



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER



WATER MASTER REPORT
PECOS VALLEY SURFACE WATER DISTRICT
2016

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WATER MASTER

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INTRODUCTION

The Pecos Valley Surface Water District was declared by Order of the State Engineer on July 1, 1952. On January 20, 1956, the State Engