UNITED STATES OF AMERICA
7	DEPARTMENT OF THE INTERIOR
8	BUREAU OF RECLAMATION,
9	
10	the
11	
12	EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1,
13	
14 15	and the
16	CITY OF EL PASO
17	JOINED BY ITS PUBLIC SERVICE BOARD
18	
19	for
20	
21	CONVERSION OF RIO GRANDE PROJECT WATER TO MUNICIPAL
22	USE; DELIVERY OF DISTRICT WATER TO THE JONATHAN ROGERS
23	WATER TREATMENT PLANT; AND DELIVERY BY THE CITY OF EL
24	PASO OF USABLE SEWAGE EFFLUENT TO THE EL PASO COUNTY
25	WATER IMPROVEMENT DISTRICT NO. 1
26	
27	WITNESSETH:
28	THIS IMPLEMENTING THIRD-PARTY CONTRACT is among the
29	EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1, a political
30	subdivision of the State of Texas, organized and existing under and by virtue of
31	Article XVI, Section 59 of the Constitution of the State of Texas, hereinafter
32	referred to as "the District," the CITY OF EL PASO, a municipal corporation
33	organized and existing under and by virtue of the laws of the State of Texas, joined
34	by its Public Service Board acting through its duly authorized Chairman,
	Approved as to Form: Jmg District Ly City United States Page 1 of 74

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US0808524

Contract No. 01-WC-40-6760

hereinafter referred to collectively as "the City," and the UNITED STATES OF
AMERICA, hereinafter referred to as "the United States," through the Secretary of
the Interior, hereinafter referred to as "the Secretary," pursuant to the Act of June
17, 1902 (32 Stat. 388) and all acts amendatory thereof or supplementary thereto,
particularly the Act of February 25, 1920 (41 Stat.451).

6

RECITALS .

7 WHEREAS, this Implementing Third-Party Contract ("this Contract") is entered into pursuant to Contract No. 8-WC-40-R5030 between the United States 8 9 and the El Paso County Water Improvement District No. 1, Texas, for the 10 Conversion of Rio Grande Project Water from Irrigation to Miscellaneous Purposes and Uses Other than Irrigation dated March 19, 1998 ("the Conversion 11 Contract"), and the Rio Grande Project Third-Party Contract No. 00-WC-40-12 13 R6460 among the United States the El Paso County Water Improvement District No. 1, and the City of El Paso joined by its Public Service Board, dated December 14 1, 1999 ("the Third-Party Contract"); and 15

WHEREAS, to meet the present and anticipated future needs of the City and County of El Paso and their inhabitants, the City is expanding its Jonathan Rogers Water Treatment Plant and which expansion the City expects to complete in February of 2002; and

20 WHEREAS, in accordance with the Rio Grande American Canal Extension 21 Act of 1990, a substantial local cost share was paid for the American Canal 22 Extension Project; and

WHEREAS, the City and the District are willing to exchange sewage
 effluent for District Water (as hereafter defined).

25

Approved as to Form: my District I's City United States Page 2 of 74

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Contract No. 01-WC-40-6760

1		AGREEMENT
2		NOW THEREFORE, the parties agree as follows:
3	1.	Definitions of Terms Used in this Contract
4	А.	Annual Delivery Allocation: The Annual Delivery Allocation is the acre-
5		feet of District Water per acre of District Water Right Lands determined
6		annually by the Directors of the District to be available for delivery by the
7		District for agricultural use on District Water Rights Lands.
8	B.	City's Water Order Budget: The budget developed annually by the City in
9		accordance with section 7D for the District Water available under this
10		Contract.
11	C,	District Manager: General Manager of the District, or such other officer of
12		the District as may be designated by the Directors of the District to act in the
13		place of the General Manager.
14	D.	District Portion: The term "District Portion" shall have the meaning given
15		to it in 14A(1) of the Third-Party Contract.
16	E.	District Water: Any and all water available to the District regardless of the
17		source.
18	F.	District Water Right Lands: Lands located within the boundaries of the
19		District that are classified under Reclamation Law and by the District as
20		"irrigable" or as having "first-class water rights."
21	G.	Estimated Charge: The charge for District Water estimated by the District
22		pursuant to section 10B of this Contract.

EPWU000238358

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US0808526

US-0116_0008

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US-0116 0009

US0808527

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Exhibit B

Contract No. 01-WC-40-6760

Existing Contracts: The following contracts among the District, the City, 1 H. 2 and the United States: 1. Contract No. 116r-1541 to Supply Water to the City of El Paso for 3 Municipal Purposes dated February 18, 1941; 4 2. Contract No. 116r-1712 to Supply Water to the City of El Paso for 5 Municipal Purposes dated December 1, 1944 (to which Elephant Butte Irrigation 6 7 District is a party); and 3. Contract No. 14-06-500-762 Permitting the City of El Paso to Acquire 8 Additional Water Supply for Municipal Purposes dated December 20, 1962. 9 Fair Market Value: The amount at which District Water would change 10 I. hands between a willing buyer and El Paso County Water Improvement 11 District No. 1 with neither being under any compulsion to buy or sell and both 12 having reasonable knowledge of the relevant facts. Fair Market Value is the 13 price in cash, or its equivalent, that the District Water would have brought at 14 15 the time District Water changes hands, considering the highest and most 16 profitable use, if then offered for sale in the open market, in competition with other similar water at or near the point of delivery of District Water, with a 17 reasonable time allowed to find a purchaser. 18 Federal Revenue: "Federal Revenue" is the amount payable to the United J.

J. Federal Revenue: "Federal Revenue" is the amount payable to the United
 States as described in section 14 of the Third-Party Contract and section 5 of
 the Conversion Contract.

K. Other Usable Sewage Effluent: Sewage effluent which meets the
 requirements of section 12 of this Contract and which is produced at any
 WWTP of the City other than from February 15 through October 15 at the
 Haskell Street WWTP.

Approved as to Form: And District My City ____ United States Page 4 of 74

Contract No. 01-WC-40-6760

L. Project Water: Water appropriated or otherwise acquired by the United 1 States for the benefit of the District. 2 M. Reclamation Law: The Act of June 17, 1902 (32 Stat. 388), and all acts 3 amendatory thereof or supplementary thereof, including particularly the Act 4 of February 25, 1920 (31 Stat. 451). 5 N. Secretary or Contracting Officer: The Secretary of the Interior of the 6 United States or his duly authorized representative. 7 Usable Sewage Effluent: Sewage effluent produced at the City's Haskell 0. 8 Street WWTP which meets the requirements of sections 8A, 8B, and 8C in 9 this Contract. 10 11 P. Underflow of the Rio Grande: Water in sand, soil, and gravel below the bed of the Rio Grande upstream of the American Diversion Dam, together 12 with the water in the lateral extensions of the water-bearing material on each 13 side of the Rio Grande upstream of the American Diversion Dam, such that 14 the surface flows are in contact with the subsurface flows, the latter flows 15 being confined within a space reasonably defined and having a direction 16 corresponding to that of the surface flow of the Rio Grande upstream of the 17 American Diversion Dam. 18 WWTP: A wastewater treatment plant. 19 0.

20 2. Coordination with Conversion Contract and Third-Party Contract

This Contract is subject to the Conversion Contract and the Third-Party Contract. All provisions that are required by the Conversion Contract to be included in any third-party contract are by reference included and incorporated in this Contract and made a part hereof.

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Contract No. 01-WC-40-6760

1 3. Contracting Authority

This Contract is executed under the authority of the Conversion Contract, the Third-Party Contract, the Act of June 17, 1902 (32 Stat. 388) and all acts amendatory thereof or supplementary thereto, particularly the Act of February 25, 1920 (41 Stat. 451).

6 4. Term

7 The term of this Contract shall commence upon the date of execution hereof 8 by the United States and terminate upon the same date as that on which the Third-9 Party Contract terminates (whether such date is the original or an extended 10 termination date).

11 5. Use of Water Provided Under This Implementing Contract

All water provided hereunder to the City shall be treated by the City at its Jonathan Rogers Water Treatment Plant to make it suitable for use as municipal and industrial water and distributed by the City among its consumers for use solely in the United States, including without limitation the Lower Valley Water District ("LVWD"), in accordance with all applicable law and regulation.

17 6. Point of Delivery

The District shall deliver all water provided hereunder by the District to the City at the Jonathan Rogers Water Treatment Plant diversion structure located on the right bank at station 0.05 (miles) of the Riverside Canal.

21 7. District Water to be Provided by District to City

22 A. Quantities

During the year 2001, in addition to the water supplied to the City
 pursuant to the Existing Contracts, subject to applicable law, subject to availability,

Approved as to Form: Jmj District KS City United States Page 6 of 74

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US0808529

Contract No. 01-WC-40-6760

1 and subject to section 7A(2) below, the District shall sell and deliver to the City at 2 the Point of Delivery and the City shall purchase from the District not more than 11,000 acre-feet of District Water plus any quantity up to 8,000 acre-feet elected 3 by the City pursuant section 7A(2) below. During the year 2002 and each calendar 4 5 year thereafter or portion thereof during the term hereof, in addition to the water supplied to the City pursuant to the Existing Contracts, subject to applicable law, . 6 subject to availability, and subject to section 7A(2) below, the District shall sell 7 and deliver to the City at the Point of Delivery and the City shall purchase from the 8 District not more than 28,116 acre-feet of District Water. In any year during the 9 10 term hereof, except the year 2001, in which the Annual Delivery Allocation is less than 4.00 acre-feet per acre, the said 28,116 acre-feet of District Water shall be 11 reduced in accordance with Table 1 below. For values of the Annual Delivery 12 13 Allocation between those listed in Table 1, the Maximum Annual Delivery of District Water shall be interpolated. For example, if the Annual Delivery 14 Allocation is 1.50 acre-feet, then the Maximum Annual Delivery of District Water 15 16 shall be 7,029 acre-feet $[5,623+(1.60-1.50)/(1.60-1.40)\times(8,435-5,623)]$. The quantities of District Water listed in Table 1 are subject to availability as 17 determined by the Directors of the District pursuant to section 7B of this Contract. 18 In each year during the term of this Contract, and to the extent permitted by law, 19 the District shall determine the quantities of District Water available for delivery to 20 the City under this Contract before the District determines the quantities of District 21 Water available for delivery under contracts between the District and third parties 22 other than the City providing for the sale of District Water for miscellaneous 23 purposes and uses other than irrigation. 24

Approved as to Form: Jmj District 148 City

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EPWU000238362

		Table 1		
Annual Delivery Allocation (acre- feet/acre)	Maximum Annual Delivery of District Water to City (acre-feet)		Annual Delivery Allocation (acre- feet/acre)	Maximum Annual Delivery of District Wate to City (acre-feet)
4.00 or greater	28,116		2.20	15,464
3.80	26,710		2.00	14,058
3.60	25,304		1.80	11,246
3.40	23,899		1.60	8,435
3.20	22,493	6	1.40	5,623
3.00	21.087	-	1.20	2,812
2.80	19.681		1.00	1,000
2.60	18.275		0.50	500
2.40	16.870		0.00	0

1

2. Because the expansion of the Jonathan Rogers Water Treatment Plant is 2 now under construction and will not be complete in 2001, the City does not expect 3 to be able to use more than 11,000 acre-feet of District Water under this Contract 4 in such year. However, in addition to the District Water available for delivery to 5 the City from the District in accordance with 7A(1) above, the City desires to 6 purchase at this time 8,000 acre-feet of District Water for delivery in this year or 7 8 future years during the term of this Contract. The City shall pay to the District \$1,547,200.00, in consideration of which, and subject to availability and subject to 9 10 sections 5, 6, 7E, 7F, 13, 15, 16, 22, 23, 24, and 25 of this Contract, the District shall provide said 8,000 acre-feet to the City in this year or future years as 11 hereinafter provided. The City shall pay said sum in four equal installments of 12 \$386,800 each, the first of which installments shall become due and payable on or 13 before February 15, or the date by which all parties have executed this contract, 14 whichever of such dates is the later, and each succeeding payment shall become 15 due and payable on or before the expiration of 90 days after the preceding payment 16 becomes due. Federal Revenue in the amount of \$77,360.00 shall be due on or 17

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US0808531

1 before November 30 of the year in which the contract is executed, and the District shall remit such Federal Revenues annually to the United States in accordance with 2 section 14A(5) of the Third-Party Contract. In no event shall the delivery by the 3 District to the City of all or any part of said 8,000 acre-feet change any obligations 4 of the City under other sections of this Contract. Subject to availability as 5 determined by the District, the City may order for delivery all or any part of said 6 8,000 acre-feet at such times during the term of this Contract as the City may elect, 7 but, in no event shall the District or the United States refund all or any portion of, 8 or pay the City any interest on, the sum paid under this section to the District or the 9 United States. The District and the City shall account for delivery of any of the 10 said 8,000 acre-feet separately from all other deliveries of District Water made by 11 the District to the City pursuant to this Contract or the Existing Contracts. In any 12 13 year after the year 2001 when the quantity of District Water which the District estimates will be available for delivery under section 7B of this Contract exceeds 14 28,116 acre-feet, and until the City has received all of the 8,000 acre-feet provided 15 for under this section, the District shall make available for delivery to the City such 16 District Water in excess of 28,116 acre-feet. 17

18

B. Determination of Availability of District Water for the City

1. Within 30 days after the Contracting Officer informs the District of 19 the District's annual diversion allocation (or allocation in storage, as the case may 20 be), the Directors of the District, to the extent permitted by law, in their sole 21 22 discretion, based on the quantity of water available to the District and provided that no water shall be furnished under this Contract to the City if the delivery of such 23 24 water shall be detrimental to the water service for the irrigation project (Rio 25 Grande Reclamation Project) or to the rights of any prior appropriators, and subject to sections 9A and 9C, shall determine the quantity of District Water which will be 26

Approved as to Form: Jmg District Ly City United States Page 9 of 74

Contract No. 01-WC-40-6760

1 available for delivery by the District to the City under this Contract. During each year of this Contract, the Directors of the District, in their sole discretion, may 2 reconsider and adjust any such determination of the quantity of District Water 3 4 which the District determines will be available for delivery by the District to the City under this Contract if the quantity of water available to the District from the 5 Rio Grande Reclamation Project changes during the course of the year. The 6 District shall give the City notice of each of such determinations within 14 days 7 after the redetermination has been made. Notwithstanding the foregoing, the 8 9 quantity of District Water which the District determines in each year to be 10 available for delivery by the District to the City under this Contract shall not be less than the quantity of District Water which, when multiplied by the price of 11 District Water determined under section 9B, equals the City's credit in such year 12 13 for Usable Sewage Effluent as determined under section 9C of this Contract.

2. 14 In entering into this Contract, the District has relied upon the assumptions and conclusions set forth in the report by a professional engineer. 15 attached hereto as Exhibit D, to determine the quantity of District Water which the 16 District estimates will be available for delivery by the District to the City under 17 18 this Contract. If any of such assumptions or conclusions should prove incorrect or change so that there is a net reduction in the quantity of District Water which the 19 District estimates will be available for delivery by the District to the City under 20 21 this Contract after a determination has been made by the Directors of the District of the quantity of District Water available for delivery to the City under this 22 Contract then the Directors of the District shall adjust, as they deem appropriate in 23 their sole discretion, the determinations of the availability of District Water for the 24 City as provided in section 7B(1) of this Contract. 25

Approved as to Form: fnrd District My City

United States Page 10 of 74

EPWU000238365

Contract No. 01-WC-40-6760

C. Quality

Neither the United States nor the District makes any warranty, express or implied, of the quality of District Water that the District determines to be available for delivery by the District to the City pursuant to section 7B of this Contract. However, the City may elect to refuse any water delivered by the District. The City shall pay the District for any District Water refused for any reason other than a force majeure under section 23 of this Contract. Any District Water refused by the City may be used by the District for any purposes elected by the District.

9

1

D. Procedure for City to Request Delivery of District Water

1. No later than 21 days after the District gives the City notice of the first 10 determination made by the District in accordance with section 7B(1) of this 11 Contract for any year during the term hereof, the City shall notify the District of 12 the City's Water Order Budget for the year. Such budget shall be based on the 13 14 quantity of District Water that the Directors of the District determine to be 15 available for delivery to the City in accordance with section 7B of this Contract and shall provide for the minimum and maximum quantities of District Water 16 during the year that the City shall order from the District monthly between March 17 1 and September 30 pursuant to this Contract. 18

2. The minimum and maximum quantities of the City's monthly orders 20 shown in the Water Order Budget shall not be more than one hundred twenty 21 percent or less than eighty percent of one-seventh of the aggregate quantity of 22 District Water available to the City for that year under this Contract. The 23 aggregate of the orders shown on the City's Water Order Budget for the year shall 24 equal the total quantity determined by the Directors of the District to be available 25 by the District to the City in accordance with section 7B of this Contract.

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Contract No. 01-WC-40-6760

3. On a weekly basis, the City shall submit orders to the District for District 1 Water in such quantities as may be elected by the City, provided that the City shall 2 order in the aggregate each month at least the minimum quantity and no more than 3 the maximum quantity for such month specified in the City's Water Order Budget. 4

4. If the City, for any reason, orders less during the year than the aggregate 5 quantity of District Water shown in the City's Water Order Budget, the City shall 6 7 nevertheless pay the District for such aggregate quantity determined by the Directors of the District to be available by the District to the City in accordance 8 with section 7B of this Contract. 9

E. Effect of City's Water Order Budget 10

Notwithstanding the City's Water Order Budget in section 7D and the City's 11 12 orders, the District reserves the right to reduce the quantities of the City's orders and adjust the delivery dates by no more than 4 days as may be necessary to 13 conform with District operations. The District will advise the City of any such 14 reductions or adjustment within 48 hours after the District makes such reductions 15 16 or adjustments.

F. Delivery to the City of District Water 17

Notwithstanding anything to the contrary in this Contract, the District shall 18 19 deliver District Water to the City under this Contract only during times when the District delivers District Water for irrigation of lands which are presently served by 20 the Riverside Canal. 21

Approved as to Form: Jmg District 14 City

United States Page 12 of 74

EPWU000238367

US0808535

Contract No. 01-WC-40-6760

Usable Sewage Effluent to be Provided by City to District from Haskell Street WWTP

3 A. Quantity

From February 15 through October 15 of each year during the term hereof, 4 the City shall deliver into the American Canal Extension not less than 12,000 acre-5 feet of Usable Sewage Effluent from the Haskell Street WWTP. This quantity 6 shall be metered at the City's Haskell Street WWTP effluent meter in accordance 7 with section 15 of this Contract. Notwithstanding anything to the contrary herein, 8 the District reserves the right to refuse to accept any effluent and to require the 9 10 City to discharge the same directly into the Rio Grande. However, if any Usable Sewage Effluent is not accepted by the District during the period from February 15 11 through October 15 such Usable Sewage Effluent will nonetheless qualify for the 12 credit against the purchase price as specified in section 9B of this Contract. All 13 effluent accepted by the District shall be District Water. If, in accordance with this 14 15 Contract, the District declines to accept any effluent discharged by the City into the 16 American Canal Extension, then such effluent may be disposed of by the District at 17 the District's sole discretion, and the City shall reimburse the District for all costs for the proper disposal of such effluent and any and all penalties or fines assessed 18 19 by any government entities against the District for the disposal of such effluent.

B. Quality

20

To constitute Usable Sewage Effluent, the effluent must not be a public nuisance and must meet all quality standards imposed by federal and state law for discharge into the Rio Grande and the American Canal or its extension. District Water in the American Canal or its extension, including varying quantities of effluent, may be for agricultural use, including without limitation, irrigation of

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crops intended for human or animal consumption. Further, the effluent shall meet 1 2 the standards set forth on Exhibit A attached hereto and made a part hereof. In the event that the District determines at any time that, at the point of discharge of 3 effluent from the Haskell Street WWTP into the American Canal Extension, such 4 effluent does not meet any of such standards, the District Manager may require all 5 effluent from the Haskell Street WWTP to be discharged into the Rio Grande until 6 such time as the quality of the effluent satisfies said standards. Effluent that does 7 not meet said standards shall not entitle the City to a credit against its charges 8 under this Contract for District Water. The quantity of effluent not meeting said 9 standards shall be deemed to be the quantity of effluent discharged from the date 10 11 standards are not met to the date standards are met. The City shall collect all water quality samples and perform the water quality analyses required under this section. 12 The City shall report the results of such analyses to the District within 14 days 13 from the date of collection of such samples. The City shall furnish the District 14 with copies of all reports filed with the Texas Natural Resource Conservation 15 16 Commission in compliance with the National Pollution Discharge Elimination System program simultaneously with the filing of such reports. 17

18

C. Rate of Discharge

The maximum rate of discharge of Usable Sewage Effluent at the point of discharge shall not exceed 50 cubic feet per second, and the quantity of Usable Sewage Effluent discharged at a rate in excess of 50 cubic feet per second shall not be credited to the City under section 9C of this Contract.

23

D. City to Pay for Damages Incurred by the District

To the extent permitted by law, the City shall hold the District and the United States harmless from liability for payment of any and all costs, damages

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(actual and exemplary), penalties and fines imposed as a consequence of any
effluent discharged by the City. The District may elect to offset the amount of any
such costs, damages, penalties, or fines imposed on the District against any credit
to the City under section 9C of this Contract. In the event that the District receives
notice of any violation, the District shall give the City notice thereof within 14
days after receipt by the District of such notice.

7 9. Price of District Water

A.

- 8
- 9

Certain Land Owned by the City within the District in Excess of 2,000 Acres

10 1. For each acre of land owned by the City, legally or beneficially, and described and listed on Exhibit B attached hereto and made a part hereof (as it may 11 be supplemented from time to time by the City with notice given to the other 12 parties pursuant to section 21), but in no case more than 1,000 acres, during the 13 14 term hereof the District shall provide annually to the City, and the City shall purchase from the District, the total quantity of District Water which in such 15 16 calendar year the owner of the lands listed on Exhibit B would have been entitled to receive from the District pursuant to District policy then in effect had such lands 17 been owned by a private landowner, provided however that such quantity shall 18 19 never exceed 4.00 acre-feet of District Water per acre of such land. For each acrefoot of District Water provided to the City under this section 9A, the City shall pay 20 to the District a price per acre-foot equal to \$15 for the calendar year commencing 21 22 January 1, 2001. On the first day of January of 2002 and each year thereafter during the term of this Contract the price per acre-foot of District Water subject to 23 this section 9A1 shall increase in same proportions as any increases after January 24 1, 2001 in the Consumer Price Index of the Bureau of Labor Statistics of the 25

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United States Department of Labor now known as the Consumer Price Index-All
 Urban Consumers (CPI-U), All Items.

2. The annual adjustments in the price per acre-foot shall be determined by multiplying \$15.00 by a fraction, the numerator of which is the index number for December of the calendar year that ended immediately before the date on which the adjustment is to be made and the denominator of which is the index number for December, 2000. In no event shall any annual adjustment called for in this section 9A result in a price per acre-foot which is less than the previous year's price per acre-foot.

3. If the CPI-U, All Items, is discontinued during the Contract term, the 10 11 future adjustments in price shall be made by substituting the index numbers for the Bureau of Labor Statistics of the United States Department of Labor that are most 12 nearly comparable to the CPI-U, All Items. If the Bureau of Labor Statistics of the 13 14 United States Department of Labor ceases to exist or to publish statistics concerning the purchasing power of the consumer dollar during the Contract term, 15 the future adjustments required under this section 9A shall be made by using the 16 most nearly comparable statistics published by a generally recognized financial 17 authority. 18

19

B. Price for All Other District Water

For all District Water provided by the District to the City and not included in section 9A of this Contract or supplied pursuant to the Existing Contracts, the District shall charge the City, and the City shall pay to the District, the following amounts:

24 25

26

\$193.40 per acre-foot for the calendar year commencing January 1, 2001
\$200.80 per acre-foot for the calendar year commencing January 1, 2002
\$208.20 per acre-foot for the calendar year commencing January 1, 2003

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\$215.60 per acre-foot for the calendar year commencing January 1, 2004
 \$223.00 per acre-foot for the calendar year commencing January 1, 2005
 \$230.40 per acre-foot for the calendar year commencing January 1, 2006
 \$237.80 per acre-foot for the calendar year commencing January 1, 2007
 \$245.20 per acre-foot for the calendar year commencing January 1, 2008
 \$252.60 per acre-foot for the calendar year commencing January 1, 2009

\$260.00 per acre-foot for the calendar year commencing January 1, 2010

8 C. Credit for Usable Sewage Effluent

7

In any year when the Directors of the District have determined that the
 Annual Delivery Allocation is two acre-feet or greater, then for each acre-foot of
 such Usable Sewage Effluent provided by the City, the District shall allow the City
 a credit in that year against any charges of the District pursuant to sections 9A and
 9B of this Contract equal to the price per acre-foot of District Water set forth in
 section 9B of this Contract multiplied by one-half.

2. In any year when the Directors of the District have determined that the 15 16 Annual Delivery Allocation is less than two acre-feet and greater than one acrefoot, then for each acre-foot of Usable Sewage Effluent provided by the City, the 17 District shall allow the City a credit in that year against any charges of the District 18 pursuant to sections 9A and 9B of this Contract equal to the price per acre-foot of 19 District Water set forth in section 9B of this Contract multiplied by one-half of the 20 sum of the Annual Delivery Allocation (acre-feet per acre) less one acre-foot 21 [credit for each acre-foot of Usable Sewage Effluent = price x 1/2 (Annual Delivery 22 Allocation - 1)]. 23

In any year when the Directors of the District have determined that the
 Annual Delivery Allocation is one acre-foot or less, then no credit shall be given
 by the District to the City for Usable Sewage Effluent.

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4. On or before November 15 of each year during the term hereof, the 1 District shall determine and notify the City of the quantity of Usable Sewage 2 Effluent provided by the City to the District during the period from February 15 3 through October 15 of such year. 4

5. In no year shall any credit pursuant to this section 9C be allowed to 5 the City for more than 15,000 acre-feet of Usable Sewage Effluent provided by the 6 City to the District in such year, and no credit shall exceed the total payment due to 7 the District for District Water made available for delivery to the City in such year 8 under this Contract. 9

6. The calculation of any credit required under sections 9C(1), 9C(2), 10 9C(3), 9C(4), and 9C(5) of this Contract shall be made in conformance with the 11 following Table 2. 12

Table 1

Α.	B.
Annual Delivery Allocation (acre-feet/acre)	Acre-Feet of District Water per Acre-Foot of Usable Sewage Effluent
2.00 or greater	0.500
1.80	0.400
1.60	0.300
1.40	0.200
1.20	0.100
1.00 or less	0.000

14

13

Federal Revenue Component 15 D.

In addition to the price of District Water, the City shall pay the Federal 16 Revenue component on all District Water delivered to the City under this Contract 17 regardless of any credit allowed to the City by the District for Usable Sewage 18 Effluent. For the purposes of determining the Federal Revenue component 19

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pursuant to this Contract, all District Water delivered to the City shall be considered Project Water. Notwithstanding section 14A(4) of the Third-Party Contract, for District Water provided pursuant to 596 of the 1,000 acres of Cityowned lands covered by section 9A of this Contract, the City shall pay a Federal Revenue component of \$5.00 per acre-foot. On all other District Water provided under this Contract, the City shall pay the Federal Revenue component as specified in and required by section 14A(2)(c) of the Third-Party Contract.

8

E. Fee of the United States Associated with Administration of the Contract

In the event that the United States imposes on the District a fee for the 9 10 United States' cost of preparation, negotiation, legal review, or any other activity related to administration of this Contract or the Third-Party Contract by United 11 12 States, the City shall pay the amount of such fee to the District on or before 30 days after notice is given to the District by the United States requesting payment of 13 14 such fee. The District shall pay such amount to the United States within 30 days after receipt of such fee by the District from the City. The United States shall give 15 the District and the City not less than 30 days in which to examine data, reports 16 and calculations supporting such fee; to review and comment; and to file any 17 objections thereto before any notice is given by the United States to the District of 18 such fee. 19

20 10. Payment by the City for District Water

A. On or before January 15, 2002 and on the same date of each year thereafter during the term hereof, the City shall give the District notice of the City's estimate of the quantity of Usable Sewage Effluent which will be delivered by the City to the District during such year. The quantity of Usable Sewage Effluent shall be estimated by the City in accordance with the best engineering

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methods, and shall not be more than one hundred ten percent of the previous year's
credit for Usable Sewage Effluent. For the year 2001, the City's estimate of the
quantity of Usable Sewage Effluent shall be 12,000 acre-feet.

B. Based on the District's determination of District Water available for
delivery to the City under section 7B in this Contract and the City's estimate of
Usable Sewage Effluent made pursuant section 10A above, and on or before
January 31 of each year during the term hereof, the District shall determine and
give the City notice of the Estimated Charge for such year which shall be in
accordance with section 9 in this Contract. An example of the calculation of an
Estimated Charge is attached hereto as Exhibit E.

11 C. On or before February 15, May 15, and August 15 of each year, the City 12 shall pay the District an amount equal to twenty-five percent of the Estimated 13 Charge.

14 D. On or before November 15 of each year, the District shall give the City notice of the final payment due to the District and the United States from the City 15 or any refund due from the District to the City. Such payment or refund shall be 16 17 calculated according to the quantity of District Water which the District made 18 available for delivery to the City under section 7 of this Contract during said year less any credit for Usable Sewage Effluent delivered by the City to the District less 19 the payments by the City to the District under section 10C of this Contract for such 20 year. 21

E. On or before November 30 of each year during the term hereof, such final payment including all Federal Revenue or refund shall be due and payable.

F. All Federal Revenues will be paid by the City to the District on or before November 30 of each year and remitted by the District to United States in accor-

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dance with section 14A(5) of the Third-Party Contract. In order to facilitate proper
 crediting of such revenue, all Federal Revenues payment remitted to the United
 States by the District shall contain a reference to Contract No. 01-WC-40-6760.

4 11. Redetermination of the Price of All Other District Water After
 5 January 1, 2011.

A. The price for District Water established in section 9B of this Contract represents the determination by the Directors of the District of the present annual Fair Market Value of District Water and increases therein for the first ten years hereafter. Commencing January 1, 2011, and on the same day of each year thereafter of the remaining term hereof, the price of District Water established in section 9B of this Contract shall automatically increase by eight percent of the previous year's price.

B. The District and the City shall each have the right to require that the price of District Water established in section 9B of this Contract be redetermined for any of the ten-year periods commencing January 1, 2011, January 1, 2021 and January 1, 2031, provided that not less than 180 days prior to any such dates, the party requiring the redetermination shall so notify the other party in accordance with section 21 of this Contract.

C. In the event that any redetermination of price is required by the District or the City, and if the District and the City fail to agree upon the price of District Water within 90 days after a notice under the preceding paragraph, then the City and the District shall have the right to file a suit for declaratory judgment in a court of competent jurisdiction in El Paso County, Texas to determine the annual Fair Market Value of District Water. If either the City or the District files such suit, then both the District and the City shall submit to mediation in

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accordance with the procedures of Chapter 154 of the Texas Civil Practice and Remedies Code, as amended. Upon the entry of a final judgment in any such suit, the annual Fair Market Value, plus any annual escalation determined by such suit to be necessary to maintain the present value of the annual Fair Market Value so determined in such suit for the ten calendar years commencing January 1, 2011, January 1, 2021 and January 1, 2031, as the case may be, shall be the price of District Water under section 9B of this Contract for the respective ten-year period.

D. 8 During the pendency of such suit, and until a final judgment is entered therein, the City shall pay the District a tentative price equal to the price which 9 would result from the automatic escalation. Upon the entry of such final judgment, 10 the parties shall adjust the tentative price to conform with the judgment, and the 11 City shall be credited with any overpayment or charged for any underpayment 12 during the pendency of such suit. In the event that an underpayment has been 13 made by the City to the District, then the City shall pay the amount of such 14 underpayment to the District within 30 days after said judgment becomes final. In 15 the event that an overpayment has been made by the City to the District, then the 16 District shall credit such overpayment against the first payment(s) becoming due 17 by the City to the District after said judgment becomes final. 18

E. During the pendency of such suit, and until a final judgment is entered 19 therein, the City shall pay tentative Federal Revenues which shall be calculated 20 according to the tentative price under section 11D above. Upon entry of such final 21 judgment, the parties shall adjust the tentative Federal Revenues to conform with 22 the judgment, and the City shall be credited with any such overpayment or charged 23 for any underpayment during the pendency of such suit. In the event that an 24 underpayment of Federal Revenues has been made by the City, then the City shall 25 pay the amount of such underpayment to the District within 30 days after said 26

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judgment becomes final. The District shall remit any such underpayment to the 1 United States within 30 days after receipt of such underpayment by the District. In 2 the event that an overpayment of Federal Revenues has been made by the City, the 3 United States shall credit such overpayment against the first Federal Revenues 4 becoming due by the City after the said judgment becomes final, so long as the 5 overpayment does not exceed \$5,000. However, in the event that the overpayment 6 exceeds \$5,000, the United States shall issue a refund in the amount of such 7 overpayment within 60 days after the judgment becomes final. 8

9 12. Obligation of City to Deliver Other Usable Sewage Effluent

In addition to any Usable Sewage Effluent, the City shall annually 10 Α. deliver to the Rio Grande upstream of American Diversion Dam, to the American 11 Canal or its extension, to the Riverside Canal, or to the Riverside Intercepting 12 13 Drain, Other Usable Sewage Effluent (acre-feet) in a quantity not less than twentyfive percent of the sum of the quantities of District Water (acre-feet) delivered by 14 the District to the City pursuant to the Existing Contracts and this Contract less the 15 quantity of Usable Sewage Effluent (acre-feet) multiplied by the applicable value 16 from column B of Table 2 in accordance with section 9C of this Contract, that is, 17 Other Usable Sewage Effluent = $0.25 \times [District Water Delivered to City - (Usable)]$ 18 Sewage Effluent x value from column B in Table 2)]. 19

20 B.

1. For the purposes of this Contract, the Underflow of the Rio Grande upstream of the American Diversion Dam captured each year during the term hereof by the City (as determined in accordance with the procedures in Exhibit C) shall be deemed District Water pursuant to section 9B of this Contract delivered to the City during such year unless the City during such year delivers Other Usable

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Sewage Effluent in a quantity of not less than one hundred and sixty percent of 1 such Underflow in addition to the quantity of Other Usable Effluent required under 2 section 12A above. Of the quantity of Other Usable Sewage Effluent required 3 under this section 12B(1), sixty-two and one-half percent shall be delivered by the 4 City in the bed of the Rio Grande upstream of American Diversion Dam and thirty-5 seven and one-half percent shall be delivered by the City in the American Canal, or 6 in its extension, or in the Riverside Canal, or in the Riverside Intercepting Drain. 7

2. Except to the extent allowed by this section 12B(2), the City shall not 8 construct, purchase, beneficially own, lease, or operate any well or other collection 9 device in the Mesilla Valley which is screened or open to any aquifer at elevations 10 higher than 200 feet below the original elevation of the surface of the land in the 11 immediate vicinity of any such well or collection device. The City shall have the 12 right to construct, purchase, beneficially own, lease, or operate any well or other 13 collection device in the Mesilla Valley at elevations between 120 and 200 feet 14 below the original elevation of the surface of the land in the immediate vicinity of 15 16 any such well or collection device, as well as the City's wells numbered EPWU 115 and EPWU 118, provided that all such wells and collection devices in the 17 aggregate do not produce more than 4,000 acre-feet of water per year in the 18 Mesilla Valley; and if in any one year more than 4,000 acre-feet of water is 19 20 produced in aggregate from such wells and collection devices, such excess production shall constitute a default under this Contract, and, in addition to any 21 other remedies at law or in equity that the District may have for such default, the 22 23 District may at its option charge the quantity in excess of 4,000 acre-feet as 24 delivery of Project Water by the District to the City pursuant to sections 7 and 9 of 25 this Contract and the Existing Contracts as elected by the District.

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L 3. Upon the construction, purchase, beneficial ownership, lease, or operation of any well or other collection device, in addition to the City's Wells 2 identified in this Exhibit C, the Contracting Officer shall modify Exhibit C-Table 1 3 in this Contract to reflect the best engineering estimate of the increase in the 4 quantity of Underflow of the Rio Grande captured upstream of the American 5 Diversion Dam by the City. The Contracting Officer shall modify Exhibit C in this 6 Contract to identify any such well or collection device. At such time as the City 7 provides any notice of intent or other information concerning any such new well or 8 collection device to any governmental agency, the City shall provide copies of 9 such notice and other information to the Contracting Officer and the District. 10

4. Notwithstanding anything herein to the contrary, the City shall not 11 capture more than 15,000 acre-feet of Underflow of the Rio Grande upstream of 12 the American Diversion Dam in any year. If the City captures more than 15,000 13 acre-feet of such underflow in any year, the City shall be in default of its 14 obligations under this Contract. In addition to any other remedies at law or in 15 equity that the District may have for such default, the District may at its option 16 charge the quantity in excess of 15,000 acre-feet as delivery of Project Water by 17 the District to the City pursuant to sections 7 and 9 of this Contract and the 18 19 Existing Contracts as elected by the District.

C. Notwithstanding anything to the contrary in section 12A and 12B above, the City shall deliver at least the following quantities of Other Usable Sewage Effluent into the Riverside Canal or the Riverside Intercepting Drain, at the District's option, from February 15 through October 15 of each year during the term hereof at station 0.51 (miles): 14,000 acre-feet in 2001, 15,000 acre-feet in 2002, 16,000 acre-feet in 2003, 17,000 acre-feet in 2004, and 18,000 acre-feet in each year thereafter less the smaller of 4,667 acre-feet or the quantity of Other

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1 Usable Sewage Effluent delivered by the City during such year pursuant to section 12D below. Such quantities of Other Usable Sewage Effluent shall be counted 2 3 against the City's obligation set forth in section 12A above and the City's obligation set forth in section 12B(1) above for the thirty-seven and one-half 4 percent of Other Usable Sewage Effluent to be delivered by the City in the 5 6 American Canal, or in its extension, or in the Riverside Canal, or in the Riverside Intercepting Drain. 7

D. 8 Of the quantities of Other Usable Sewage Effluent required by section 12B(1), the City shall deliver from February 15 through October 15 of each year 9 during the term hereof in the bed of the Rio Grande upstream of the American 10 11 Diversion Dam not less than forty-one and two-thirds percent thereof.

E. 12 To constitute Other Usable Sewage Effluent, the effluent must not be 13 a public nuisance and must meet all quality standards imposed by federal and state law for discharge into the Rio Grande, the American Canal or its extension or in 14 15 the Riverside Canal, or in the Riverside Intercepting Drain. District Water in the American Canal or its extension, or in the Riverside Canal, including varying 16 17 quantities of effluent, may be for agricultural use, including without limitation, irrigation of crops intended for human or animal consumption. 18

F. 19 To the extent permitted by law, the City shall hold the District and the United States harmless from liability for payment of any and all costs, damages 20 21 (actual and exemplary), penalties and fines imposed as a consequence of any effluent discharged by the City. The District may elect to offset the amount of any 22 such costs, damages, penalties, or fines imposed on the District against any credit 23 to the City under section 9C of this Contract. 24

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1 13. City to Maintain Diversion Facilities

When and as directed by the District Manager, the City shall maintain,
without cost to the District, the Jonathan Rogers Water Treatment Plant diversion
facility located on the right bank at station 0.05 (miles) of the Riverside Canal.

5 14. Termination for Default

In the event of any default or breach in the performance by the City of any
obligation imposed upon the City by this Contract, then after 30 days' written
notice to the City of the breach or default and the City's failure to remedy such
breach or default within such 30 days, the District may invoke all or any of the
following remedies:

- (1) terminate this Contract and without liability to the City for damages of
 the City or any third party resulting from termination;
- 13 (2) refuse to deliver District Water to the City under this Contract; and
- invoke any remedies at law or in equity to which the District may beentitled.
- 16 15. Measurement of Water

17 A. The City shall, without cost to the United States or the District, provide, 18 install, maintain, and replace as necessary, at the point of delivery of water to the 19 City and at the points of discharge of effluent into the American Canal or its extension, the Riverside Canal, and the Riverside Intercepting Drain, measuring 20 devices acceptable to the District Manager and the Contracting Officer for the 21 measurement of water delivered to the City under this Contract. The City shall 22 keep said device or devices in a condition satisfactory to the District Manager and 23 Contracting Officer. 24

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B. Provided that the District and the Contracting Officer advise the plant manager or shift supervisor on duty, the City shall allow the District and/or the Contracting Officer unfettered access to inspect and check the accuracy of any measuring device that is required under section 15A above and is located on Cityowned or leased land.

6 C. The District may measure the District Water delivered to the City and 7 effluent discharged by the City into the American Canal Extension and the 8 Riverside Canal, or to the Riverside Intercepting Drain using the District's 9 measuring devices.

D. In the event of any conflict between the City's measurements and the District's measurements of District Water delivered to the City and/or the effluent discharged by the City the decision of the Contracting Officer regarding such conflict shall be binding on the City and the District.

14 16. Responsibility for Water Delivered to the City

Upon receiving District Water delivered to the City at the City's point of 15 diversion as provided in this Contract, the City, without cost to the United States or 16 to the District, shall thereafter be responsible for the carriage, treatment, storage or 17 distribution of the District Water so delivered; and the City shall and hereby does 18 19 assume full responsibility for the control and handling of said water and for any damage for which there is legal liability, including damage arising from personal 20 injury or death, that may result therefrom or in connection therewith after its 21 delivery to the City as provided in this Contract, and, to the extent permitted by 22 law, shall save the United States and the District harmless on account of any such 23 damage. 24

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1 17. Resolutions to be Furnished

The City shall furnish to the United States and to the District certified copies of a resolution adopted by the City Council of the City of El Paso approving this Contract and authorizing the Mayor and the Clerk of the City to execute the same on behalf of and as the act of the City. The District will furnish to the United States and to the City certified copies of a resolution by its Board of Directors approving this Contract and authorizing the President and Secretary of the District to execute the same on behalf of and as the act of the District.

9 18. Successors and Assigns Bound

The provisions of this Contract shall apply to and bind the successors and assigns of the respective parties; provided, however, that no assignment by the City of any interest in or right pursuant to this Contract shall be valid until the City has received the written consent thereto of the Contracting Officer and the written consent of the District.

15 19. Existing Contracts Unaffected

Nothing in this Contract shall be construed as altering, modifying, or
 amending the Existing Contracts.

Compromise and Settlement Regarding the April 23, 1992 Memorandum
 of Understanding and Rescission of Contracts Relative to

20 Tax Delinquent Lands

A. Upon execution of this Contract by the United States, the District and the City, all claims which have been or which could have been asserted by the City against the District, its officers, directors, employees, attorneys, consultants, and engineers and all claims which have been or which could have been asserted by the

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District against the City, its officers, elected and appointed officials, employees, 1 attorneys, consultants, and engineers, concerning, based on, or arising from the 2 Memorandum of Understanding dated April 23, 1992 and executed by District and 3 the City's Public Service Board are hereby finally compromised and settled. The 4 City releases and discharges the District its officers, directors, employees, 5 attomeys, consultants, and engineers, and the District releases and discharges the 6 City its officers, elected and appointed officials, employees, attorneys, consultants, 7 and engineers, from any and all of said claims. 8

9 The City disclaims any interest in the American Canal or its extension B. and any interest in the water transported by or conserved as a result of the 10 construction and/or operation of the American Canal or its extension. The City 11 releases any and all claims it may have against the District for any interest in the 12 water transported by or conserved as a result of the construction or operation of the 13 American Canal or its extension. The City shall not release, convey, or quitclaim 14 unto anyone other than the District any interests in the American Canal or its 15 extension and any interest in the water transported by or conserved as a result of 16 the construction or operation of the American Canal or its extension. 17

C. The parties agree to and they do hereby rescind the following contracts
executed by the City and the District relative to tax delinquent land:

20 (1) Special Delinquent Lease #4579 Executed 05-31-91,

(2) Special Delinquent Lease #4579 Executed 06-29-92,

22 (3) Special Delinquent Lease #4579 Executed 05-12-93, and

(4) Special Delinquent Lease #4579 Executed 10-20-93.

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D. This section 20 is a compromise and settlement agreement in which no party herein has made any admissions regarding any claims mentioned herein and which compromise and settlement is made to avoid the risks and costs of litigation.

5 21. Notices

Any notice, demand, or request authorized or required by this Contract shall 6 be deemed to have been given when mailed, postage prepaid, or hand-delivered to 7 the Regional Director, Upper Colorado Region, Bureau of Reclamation, 125 South 8 State Street, Salt Lake City, Utah 84138-1147; when mailed, postage prepaid, or 9 hand-delivered to the General Manager, El Paso County Water Improvement 10 11 District No. 1, 294 Candelaria, El Paso, Texas 79907-5599; or when mailed, 12 postage prepaid, or hand-delivered to the General Manager, Public Service Board, 1154 Hawkins Blvd., El Paso, Texas 79925. The designation of the addressee or 13 the address may be changed by notice given in the same manner as provided in this 14 section 21 for other notices. 15

16 22. Neither the United States nor the District shall be Liable on Account of 17 Shortage or Quality of Water

Neither the United States nor the District shall be liable for damages to the 18 City or its inhabitants or to others for failure to supply water under this Contract 19 caused by insufficient supply of water in the Rio Grande, hostile diversion, 20 drought, interruption of service made necessary by repairs, or on account of any 21 other delivery of water than that provided for in this Contract, stipulated for, 22 directed or ordered to be made, by any valid or subsisting order, or decree of a 23 competent court or of any other duly constituted, competent authority; or for 24 damages caused by floods, acts of hostility or unavoidable circumstances; or for 25

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damages of any character resulting from any lack of purity or potable quality of the
water that may be delivered to the City under the terms of this Contract, and, to the
extent permitted by law, the City agrees to hold the United States and the District
harmless from any damage or claims of damage arising from said causes.

5 23. Force Majeure

6 If any party through no fault of its own is rendered unable, wholly or in part, by force majeure to carry out its obligations under this Contract, then the 7 obligations of such party, so far as they are affected by such force majeure, shall be 8 suspended during the time reasonably necessary to remedy such inability, but for 9 no longer period. The term "force majeure" shall mean acts of God, wars, 10 insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, 11 floods, hazardous spills, explosions, and unforeseeable failure of machinery, 12 structures, or water conveyance facilities. 13

14 24. City To Secure Compliance with National Environmental Policy Act

Notwithstanding anything to the contrary in this Contract, the City shall 15 comply with the provisions of section 13C of the Third-Party Contract. The 16 District shall not deliver to the City, and the City shall not demand delivery from 17 the District, any District Water pursuant to this Contract until the Contracting 18 Officer notifies the District and the City in writing that this Contract is in full 19 compliance with the National Environmental Policy Act of 1969 (83 Stat. 852), as 20 amended, (NEPA), the District has accepted any and all conditions imposed on the 21 District pursuant to NEPA, and the United States has executed this Contract. The 22 Contracting Officer shall cooperate with the parties in all aspects of the NEPA. 23 process and shall not unreasonably withhold such notification. 24

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Contract No. 01-WC-40-6760

1 25. District Discretion Regarding Environmental Actions

Any material prepared by the City or any contractor of the City for the purposes of meeting NEPA requirements shall be submitted to the District by the City in writing not less than 7 days prior to its submission to the United States. Any comments of the District on such materials shall be attached by the City to and made a part of such materials submitted to the United States. The District shall not be obligated to adopt any alternative or mitigation measure or to bear any cost thereof.

9 26. Water Right

The City shall not oppose an administrative determination and a final 10 judgment in the pending adjudication of the Upper Rio Grande of Texas 11 adjudicating unto the District the rights claimed by the District pursuant to its 12 13 Permit to Use State Water No. 5433 granted by the Texas Natural Resource Conservation Commission. The District shall not oppose an administrative 14 determination and a final judgment in the pending adjudication of the Upper Rio 15 Grande of Texas adjudicating unto the City the rights claimed by the City pursuant 16 17 to its Permit to Appropriate State Water No. 1535C granted by the Texas Natural Resource Conservation Commission. 18

19 27. Venue and Choice of Law

Except a civil action or claim against the United States of which jurisdiction is exclusive in the United States Court of Federal Claims pursuant to 28 U.S.C. §§ 1346 and 1491, any civil action based upon, concerning, arising from, or related to this Contract shall be filed only in a court of competent jurisdiction in El Paso County, Texas. This Contract shall be construed in accordance with the laws of the United States and of the State of Texas.

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US0808556

Contract No. 01-WC-40-6760

1 28. Other Contracts for the Sale of Surplus Water

To the extent permitted by law, the District shall not enter into other 2 contracts for the sale of surplus water which will interfere with the delivery by the 3 District to the City of District Water pursuant to this Contract. 4

29. Disagreement with Determinations by the Contracting Officer Pursuant 5 6 to Exhibit C

The determinations of the Contracting Officer made pursuant to Exhibit C of 7 this Contract shall be regarded as purely contractual in nature and shall be subject 8 to de novo review in any suit to adjudicate, confirm, validate, or decree this 9 contract pursuant to 43 U.S.C. § 390uu. 10

11

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Contract No. 01-WC-40-6760

1	IN WITNESS WHEREOF, the	e parties hereto have caused this Contract to
2		becomes effective on the date of execution
34	shown below for the signature of the U	
5 6	(Attest:	EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1
7 6 0 10 1	Indar Singh Secretary	By: Date Johnny Stubbs President of the Board of Directors
11 12 13 14 15 16 17	Attest: Dance Ande Carole Hunter City Clerk	THE CITY OF EL PASO By Date 4-25-01 Carlos M. Ramirez Mayor
17 18 19 20 21 22 23	Approved to as Form: <u> <u> <u> </u> <u> </u></u></u>	
24 25 26 27 28 29	Attest: <u>Attest:</u> <u>Banin</u> Secretary Elaine M. Barrón	THE PUBLIC SERVICE BOARD OF EL PASO, TEXAS By: Gilbert Moreno, J. Chairman
30 31 32 33 34 35	Approved to as Form: <u>Michael Spurlock</u> General Counsel	
36 37 29	Attest:	UNITED STATES OF AMERICA
38 39 40 41 42	Field Solicitor	By: Buck J. Hold Date 6-11-01 Regional Director Upper Colorado Region Bureau of Reclamation
	Approved as to Form: Jmd District	US_CityUnited States Page 35 of 74

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EXHIBIT A - Minimum Effluent Standards

All Haskell Street WWTP effluent must meet or exceed all water quality 3 standards required by the discharge permit number 10408-004 and any subsequent 4 amended, renewed or new permits issued by the Texas Natural Resources 5 Conservation Commission (TNRCC) in effect at the time such effluent is 6 discharged into the American Canal Extension. Such effluent must have a Total 7 Dissolved Solids (TDS) of less than or equal to 1,200 milligrams per liter and a 8 Sodium Adsorption Ratio (SAR) of less than or equal to the following equation: 9

10

17

1 2

$SAR \le 29 - 6 \log_{10} [TDS (mg/l)]$

SAR and TDS shall be measured at least biweekly by taking a flow-11 weighted 24-hour composite water quality sample from the effluent being 12 discharged into the American Canal Extension. TDS shall be determined 13 according to the procedures of 2540 C. Total Dissolved Solids Dried at 180° C of 14 the 19th Edition of Standard Methods for the Examination of Water and 15 Wastewater. The SAR shall be determined using the following equation: 16

 $SAR = Na^{+} (meg/l) / [(Ca^{2+} (meg/l)/2 + Mg^{2+} (meg/l)/2)]^{\frac{1}{2}}$

where meq/l is the milliequivalents per liter of the concentrations of Calcium (Ca), 18 19 Magnesium (Mg), and Sodium (Na) ions of the composite water quality sample. The concentrations of Calcium (Ca), Magnesium (Mg), and Sodium (Na) ions shall 20 be determined according to the procedures of Ion Chromatographic Method (EPA 21 300.7). 22

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US0808559

Contract No. 01-WC-40-6760

Grant	Block	Tract/Subdivision	Acres
UV	14	Tract 16	16.68
UV	14	Tract 17	52.25
UV	18	Tract 12B	16.28
UV	18	Tract 1A2	2.75
UV	18	Tract IB1	9.43
UV	18	Tract IC	19.53
UV	19	Tract 9A1B	3.67
UV	19	Tract 9A1C	3.62
UV	19	Tract 9C1A	11.09
UV	20	Tract 13	39.33
UV	20	Tract 14	4.41
UV	21	Tract 3A	23.50
UV	21	Tract 9A	57.26
UV	21	Tract 2A	71.21
UV	21	Tract 13A	1.13
UV	21	Tract 1A	67.38
UV	21	Tract 1B	62.10
UV	21	Tract 2B	30.39
UV	21	Tract 6B2	8.00
UV	23	Tract 1G	30.38
UV	23	Tract 4A	7.12
UV	23	Tract 5A	95.21
YSL	01	Tract 4A	3.52
YSL	03	Tract 7B	1.14
YSL	03	Tract 8E	8.04

Exhibit B - Descriptions of Public Service Board Property

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Contract No. 01-WC-40-6760

Grant	Block	Tract/Subdivision	Acres
YSL	03	Tract 9A	18.96
YSL	03	Tract 9C1	1.72
YSL	04	Tract 9C	3.57
YSL	12	Boothville #2, Lot PT 9 PT 10	1.60
YSL	49	Tract 12A	0.05
YSL	49	Tract 12C	0.02
YSL	51	Tracts 7 & 8	0.04
OTAL			671.38

The above descriptions refer to the maps prepared for tax purposes which are on 1 file with the El Paso Central Appraisal District, reference to which is made for all 2 3 purposes and which maps are incorporated herein and made a part hereof by

- reference. 4
- 5

6

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Exhibit B

Exhibit C – Determination of Underflow of the Rio Grande Captured by the City of El Paso's Groundwater Withdrawal

1

2

On or before December 1 of each year during the term hereof, the 3 Contracting Officer shall determined the Underflow of the Rio Grande captured 4 5 upstream of the American Diversion Dam from the "City's Wells" numbered EPWU 101 through 118, EPWU 201 through 207, and EPWU 301 through 309, as 6 7 identified in the final report by Boyle Engineering Corporation titled "Canutillo Well Field Master Plan" and dated October 1999 and any other wells constructed, 8 purchased, beneficially owned, leased, used, or operated by the City or from which 9 the City acquires water and which are located in the Mesilla Valley. 10 Notwithstanding anything to the contrary herein, for the calendar year 2001 the 11 12 Underflow of the Rio Grande captured by the City's Wells shall be deemed to be 13 7,000 acre-feet. On or before December 1, 2001 the Contracting Officer shall update Exhibit C-Table 1 using the best engineering methods available to the 14 15 Contracting Officer using the following procedures:

The Contracting Officer shall update the MODFLOW data files in accordances
 with the measured quantities of water withdrawn from the City's Wells and the
 actual flows in the Rio Grande and EBID's and EPCWID's canals and drains for
 each year since 1995. The names of the data files shall reflect the date such files
 were updated.

The MODFLOW data files shall be modified to include the Contracting
 Officer's best estimate of the City's groundwater withdrawals for the current
 year and the next five years. All other values in the MODFLOW data files shall
 be equal to values of the current year or the best engineering estimate of such
 values for the next five years as determined by the Contracting Officer.

26 3. After the MODFLOW data files are updated, the Contracting Officers shall
 27 execute the MODFLOW model to determine the annual acre-feet of stream

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ĩ. leakage from the Rio Grande for each year in such data files. 4. The Contracting Officer shall modify the updated MODFLOW "well package" 2 data file to reflect the assumption that no withdrawal of groundwater was made 3 4 by the City's Wells during any year between 1915 and the last year for which 5 data is contained in such data file. No other changes shall be made to the updated MODFLOW data files. The names of such modified "well package" 6 data file shall reflect the date such file was created and the annotation 7 "WOCW". 8 5. The Contracting Officer shall execute the MODFLOW model using the updated 9 data files and the "well package" data file modified to reflect no groundwater 10 withdrawals by the City's Wells, and the Contracting Officer shall determine the 11 12 annual acre-feet of stream leakage from the Rio Grande for the current year and the next five years as recorded in such data file. 13 14 6. The Contracting Officer shall calculate the difference in stream leakage from the 15 Rio Grande from the results between the first execution of the MODFLOW model for the quantities of groundwater withdrawn from the City's Wells and 16 the second execution of the MODFLOW model simulating no withdrawal of 17 groundwater by the City's Wells. Such difference shall be used as the quantity 18 19 of Underflow of the Rio Grande captured upstream of the American Diversion Dam by the City's groundwater withdrawals for the estimated quantity of water 20 withdrawn from the City's Wells for the previous years, the current year, and the 21 next five years as recorded in the "well package" data file. 22

7. The Contracting Officer shall determine the new quantities of Underflow of the
Rio Grande captured by the City's Wells (Column A, Exhibit C-Table 1) by the
difference in stream leakage from the Rio Grande as determined for the current
year and the next five years recorded in the "well package" data file.

27 8. The Contracting Officer shall then replace the existing Exhibit C-Table 1 with a

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new version of Exhibit C-Table 1 that reflects the newly calculated Underflow
 quantities.

The Contracting Officer shall modify Exhibit C to add all wells constructed,
 purchased, beneficially owned, leased, used, or operated by the City or from

5 which the City acquires water and which that are not-listed in this Exhibit C.

6 The Contracting Officer shall provide to all parties documentation of any 7 changes made to MODFLOW, the associated data files, a version of MODFLOW 8 executable on computer systems available to the City and the District and including 9 all required data files, and notice of the changes made by the Contracting Officer to 10 Exhibit C-Table 1 and Exhibit C within 30 days after making such changes.

11

Exhibit C - Table 1 - Underflow Captured by City's Wells*

Year	Column A	Column B	Column C	Column D	Column E
	Underflow of	Total Annual	Total Annual	Total Annual	Total Annual
	the Rio	Quantity of	Quantity of	Quantity of	Quantity of
	Grande	Groundwater	Groundwater	Groundwater	Groundwater
	Captured by	Withdrawn	Withdrawn	Withdrawn from	Withdrawn
	the City's	from the City's	from the City's	the City's Wells	from the City's
	Wells	Wells	Wells	Intermediate	Wells
	(acre-feet per	(acre-feet per	Shallow Zone	Zone	Deep Zone
	year)	year)	(acre-feet per year)	(acre-feet per year)	(acre-feet per year)
2001	7,000	-	1.1.1		
2002	7,000	23,809	2,361	14,248	7,201
2003	7,000	23,809	2,361	14,248	7,201
2004	7,000	23,809	2,361	14,248	7,201
2005	7,000	23,809	2,361	14,248	7,201

12 *The values for years 2002 through 2005 shall be redetermined by the Contracting Officer on or before 13 December 1 of 2001. The values in Exhibit C-Table 1 for columns B through E are the average acre-feet

14 per year quantities for the years 1995 through 1999.

The Contracting Officer may update the MODFLOW data files and revise Exhibit C-Table 1 as often as the Contracting Officer deems it necessary to ensure that Exhibit C-Table 1 is accurate but in no case shall such table be updated more frequently than once per year. In all events, the Contracting Officer shall update the

19 MODFLOW data files and revise Exhibit C-Table 1 on or before December 1, 2001

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and at least once every 5 years thereafter. If at the end of any year the estimated 1 quantities of groundwater listed in Exhibit C-Table 1 columns B or C differ from 2 measured values of columns B or C by more than 10% the Contracting Officer shall 3 revise Exhibit C-Table 1. The City or the District may submit to the Contracting 4 Officer for his or her consideration any information or analysis relating to this 5 Exhibit C prior to the Contracting Officer revising this Exhibit C. The City shall 6 reimburse the Contracting Officer for all reasonable cost incurred by the 7 Contracting Officer in updating the MODFLOW data files and revising Exhibit C. 8

The best engineering methods used by the Contracting Officer in determining 9 the increase in the quantity of Underflow of the Rio Grande captured upstream of 10 the American Diversion Dam by the City's Wells shall consist of using the United 11 States Geological Survey (USGS) MODFLOW groundwater flow computer model 12 and data files developed for transient conditions between years 1915 and 1995 as 13 documented in the report by Weeden and Maddock titled "Simulation of 14 15 Groundwater Flow in the Rincon Valley Area and Mesilla Basin, New Mexico and Texas" and dated September 30, 1999 and as updated from time to time by the 16 Contracting Officer. The Contracting Officer shall assume that the parameters for 17 the streamflow routing package used in the MODFLOW model are: 18

K = 0.558 feet/day, w = 150 feet, and t = 5 feet, 19

where K is the vertical hydraulic conductance of the bed, w is the average wetted 20 perimeter, and t is the average bed thickness of the reach of the Rio Grande in the 21 Mesilla Valley of New Mexico and Texas. The Contracting Officer shall use his or 22 her best effort in using the most accurate values of K, w, and t or any other 23 MODFLOW values provided that the best engineering methods available to the 24 Contracting Officer justify such values. 25

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t.	Exhibit D - Report by a Professional Engineer	
2	Specifying the Sources of District Water	
3		
4	Sources and Quantity of Rio Grande Project Water	
5	Available for Conversion to Uses Other than Irrigation	
6	under the	
7	Proposed 2001 Third Party Implementing Contract	
8	among	
9	The El Paso County Water Improvement District No.1,	
10	The City of El Paso, and The United States	
11	Prepared for	
12	The El Paso County Water Improvement District No. 1	
13	El Paso, Texas	
14	April 10, 2001	
16		
18	E OF TE	
20		
22	ALLIE W. BLAIR	
24	63707	
26	A S (NAL	
28		
30	NAI	
32	Ul Dais	
34		
35	A.W. Blair, Ph.D., P.E.	
36	AWBLAIR ENGINEERING	
37	P.O. 1090	
38	Dripping Springs, Texas 78620	
39	Phone: 512-858-1997 Fax: 512-942-8025	

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1 I. Introduction

2 As requested by the El Paso County Water Improvement District No. 1 (EPCWID) this report was prepared as required by the Third Party Contract 3 between EPCWID, the City of El Paso ("the City"), and the United States, and 4 pursuant to a request by the City for delivery of Rio Grande Project Water 5 ("Project Water") to the Jonathan-Rogers Water Treatment Plant for M&I use, and 6 pursuant to the proposed Third Party Implementing Contract among EPCWID, the 7 City, and the United States ("the 2001 Contract"). The engineering and related 8 9 legal issues regarding the conversion of Project Water for M&I uses are complex. The 2001 Contract proposes delivery by the District to the City of three categories 10 of District Water: 11

12

1) water pursuant to 1,000 acres of City owned land,

13 2) water pursuant to Usable Sewage Effluent, and

water surplus to the needs of the taxpayers of the District.

This report analyzes the sources, availability, and quantities of Project and District 15 waters proposed for delivery under the 2001 Contract. Currently, the procedures 16 used by the United States in determining EPCWID's annual diversion allocation of 17 18 Project Water are done under protest by EPCWID and are the subject of ongoing 19 litigation. This report analyzes the sources of water available to EPCWID based on the allocation procedures presently used by the United States, but in no manner 20 does this report endorse or support such procedures and this report should not be 21 22 considered to waive any right or claim to which EPCWID is entitled.

23 II. EPCWID's Classifications of District and Project Water

For the purposes of this report, District Water is any and all water available to EPCWID, regardless of the source, and Project Water is all water appropriated or otherwise acquired by the United States for the benefit of EPCWID. District

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1	Non-Project Water is all water acquired by EPCWID from sources other than
2	Project Water. Presently, the primary source of Project Water available to
3	EPCWID is the water in the Rio Grande available for diversion at Mesilla,
4	American, and Riverside diversion dams. The primary source of District Non-
5	Project Water is the sewage effluent discharged into the American Canal
6	Extension, the Riverside Canal, and the Riverside Intercepting Drain.
7	Reclamation's allocation procedure considers three types of Project Water:
8	1) Releases, which are Project Water released at Caballo Dam from project
9	storage in Elephant Butte and Caballo reservoirs;
10	2) Diversions, which are Project Water diverted from flow in the Rio
11	Grande downstream of Caballo Dam and at, or upstream of, the Riverside
12	Diversion Dam; and
13	3) Deliveries, which are Project Water or District Water diverted from the
14	Rio Grande and delivered by Elephant Butte Irrigation District (EBID) or
15	EPCWID to farm turnouts or the intake structures of municipal water
16	treatment plants, and Project Water diverted by the United States at the
17	International Diversion Dam for use by Mexico.
18	III. EPCWID's Sources of District Water
19	Under current United States - Bureau of Reclamation (Reclamation)
20	diversion allocation procedures, EPCWID has three sources of Project Water:
21	1) When Reclamation deems that sufficient Project Water is in storage to
22	make a release of 763,840 acre-feet, EPCWID receives from Reclamation
23	an annual diversion allocation of 376,860 acre-feet of Project Water for
24	diversion by EPCWID from the Rio Grande.

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1 2) Occasionally, flood waters spilled from Elephant Butte and Caballo reservoirs, may be diverted by EPCWID and not charged against 2 EPCWID's annual diversion allocation of Project Water. The quantity, 3 duration, and timing of the availability of floodwaters cannot be 4 accurately predicted, and thus this water is unreliable and at this time is 5 not considered a source of Project Water available for conversion to M&I 6 7 use, except during years when Reclamation can accurately predict that such floodwater will be released for extended periods of time (several 8 months) from Elephant Butte and Caballo reservoirs. Such releases have 9 10 occurred during 12 of the 71 years from 1925 through 1995, on average about once every six years. 11

3) When Project Water is not being released from Caballo Dam, return flow
water from sources upstream of the American Diversion Dam-may be
available for diversion by EPCWID and such water is not charged against
EPCWID's annual diversion allocation. Typically, the quality of such
return flow water is too poor to be usable by the City (TDS>1000 mg/l,
or Sulfate>300 mg/l), and thus this return flow water is not considered a
viable source of Project Water available for conversion to M&I use.

Project Water previously lost to seepage and evaporation is now being 19 salvaged by the American Canal Extension Project. EPCWID should receive the 20 benefit of such salvaged Project Water and Reclamation should, in consideration of 21 the "local cost share" of construction cost of the American Canal Extension, 22 23 continue to provide those flows in the Rio Grande upstream of the American Diversion Dam to EPCWID so that EPCWID may provide all or a portion of such 24 salvaged Project Water to the City pursuant to the 2001 Contract. The United 25 States Section of the International Boundary and Water Commission (1993) 26

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estimated that the American Canal Extension would save the Rio Grande Project I. from 21,300 to 30,200 acre-feet per year of Project Water. Reclamation (1971) 2 estimated an annual savings of 25,000 acre-feet per year. Blair (2000) calculated 3 that the quantity of Project Water salvaged for the year 2000 from March through 4 October by the American Canal Extension was approximately 29,928 acre-feet. 5 The estimate of 29,928 acre-feet was based on the preliminary results of a recent 6 United States Geological Survey study (Heywood, 2000) and field measurements 7 made by Blair (2000) after the completion of the American Canal Extension. 8

9 IV. EPCWID First Class Water Rights Land

EPCWID has 69,010 acres of "first class" water rights land of which (according to the January 22, 2001 "Authorization for Water Service" of EPCWID) 2,602 acres are owned by the City, the landowners of 5,241 acres have assigned to the City all rights to receive water from EPCWID, 4 acres are owned by the Lower Valley Water District (LVWD), and the landowners of 2,918 acres have assigned to the LVWD all rights to receive water from EPCWID (the number of acres assigned to the LVWD is currently under review).

Although the 1941 and 1962 contracts do not allow for a quantity or price of water in consideration of the City's owning more than 2,000 acres, Project Water appurtenant to up to 1,000 acres of EPCWID lands in excess of the 2,000 acres owned by the City are considered in the 2001 Contract for conversion to M&I use. The 2001 Contract provides for the sale of a maximum of 4,000 acre-feet of District Water in consideration of such 1,000 acres.

The 1941 and 1962 contracts limit EPCWID to delivering to the City a maximum of 3.5 acre-feet of water per acre per year (25,344 acre-feet per year) in respect of the City's 7,241 acres of assigned rights to water and owned land. The 1988 LVWD assignment contract does not contain the "3.5 acre-foot cap"

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language contained in the 1941 and 1962 City contracts. This report assumes a
 maximum delivery allocation by EPCWID of 4.00 acre-feet per acre pursuant to
 which EPCWID will deliver 11,688 acre-feet per year in consideration of the
 LVWD's 2,922 acres of assigned rights to water and owned land.

Typically, some of EPCWID's remaining "First Class" Water Right land is 5 not irrigated. Nonetheless, if EPCWID taxes on such lands are currently paid and 6 7 all other EPCWID requirements are met, the owners are entitled to water from 8 EPCWID. When a District forbearance program is initiated by EPCWID, in all likelihood most if not all of EPCWID's "First Class" Water Rights landowners 9 who do not presently call for delivery of their respective annual farm delivery 10 allocation will forbear all or part of such allocation. This will likely result in a full 11 call on the delivery allocations for the 69,010 acres of lands within EPCWID 12 classified as having "First Class" Water Rights. 13

14 V. Reclamation Diversion Allocation Procedure

In 1983 the United States Bureau of Reclamation, El Paso Office, proposed 15 16 a diversion allocation procedure based on the result of regression analysis of the annual releases of Project Water made from storage in Elephant Butte and Caballo 17 18 reservoirs during the years of 1951 through 1978 as measured immediately 19 downstream of Caballo Dam versus the measured quantities of Project Water delivered to EBID, Mexico, and EPCWID, and the estimated quantity of Project 20 21 Water delivered to lands in the United States. Deliveries to Mexico pursuant to the Treaty of 1906 were considered by Reclamation as both a delivery and a diversion 22 23 of Project Water. The draft operating agreement submitted in 1983 by 24 Reclamation to EPCWID contained exhibits D1 and D2 which were graphs of the project diversions and project deliveries versus the quantity of Project Water 25

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224

Exhibit **B**

released from storage. The resulting regression equation for data contained in the

where R is the quantity of Project Water released from storage (acre-feet). The

regression equation for the relationship for the data contained in the graph

1

2

3

4

5

6

7

graph in Reclamation's exhibit D1 is:

contained in Reclamation's exhibit D2 is:

Project Deliveries (ac-ft) = 0.8260932 x R - 102,305

Project Diversions (ac-ft) = 1.3377994 × R - 89,970

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Reclamation's determination of a "full supply" of Project Water delivered to 8 project lands in the United States was based on the estimated quantity of Project 9 Water delivered to project lands in the United States during the years 1946 through 10 1950. The "average charge to farms" (quantity of project water delivered on a 11 acre-foot per acre basis) for these years was estimated at 3.0241 acre-feet per acre 12 (see Figure 1). Reclamation assumes a Project Water Rights Acreage of 155,000 13 acres (88,000 acres for EBID, and 67,000 acres for EPCWID) for a full delivery of 14 15 468,700 acre-feet of Project Water to land in the United States. The 1938 Contract between EBID and EPCWID and approved by the United States increased the 16 Project Authorized Acreage to 159,650 acres (90,640 acres for EBID and 69,010 17 acres for EPCWID) but did not change the quantity of diversion allocation (such an 18 allocation likely did not exist). 19

The total project delivery is determined as the sum of 468,700 acre-feet and the 60,000 acre-foot diversion from Mexico or 528,700 acre-feet. The required release from storage is then calculated by Reclamation using the Project Deliveries equation above and is equal to 763,840 acre-feet.

If the value of 763,840 acre-feet is substituted for the variable R (releases) in the Project equation above, then a full diversion at headings is determined as

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1	931,841 acre-feet (includin	ng 60,000 acre-fe	et for Mexico). The full diversion for					
2	lands in the United States	is 871,840 acre-	feet (931,841 - 60,000). Reclamation					
3	prorates the 871,840 acre-feet according to the ratio of irrigable acreage in EBID							
4			D and 376,860 acre-feet for EPCWID.					
5			50 acre-feet is EPCWID's full annual					
6	diversion allocation.							
7								
8	Figure 1 Photograph of Peol	amation's Doguman	t Regarding Full Supply of Project Water to					
9			tez, Reclamation El Paso Field Office, 1998)					
11								
		RIC GRANDE THOU	та					
13	Water Cha	arged to Farms, and	Acres Irrigated					
15		1946 - 1950						
17		Acre-Feet Charged To Farma	froject lands Irrigatod Acres					
19	1946	498,960	156,899 *					
	1947	466,910	158,111					
21	1748	151,750	155,809					
23	1949	479,6CC	159,124 "					
25	1550	1.88.023	158.783					
-	Total	2,385,243	78R,726					
27		harged to Farms	2,365,242 - 3,0261 feet					
29	Averale .	narkia ta tatan D	758,726 - 3.0741 feet					
31		3.021) x 12 = 36.	29 inchos					
32	Figure 2 shows a	graph of Reclam	nation's D2 relationship between the					
33	quantity of Project Water	diverted and the	hat released from storage. Because					
34	quantities of Project Water	in excess of 790	,000 acre-feet have been available for					
35	release from storage sinc	e the developm	ent of the D1-D2 procedures, these					
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			EPWU00	0				

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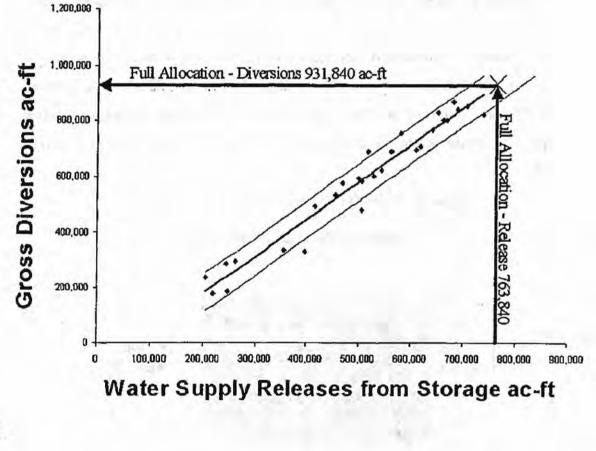
Contract No. 01-WC-40-6760

equations have only been applied by Reclamation during years with a "full supply"
of Project Water. Since 1980 (three years prior to when Reclamation first
proposed use of the D1-D2 procedures) the annual delivery allocation of Project
Water to District Water Rights Lands has been determined by the Directors of
EPCWID for lands in Texas and by the Directors of EBID for lands in New
Mexico. The D1 equation has never been used by either District.

7

8

Figure 2 - Reclamation D2 Diversion Allocation v. Releases from Storage Relationship



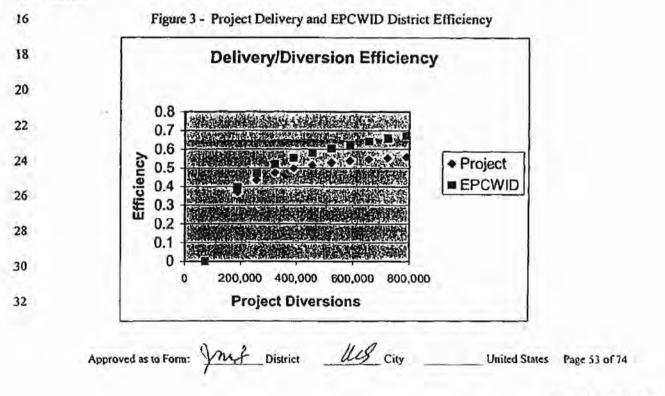
22

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1 VI. Project and District Delivery Efficiency

2 EPCWID operates a gravity flow surface irrigation system with the majority of EPCWID's diversion of Project Water occurring at the American Diversion 3 Dam which is located on the Rio Grande approximately 107 river miles 4 downstream of the storage reservoirs. Under current operating conditions, the 5 quantity of District Water delivered by EPCWID is approximately 73% of 6 EPCWID's combined diversions of District Water (including any sewage effluent 7 discharged into EPCWID's facilities). Reclamation's D1-D2 graphs assume that 8 the quantity of delivered Project Water is 54% of EPCWID diversions. Since 9 1980, EPCWID has continuously reduced the difference between the quantity of 10 water diverted and delivered. Presently, all District Water including diversions 11 12 from the Rio Grande, any sewage effluent discharged into EPCWID's facilities. and all water salvaged by EPCWID through conservation (lining of laterals, 13 improved operations, etc.) over the previous 20 years is committed to EPCWID 14 15 lands.



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Exhibit B

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The Rio Grande Project Delivery Efficiency is equal to Project Deliveries
 divided by Project Diversions or

3

Project Delivery Efficiency = 0.6175-46,748/Project Diversions (acre-feet)

4 Thus, based on Reclamation's D1-D2 graphs, the Project Delivery Efficiency is zero for Project Diversions of less than 75,705 acre-feet, and the upper limit of 5 Project Delivery Efficiency is 61.75%. Since EPCWID took over delivery 6 operations from Reclamation in 1980 there has been enough Project Water in 7 8 storage each year for Reclamation to declare an annual diversion allocation for EPCWID of 376,860 acre-feet. Because no recent data exist to determine 9 EPCWID's District Delivery Efficiency when Reclamation deems that EPCWID's 10 Annual Diversion Allocation is less than 376,860 acre, this report uses a 11 12 modification of Reclamation's D1-D2 graphs to predict District Delivery Efficiencies for such allocations. 13

Reclamation's D1-D2 graphs predict that a release from storage in Elephant 14 Butte and Caballo Reservoirs of 763,840 acre-feet will provide for a total Project 15 Diversion of 931,840 acre-feet for EBID, EPCWID, and Mexico. Of this 931,840 16 17 acre-feet, 376,860 acre-feet or 40.4427% of which is EPCWID's Annual Diversion Allocation. The equation for EPCWID's District Delivery Efficiency was derived 18 19 based on the Project Delivery Efficiency equation adjusted using the percentage of 20 EPCWID's Annual Diversion Allocation (40.4427%) and EPCWID's average 21 District Delivery Efficiency during the years 1994 through 1998 was 69%. The 22 resulting equation is:

23

District Delivery Efficiency = 0.6175 - 18,906/d + d/2,769,231

where d equals EPCWID's Project Diversions (acre-feet), 18,906 equals 0.404427 \times 46,748, and d/2,769,231 equals the adjustment to project efficiency such that

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EPCWID's District Delivery Efficiency equals 0.69 for EPCWID's diversion of 1 350,250 acre-feet. The value of 0.404427 is equal to the ratio of EPCWID's 2 Annual Diversion Allocation to the Rio Grande Project Annual Diversion 3 Allocation (376,860/931,840). 4

VII. Project Water Losses - Mesilla to American Diversion Dam 5

The estimated losses in the Rio Grande of Project Water during the primary 6 7 irrigation season from downstream of Mesilla Dam to the American Diversion Dam for a year with a release from storage of 763,840 acre-feet is 43,667 acre-feet 8 or 12% or the sum of diversions at the American Diversion Dam and the 9 International Diversion Dam (377,445 acre-feet). This quantity of water lost in the 10 Rio Grande was obtained from Appendix C of the January 20, 2000 Operating 11 12 Agreement proposed by the United States and EPCWID which was based on the report by the Hydrology Committee (1997). Section XVIII of this report contains 13 a table with the estimate of the quantity of water lost in the Rio Grande 14 downstream of Caballo Dam and upstream of American Dam. 15

16 VIII. Proposed Operating Agreement

17 EPCWID is currently awaiting the implementation of the January 20, 2000 Operating Agreement for the Rio Grande Reclamation Project proposed by the 18 United States and EPCWID. The benefits of water salvaged by changing operating 19 procedures, construction and operation of regulating reservoirs, and the American 20 Canal Extension Project are not available to EPCWID unless Reclamation changes 21 its current diversion allocation procedure to allow for a conservation credit or 22 adopts the Project Water allocation procedures in the proposed January 20, 2000 23 Operating Agreement proposed by the United States and EPCWID. 24

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1 IX. Quantity of Project Water Available for Conversion to M&I Use

If Reclamation provides a 29,932 acre-foot conservation credit to EPCWID in accounting for diversions of Project Water, in addition to Reclamation's annual diversion allocation of 376,860 acre-feet for EPCWID, then 29,015 acre-feet of additional Project Water will be available to the District (see section XI). The maximum quantity of District Water which can be delivered to the City under the 2001 Contract is 28,116 acre-feet.

8 X. District Water Available for Sale by EPCWID

9 EPCWID delivers water to taxable owners of "1" Class Water Rights Lands" pursuant to the Texas Water Code Chapter 49 - Provisions Applicable to all 10 Districts and Chapter 55 - Water Improvement Districts. Such District Water is 11 not "sold" to such taxpayers, but is delivered for beneficial use subject to 12 availability of water, District requirements, and the payment of District water 13 assessments levied on such lands. The 2001 Contract considers the sale of District 14 Water to the City of El Paso. Chapter 49 section 49.2261 of the Texas Water Code 15 provides for the sale of District Water as follows: 16

17 § 49.2261. Purchase, Sale, or Other Exchange of Water or Water Rights

18 Notwithstanding any other law, the district may:

(1) purchase, acquire, sell, transfer, lease, or otherwise exchange water or
 water rights under an agreement between the district and a person or entity
 that contains terms that are considered advantageous to the district; and

(2) employ agents, consultants, brokers, professionals, or other persons that
 the board determines are necessary or appropriate to conduct a transaction
 described by Subdivision (1).

- 25 and Chapter 55 section 55.197 provides,
- 26 § 55.197. Selling Surplus Water

The district may sell to any person who owns or uses land in the vicinity of
 the district any surplus district water for use in irrigation or for domestic or
 commercial uses.

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EPCWID Texas Natural Resource Conservation Commission Permit to Use State
 Water No. 5433 authorizes EPCWID to:

"...use all of the water authorized herein for municipal, industrial, mining or recreational purposed and/or irrigation of a maximum of 69,010 acres of land with the District's boundaries and/or to sell any of this water surplus to the District's needs for any of the authorized purposes of use in El Paso and Hudspeth Counties."

3

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8 EPCWID's Permit No. 5433 is consistent with the previously cited provisions of
9 the Texas Water Code regarding surplus water.

In this report, the determination in a "full supply" year of the quantity of 10 water surplus to the needs of the taxpayers of EPCWID first assumes a District 11 Project Water delivery requirement of 4.00 acre-feet per acre per year to all lands 12 held by taxable owners of "First Class" Water Rights Lands and the requirements 13 of the 1941 and 1962 contracts among the City of El Paso, EPCWID, and the 14 United States, and the requirements of the 1988 contract among the Lower Valley 15 16 Water District, EPCWID, and the United States. For the purposes of this report I have assumed that EPCWID only has those obligations to deliver District Water as 17 identified above in this report. 18

19 XI. Sources of Diversion and Delivery Quantities of EPCWID's District

20 Water during Years including a Conservation Credit

Table 1 is a summary of the potential sources for diversions and delivery of 21 District Water during a year when Reclamation has provided EPCWID with an 22 annual diversion allocation of 376,860 acre-feet. All values, except District 23 Delivery Efficiency, in Table 1 are in acre-feet per year or acre-feet per acre per 74 year. The maximum quantity of EPCWID District Water (exclusive of non-project 25 water) which is available for delivery to the City pursuant to the 2001 Contract is 26 28,116 acre-feet of which 4,000 acre-feet are pursuant to City owned land of 1,000 27 acres and 7,500 acre-feet are pursuant to EPCWID receiving 15,000 acre-feet of 28

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Usable Sewage Effluent. The remaining 16,616 acre-feet may be determined as
 surplus to the needs of EPCWID taxpayers by EPCWID's Directors.

Table 1 lists a reserve balance of 899 acre-feet of District Project Water and
a reserve balance of 21,615 acre-feet of District Water.

5 XII. Sources and Quantities of EPCWID's District Water during Years with 6 a Full Project Delivery Allocation and No Conservation Credit

7 Table 2 assumes the minimum deliveries to EPCWID of 12,000 acre-feet of 8 Usable Sewage Effluent from Haskell Street WWTP and 9,333 acre-feet (year 2001) of Other Usable Sewage Effluent from Bustamante WWTP. If Reclamation 9 provides an annual diversion allocation of 376,860 acre-feet to EPCWID, but does 10 not provide any credit to EPCWID for the Project Water salvaged by the American 11 Canal Extension project, then a minimum of 10,000 acre-feet of District Water 12 pursuant to the 2001 Contract will be delivered by EPCWID to the City. The 13 Reserve Balance of 5,816 acre-feet of District Water may be determined by the 14 Directors of EPCWID as available for delivery to the City under the 2001 Contract 15 in addition to the 10,000 acre-foot minimum. 16

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	DISTRICT WATER SUPPLY and DELIVERY REQUIREMENTS		Delivery	Diversion	Delivery
n [(Maximum Effluent Diversions and Conservation Credit)	acres	ac-fl/ac	ac-ft	ac-ft
1	EPCWID's Diversion Allocation of Project Water	69,010		376,860	275,55
2	Conservation Credit from American Canal Extension Project			29,928	21,88
3	Usable Bustamante Effluent - Non-Project Water			13,333	9,74
4	Usable Haskell Effluent - Non-Project Water			15,000	10,96
5	Total District Water (Project and Non-Project Water)		0.00	435,121	318,150
6	Estimated Difference (Diversion to Delivery)	10.000	1.	-116,971	
7	City 1941 and 1962 Contract Deliveries (max. of 3.5 ac-ft/ac)	7,241	-3.50		-25,344
8	LVWD 1988 Contract Delivery (4.0 ac-ft/ac)	2,922	-4.00		-11,688
9	Irrigated Land Delivery (4,0 ac-ft/ac)	57,847	-4.00		-231,388
10	2001 Contract 1,000 acres City Owned Land >2000 acres	1,000	-4.00		-4,000
11	2001 Contract Deliveries under section 7A2				1
12	2001 Contract Other District Water 7A1	2			-24,116
13	2001 Contract Total	- 1 - · · ·			-28,116
14	Non-Project Water (sum of items 3 and 4)	21 . 227			20,716
15	Reserve Balance of District Project Water	10.000			895
16	Reserve Balance of District Water		-		21,615
17	District Delivery Efficiency	73.1%			10 2007

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NOTES: The numbers in this table are based on the following assumptions: 1) execution of the 2001 Contract, 2) the present allocation and accounting methodology of Reclamation, and 3) acreage in Column A for rows 7, 8, and 10 was obtained from EPCWID Authorization for Water Service Report date 1/22/2001 3) acreage in Column A for rows 7, 8, and 10 was obtained from EPCWID Authorization for Water Service Report date 1/22/2001

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lem	Description
1	EPCWID's Diversion Allocation of Project Water: Reclamation's full D2 diversion allocation EPCWID is 376,860 acre-feet per year during it primary irrigation season for 67,000 acres or 5.6248 ac-fl/acre. The 1938 Contract increased the acreage to 69,010 acres but did not change it quantity of diversion allocation (such an allocation likely did not exist).
2	Credit for Water Conserved by the American Canal Extension (March – October): The quantity of Project Water conserved by the construction ar operation of the American Canal Extension from March through October during a year with a full D2 Diversion Allocation. (estimated from usin preliminary USGS data and Blair, 2000 report)
3	Usable Bustamante Effluent: Non Project Water - A minimum quantity of Other Usable Sewage Effluent of 9,333 acre-feet in 2001 and increase 1,000 acre per year until reaching 13,333 acre-feet in 2005 from Bustamante WWTP discharged into the Riverside Canal downstream of EPCWID Riverside Diversion metering station from Feb. 15 through Oct. 15 of each year.
	Usable Haskell Effluent: Non Project Water - A minimum quantity of 12,000 acre-feet and a maximum quantity of 15,000 acre-feet of effluent from Haskell Street WWTP discharged into the American Canal Extension upstream of EPCWID's Riverside Diversion metering station from Februar 15 through October 15 of each year.
5	Total District Water (Project and Non-Project Water): The sum of deliverable quantity of Reclamation's D2 diversion allocation, Conservatio Credit, and the quantity of Usable Bustamante and Haskell Effluent.
6	Estimated Difference (Diversion to Delivery): The sum of 435,121 multiplied by 0.269. The value 0.269 equals 1.000 - 0.731.
7	City 1941 and 1962 Contract Deliveries (max. of 3.5 ac-ft/ac): The screage includes 2,000 acres of City owned District Land and 5,241 acres of assignments (EPCWID, May 2000)
8	LVWD 1988 Contract Delivery (4.0 ac-ft/ac): This acreage includes the 4 acres of LVWD owned land and 2,918 acres of assignments.
9	Itrigated Land Delivery (4.0 ac-ft/ac): District land not included in rows 7, 8 and 10.
	2001 Contract 1,000 acres of City owned land under section 9A of the 2001 Contract.
	2001 Contract Deliveries under section 7A2 which are assumed to be zero. The City can call for a max. of 8,000 acre-feet of District Water i addition to the 28,116 acre-feet maximum in section 7A1 if such water is available as determined by the District under section 7A2.
1	2001 Contract Deliveries under section 7A1 and 7B: the sum of all other District Water available for delivery by the District to the City under th 2001 Contract less any District Water delivered under items 10 and 11 above
	District Water Available Under 2001 Contract Including 7,500 acre-feet of Haskell Effluent Credit and 4,000 acre-feet for 1,000 acres of City owner land and assuming the District receives a Conservation Credit of 29,928 acre-feet.
14	District Non-Project Water: sum of the quantities of non-project water available for delivery
15	Reserve Balance of District Project Water: The balance of District Project Water held in reserve by the District to facilitate delivery of obligate District Water.
16	Reserve Balance of District Water: balance of District Project Water held in reserve by the District to facilitate delivery of obligated District Water.
17	District Delivery Efficiency: District Efficiency is the ratio of the quantity of District Water delivered to the quantity diverted and is a function of the quantity of District Water diverted.

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DISTRICT WATER SUPPLY and DELIVERY REQUIREMENTS		Delivery	Diversion	Delivery
(Minimum Effluent Diversions and No Conservation Credit)	acres	ac-fl/acre	ac-ft	ac-ft
1 EPCWID's Diversion Allocation of Project Water	69,010		376,860	269,00
2 Conservation Credit from American Canal Extension Project		1.1	0	N. and
3 Usable Bustamante Effluent - Non-Project Water			9,333	6,66
4 Usable Haskell Effluent - Non-Project Water	1.00		12,000	8,56
S Total District Water (Project and Non-Project Water)	1.000	1	398,193	284,23
6 Estimated Losses (Diversion to Delivery)			-113,958	
7 City 1941 and 1962 Contract Deliveries (max. of 3.5 ac-ft/ac)	7,241	-3.50		-25,34
8 LVWD 1988 Contract Delivery (4.0 ac-ft/ac)	2,922	-4.00		-11,68
9 Irrigated Land Delivery (4.0 ac-ft/ac)	57,847	-4.00		-231,38
10 2001 Contract 1,000 acres of City Owned Land >2000 acres	1,000	-4.00	1	-4,00
11 2001 Contract Deliveries under section 7A2	1.000		1000	
12 2001 Contract minimum determination under section 7B1		1	1	-6,00
13 2001 Contract Total (sum of items 10 through 12)			1000	-10,00
14 Non-Project Water (sum of items 3 and 4)		1.00	1.000	15,22
15 Reserve Balance of District Project Water (negative number indicates shortage)		1	(P. 11)	-9,41
16 Reserve Balance of District Water			1	5,81
17 District Delivery Efficiency	71.4%	(

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NOTES: The numbers in this table are based on the following assumptions: 1) execution of the 2001 Contract, 2) the present ellocation and accounting methodology of Reclamation, and 3) acreage in Column A for rows 7,8, and 10 was obtained from EPCWID Authorization for Water Service Report dated 1/22/2001

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XIII. Sources and Quantities of EPCWID's District Water during Years with Greater than Full Project Delivery Allocation

Section 7A2 of the 2001 Contract considers an "if available" delivery of 3 8,000 acre-feet of District Water some time over the course of the term of the 4 contract. One possible source of such water would be during flood years when the 5 release from storage is greater than or equal to 823,500 acre-feet and Reclamation 6 makes available for diversion by EPCWID at least 409,160 acre-feet, and no credit 7 is given for water conserved by the American Canal Extension Project. The results 8 of the analysis contained in Table 3 support that for a year with Annual Diversion 9 Allocation of 409,160 acre-feet that EPCWID can deliver up to 36,116 acre-feet of 10 Project Water under the 2001 Contract. In such years no conservation credit 11 should be provided for the American Canal Extension project because during flood 12 years it is likely that no water will be salvaged by such project (Blair, 2000). 13

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District

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	DISTRICT WATER SUPPLY and DELIVERY REQUIREMENTS		Delivery	Diversion	Delivery
n	(Maximum Effluent Diversions and No Conservation Credit)	acres	ac-fl/acre	ac-ft	ac-ft
1	EPCWID's Diversion Allocation of Project Water	69,010		409,160	299,615
2	Conservation Credit from American Canal Extension Project		-	0	(
3	Usable Bustamante Effluent - Non-Project Water	1 1 1 1 1 4		13,333	9,763
4	Usable Haskell Effluent - Non-Project Water			15,000	10,984
5	Total District Water (Project and Non-Project Water)			437,493	320,363
6	Estimated Losses (Diversion to Delivery)	53 5-54		-117,130	
7	City 1941 and 1962 Contract Deliveries (max. of 3.5 ac-fl/ac)	7,241	-3.50		-25,344
8	LVWD 1988 Contract Delivery (4.0 ac-ft/ac)	2,922	-4.00	1.000	-11,688
9	Irrigated Land Delivery (4.0 ac-ft/ac)	57,847	-4.00	P	-231,388
10	2001 Contract 1,000 acres of City Owned Land >2000 acres	1,000	-4.00	1.1	-4,000
11	2001 Contract Deliveries under section 7A2	10.0	S - 2 - 4		-8,000
12	2001 Contract Other District Water under section 7				-24,116
13	2001 Contract Total	13.		1.0	-36,116
14	Non-Project Water	10.000			20,747
15	Reserve Balance of District Project Water			1.00	-4,920
16	Reserve Balance of District Water			1.201	15,827
17	District Delivery Efficiency	73.2%		1.1.1	

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Ì 2

The numbers in this table are based on the following assumptions: 1) execution of the 2001 Contract, 2) the present allocation and accounting methodology of Reclamation, and 3) acreage in Column A for rows 7, 8, and 10 obtained from EPCWID Authorization for Water Service Report date 1/22/2001

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XIV. Sources and Quantities of EPCWID's District Water during Years with 1 2 less than a Full Project Delivery Allocation

During years with less than a full Project Delivery Allocation, there is no 3 surplus water available for sale by EPCWID. Table 4 below lists the sources of 4 water and quantities of District Water available when EPCWID's Project 5 Diversion Allocation is less that 376,860 acre-feet. Once EPCWID's Annual 6 Delivery Allocation falls below 4.00 acre-feet per acre the District has no surplus 7 water available for sale as discussed in section X of this report. Column B of 8 Table 4 shows the estimated quantity of water salvaged from the American Canal 9 10 Extension project. The initial value of 29,928 was determined by Blair (2000). 11 The reduction in the quantity of water salvaged was estimated from a report by 12 Raymond Hill dated February 27, 1964 as detailed in a memorandum from A. Blair to Bert Cortez dated October 29, 2000. 13

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Table 4 - Sources of Diversion and Delivery Quantities of District Water-Less Than a Full Allocation

t

A	В	C	D	E	F	G	н	1	1
USBR Diversion Allocation Project Water	Percent of Normal Allocation	ACE Diversion Credit Project Water	Usable Sewage Effluent Non-Project Water	Bustamante Sewage Effluent Non-Project Water	District Water Available for Diversion	District Eff.	for Delivery	Estimated Delivery Allocation	2001 Contract
ac-ft		ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ac-ft	ft	ac-ft
376,860		29,928	15,000		435,122	73.1%	318,151		
350,924	93.12%	29,680	15,000	13,333	408,938	71.9%	294,002	3.99	0.50
275,868	73.20%	27,698	15,000	13,333	331,900	68.0%	225,821	3.00	0.50
192,279	51.02%	23,282	15,000	13,333	243,894	62.8%	153,179	2.00	0.50
		and the second se	10 000	12 222	127 241	CO 00/	72,642	1.00	
93,816		15,092	15,000		137,241	52.9%			
	24.89% L City Owned Lands	M 1988 LVWD Contracts	N Irrigated Lands Deliveries	O 2001 Contract Other	Р	Q Non-Project Water	R Reserve Balance	S Reserve Balance	T Reserve Balance of District
93,816 K 1941/62 Contracts Deliveries	L City Owned Lands 1,000 ac Deliveries	M 1988 LVWD Contracts Deliveries	N Irrigated Lands Deliveries	0 2001 Contract Other District Water	P 2001 Contract Avnilable District Water	Q Non-Project Water Available for Delivery	R Reserve Balance of District Project Water	S Reserve Balance of District Water	T Reserve Balance
93,816 K 1941/62 Contracts Deliveries ac-ft	L City Owned Lands 1,000 ac Deliveries ac-ft	M 1988 LVWD Contracts Deliveries ac-ft	N Irrigated Lands Deliveries ac-ft	O 2001 Contract Other District Water ac-ft	P 2001 Contract Available District Water ac-ft	Q Non-Project Water Available for Delivery ac-ft	R Reserve Balance of District Project Water ac-ft	S Reserve Balance of District Water ac-ft	T Reserve Balance of District Water
93,816 K 1941/62 Contracts Deliveries ac-ft 25,344	L City Owned Lands 1,000 ac Deliveries ac-ft 4,000	M 1988 LVWD Contracts Deliveries ac-ft 11,688	N Irrigated Lands Deliveries	O 2001 Contract Other District Water ac-ft 24,116	P 2001 Contract Available District Water ac-ft 28,116	Q Non-Project Water Available for Delivery ac-ft 20,716	R Reserve Balance of District Project Water ac-ft	S Reserve Balance of District Water ac-ft 21,616	T Reserve Balance of District Water
93,816 K 1941/62 Contracts Deliveries ac-ft 25,344 25,344	L City Owned Lands 1,000 ac Deliveries ac-ft 4,000 3,990	M 1988 LVWD Contracts Deliveries ac-ft 11,688 11,659	N Irrigated Lands Deliveries ac-ft 231,388 230,810	0 2001 Contract Other District Water ac-ft 24,116 7,500	P 2001 Contract Available District Water ac-ft	Q Non-Project Water Available for Delivery ac-ft	R Reserve Balance of District Project Water ac-ft 899 -5,670	S Reserve Balance of District Water ac-ft 21,616 14,700	T Reserve Balance of District Water 6.79%
93,816 K 1941/62 Contracts Deliveries ac-ft 25,344	L City Owned Lands 1,000 ac Deliveries ac-ft 4,000	M 1988 LVWD Contracts Deliveries ac-ft 11,688	N Irrigated Lands Deliveries ac-ft 231,388	O 2001 Contract Other District Water ac-ft 24,116	P 2001 Contract Available District Water ac-ft 28,116 11,490	Q Non-Project Water Available for Delivery ac-ft 20,716 20,370	R Reserve Balance of District Project Water ac-ft 899 -5,670 -7,986	S Reserve Balance of District Water ac-ft 21,616 14,700 11,291	T Reserve Balance of District Water 6.79% 5.00%

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1 XV. Impacts of Proposed Location of Sources and Diversions

The 2001 Contract contemplates that all or any lesser portion of the 28,116 2 acre-feet of District Water available for delivery to the City will be delivered to the 3 Jonathan-Rogers Water Treatment Plant located immediately downstream of the 4 confluence of the American Canal Extension and the heading of the Riverside 5 6 Canal (approximately ½ mile upstream of the location where the Bustamante Wastewater Treatment Plant discharges effluent into the Riverside Canal). All 7 sources of Project Water (including all water salvaged by the American Canal 8 9 Extension) originate upstream of the diversion point.

The source of the water salvaged by the American Canal Extension Project 10 11 is the American Canal Extension which is the structure that conveys Project Water diverted from the Rio Grande at the American Diversion Dam to the delivery point 12 at the Jonathan Rogers Water Treatment Plant. The conservation credit proposed 13 for the Project Water salvaged by the American Canal Extension will have no 14 impact on the quantity of Project Water Supply upstream of the American 15 Diversion Dam or downstream in the Riverside Canal as compared to conditions 16 prior to the construction of the American Canal Extension project or prior to the 17 implementation of the 2001 Contract. 18

The location of the majority of the 1,000 acres of City owned land in excess of 2,000 acres is assumed to be within units 6A and 6B of EPCWID (upstream of the American Dam). Prior to the City purchasing such lands, the Project Water appurtenant to such lands was diverted in New Mexico at the Mesilla Diversion Dam. Reclamation allows a 15% diversion credit to EBID to account for transportation losses of EPCWID Project Water in the Westside Canal between Mesilla Dam and the heading of the La Union East canal. The estimate of Project

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Water losses in the Rio Grande between Mesilla and American diversion dams is 1 approximately 12% (as discussed in section VII this report) of the total quantity of 2 Project Water diverted for EPCWID at the American Diversion Dam and for 3 Mexico at the International Diversion Dam (located approximately 2 miles 4 downstream of the American Diversion Dam). The losses in the American Canal 5 and its extension between the American Diversion Dam and the confluence of the 6 Riverside Canal are approximately 1% to 2% of the diversions into the American 7 Canal. Thus, the change in location of diversion of the 4,000 acre-feet from the 8 Mesilla Diversion Dam to the American Diversion Dam will have diminutive 9 10 impact on the quantity of the project water supply.

XVI. Summary 11

12 This report analyzed the sources, quantities, and conditions for which District Water is available for delivery by EPCWID to the City of El Paso under 13 the terms of the 2001 Third Party Implementing Contract and Reclamation's 14 15 Project Water allocation procedures currently in effect but under the protest of EPCWID and subject to ongoing litigation. During years when Reclamation 16 declares a full annual diversion allocation of Project Water for EPCWID (376,860 17 18 acre-feet) and when Reclamation provides EPCWID with the full diversion credit for the Project Water salvaged by the American Canal Extension (29,928 acre-19 feet), then 28,116 acre-feet of District Water will be available for delivery to the 20 21 City of El Paso if so determined by the Directors of EPCWID.

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XVII. References 1

Blair, A.W., October 2000, "Salvage of Rio Grande Project Water" report to El Paso County 2 3 Water Improvement District No. 1.

Blair, A.W., October 29, 2000, "Memorandum to Bert Cortez regarding the Relationship 4 5 between the quantity of water salvaged by the American Canal Extension Project and EPCWID's quantity of annual diversion allocation." 6

1938 Contract, Contract between Elephant Butte Irrigation District and El Paso County Water 7 8 Improvement District No. 1 and approved by the United States dated February 16, 1938 9 Providing for a 3 per cent cushion on the Irrigable Area of the Rio Grande Reclamation Project as allocated to the Districts. 10

1941 Contract, Contract No. 116r-1541 to Supply Water to the City of El Paso for Municipal 11 Purposes dated February 18, 1941 among the City of El Paso, El Paso County Water 12 Improvement District No. I and the United States. 13

1962 Contract, Contract No. 14-06-500-762 Permitting the City of El Paso to Acquire Additional 14 Water Supply for Municipal Purposes dated December 20, 1962 among the City of El 15 Paso, El Paso County Water Improvement District No. 1 and the United States. 16

- 1988 Contract, Contract No. 9-07-40RO680, Contract Regarding Delivery of Water to the El 17 Paso County Lower Valley Water District Authority, among the Lower Valley Water 18 District Authority, El Paso County Water Improvement District No. 1 and the United 19 20 States.
- EPCWID, January 2001 Authorization for Water Service Report for Lower Valley Water 21 22 District.
- EPCWID, January 2001 Authorization for Water Service Report for El Paso Public Service 23 24 Board.
- Heywood, Charles, May 19, 2000, "Revised Leakage Estimates" e-mail to A. Blair, B. Cortez, 25 and D. Knorr. 26
- Hydrology Committee, July 31, 1997, Lower Rio Grande General Hydrologic Relationships, 27 prepared in response to a stipulated protocol in Elephant Butte Irrigation District v. 28 29 Thomas C. Turney, et al., Third Judicial District County, County of Dona Ana, State of 30 New Mexico, CV 96-888.
- Permit to Use State Water No. 5433, Type: Section 11.121, Texas Natural Resources 31 Conservation Commission, granted to El Paso County Water Improvement District No. 1 32 33 on September 8, 1993.
- Rio Grande Project Operating Agreement, January 20, 2000 Draft, proposed by the El Paso 34 County Water Improvement District No. 1 and the United States. 35

United States Section of the International Boundary and Water Commission, 1993 Final 36 37 Environmental Assessment for the American Canal Extension.

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Estimated Rio Grande Losses/Gains for a Release from Storage of 790,000 ac-ft	River Miles from Caballo Metering Station , RI miles	Evaporation From River Water Surface ac-fl/year	Riparian Evapo- Transpiration From River ac-ft/year	Depletions Due to Groundwater Withdrawals ac-fl/year	Surface Water	Subsurface Water	Total Project Losses ac-fl/year
Below Caballo to Percha	1.2	-287	-430	-617	44	158	-1,132
Percha to Leasburg	43.6	-10,410	-15,614	-22,421	1,601	5,725	-41,118
Leasburg to Mesilla	22.7	-5,420	-8,129	-11,673	834	2,981	-21,408
Mesilla to Below Mesilla	0.8	-191	-287	-411	29	105	-754
Below Mesilla to Anthony State Line	19.2	-4,584	-6,876	-9,873	705	2,521	-18,107
Anthony State Line to American	19.3	-4,608	-6,912	-9,925	709	2,534	-18,201
American to International	2.1	-501	-752	-1,080	77	276	-1,980
Total	108.9	-26,000	-39,000	-56,000	4,000	14,300	-102,700

XVIII. Conveyance Losses of the Rio Grande Upstream of American Diversion Dam

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2	Exhibit E-Example of the Calculation of an Estimated Charge
3	
4	This example is hypothetical and is only provided for illustrative purposes.
5	The following steps are required to determine the Estimated Charge for the year
6	2002. Items E1 through E9 were obtained from table below. The Estimated
7	Charge does not include any Federal Revenue.
8	Step 1: Determine the price of District Water pursuant to section 9A:
9	E7 × E4/E3 = 15.00 \$/acre-foot × 173.9/171.0 = 15.25 \$/acre-foot
10	Step 2: Determine quantity of District Water pursuant to section 9A:
11	$E6 \times E1 = 1000 \text{ acres} \times 4.00 \text{ acre-feet/acre} = 4,000 \text{ acre-feet}$
12	Step 3: Determine the payment for District Water pursuant to section 9A:
13	$(Step 1 \times Step 2) = 15.25 $ \$/acre-feet × 4,000 acre-feet = \$61,000.00
14	Step 4: Determine Price of District Water pursuant to section 9B:
15	E8 = 200.80 \$/acre-foot
16	Step 5: Determine the quantity of District Water priced under section 9B
17	pursuant to sections 7A(1) and 7B:
18	E2 - Step 2 = 19,500 acre-feet - 4,000 acre-feet =15,500 acre-feet
19	Step 6: Determine the payment for District Water priced under section 9B:
20	E8 × Step 5 = 200.80 \$/acre-foot × 15,500 acre-feet = \$3,112,400.00
21	Step 7: Determine the estimated of quantity of Usable Sewage Effluent
22	pursuant to section 10A:
23	E5 = 15,000 acre-feet

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Step 8: Determine the multiplier used in calculating the credit for Usable								
		Se	ewage Effluent pursuant to section 9C:					
	E9 = 0.50							
		Step 9: De	termine the estimated credit for Usable Seway	ge Effluent pursuant				
		to	9C:					
		E8 ×	x E5 x E9 = 200.80 \$/acre-foot x 15,000 acre-feet x 0	0.50 = \$1,506,000.00				
		Step 10: D	etermine the Estimated Charge pursuant to see	tions 9 and 10:				
			AND AND REAL PROPERTY AND A RE					
		200						
		Step	3+Step 6-Step 9 = \$61,000.00+\$3,112,400.00-\$1,506	,000 = \$ 1,667,400.00				
_		Step	3+Step 6-Step 9 = \$61,000.00+\$3,112,400.00-\$1,506	,000 = \$ 1,667,400.00				
It	tem	Step	3+Step 6-Step 9 = \$61,000.00+\$3,112,400.00-\$1,506 Description	000 = \$ 1,667,400.00 Value				
It E								
E		Section	Description	Value				
E	31	Section 1A	Description Annual Delivery Allocation	Value 4.00 acre-feet/acre				
E E E	51 52	Section 1A 7A1, 7B	Description Annual Delivery Allocation District Water Available to City	Value 4.00 acre-feet/acre 19,500 acre-feet				
E E E	31 32 33	Section 1A 7A1, 7B 9A	Description Annual Delivery Allocation District Water Available to City CPI-U for December 2000	Value 4.00 acre-feet/acre 19,500 acre-feet 171.0				
E E E E E	31 32 33 34	Section 1A 7A1, 7B 9A 9A	Description Annual Delivery Allocation District Water Available to City CPI-U for December 2000 CPI-U for December 2001	Value 4.00 acre-feet/acre 19,500 acre-feet 171.0 173.9				

Year 2001 Price of District Water from 9A.

Year 2002 Price of District Water from 9B

Multiplier for Usable Sewage Effluent from 9C

10

ET

E8

E9

9A

9B 9C

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15.00 \$/acre-feet

0.50

200.80 \$/acre-feet

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1 2	Exhibit F-Example of the Calculation of City's Other Usable Effluent Delivery Obligations
3	This example is hypothetical and is only provided for illustrative purposes.
4	The year is assumed to be after 2004. Items F1 through F14 were obtained from
5	the table below.
6	Step 1: Determine the estimate of the annual quantity of District Water
7	available for delivery to the City under Existing Contracts and this
8	Contract.
9	(F3 + F4) × F2 + F8 = (5,241 + 2,000) × 3.50 + 28,116 = 53,460 acre-feet
10	Step 2: Determine the obligation of the City for Other Usable Sewage
11	Effluent for District Water delivered under Existing Contracts and
12	this Contract.
13	F1 × (Step 1-F5 × F9) = 0.25 × (53,460-15,000 × 0.50) = 11,490 acre-feet
14	Step 3: Determine the obligation of the City for Other Usable Sewage
15	Effluent for Underflow of the Rio Grande captured by the City's
16	Groundwater withdrawals and to be delivered in the bed of the Rio
17	Grande upstream of the American Diversion Dam.
18	F10 × F7 × F12 = F7 = 1.60 × 7,000 × 0.625= 7,000 acre-feet
19	Step 4: Determine the obligation of the City for Other Usable Sewage
20	Effluent for Underflow of the Rio Grande captured by the City's
21	Groundwater withdrawals and to be delivered in the American
22	Canal or its extension, the Riverside Canal or the Riverside
23	Intercepting Drain.
24	F10 × F7 × F13 = 1.60 × 7,000 × 0.375= 4,200 acre-feet

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D.	Step 5: Determine the obligation of the City for Other Usable Sewage
2	Effluent to be delivered in the bed of the Rio Grande upstream of
3	the American Diversion Dam from February 15 through October 15.
4	F10 × F7 × F14 = 1.60 × 7,000 × 0.41667= 4,667 acre-feet
5	Step 6: Determine the obligation of the City for Other Usable Sewage
6	Effluent to be delivered in the bed of the Rio Grande upstream of
7	the American Diversion Dam from January 1 through February 14
8	and from October 16 through December 31.
9	F7 - Step 5 = 7,000 - 4,667 = 2,330 acre-feet
10	Step 7: Determine the total obligation of the City for Other Usable Sewage
11	Effluent to be delivered from February 15 through October 15.
12	Step 5 + F11 = 4,667 + 13,333 = 18,000 acre-feet
13	Step 8: Determine the remaining other Usable Sewage Effluent which can be
14	delivered in the bed of the Rio Grande upstream of the American
15	Diversion Dam, in the American Canal or its extension, the
16	Riverside Canal, or the Riverside Intercepting Drain any time during
17	the year.
18	Step 2 + F10 × F7 - Step 7 - Step 6 =
19	11,490 + 1.60 × 7,000 - 18,000 - 2,330 = 2,360 acre-feet

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ltem	Section	Description	Value
F1	12A	Return Flow Obligation as a Percent of Deliveries	25%
F2		Delivery Allocation Under Existing Contracts	3.50 acre-feet/acre
F3	9A	Assignments under Existing Contracts	5,241 acres
F4		City Owned Land Under Existing Contracts	2,000 acres
F5	10A	Estimated Usable Sewage Effluent	15,000 acre-feet
F6	9A	Acres of City Owned Land from Exhibit B	1,000 acres
F7	Exhibit C	Underflow of Rio Grande Captured by City's Groundwater Withdrawals	7,000 acre-feet
F8	7A(1)	Delivery of District Water under Contract	28,116 acre-feet
F9	Table 2	Multiplier for Usable Sewage Effluent from 9C	0.50
F10	12B(1)	Multiplier for Underflow	160%
F11	12C	Estimate of City's obligation to deliver Other Usable Sewage Effluent from February 15 through October 15 in the Riverside Canal or Riverside Intercepting Drain after year 2004	13,333 acre-feet
F12	12B(1)	Percent of Item F7 required under section 12B(1) as Other Usable Sewage Effluent to be delivered in the bed of the Rio Grande upstream of the American Diversion Dam	62 1/2%
F13	12B(1)	Percent of Item F7 required under section 12B(1) as Other Usable Sewage Effluent to be delivered in the American Canal or its extension, the Riverside Canal, or the Riverside Intercepting Drain	37 1/2%
F14	12D	Percent of Item F7 required under section 12B(1) as Other Usable Sewage Effluent to be delivered from February 15 through October 15 in the bed of the Rio Grande upstream of the American Diversion Dam	41 2/3 %

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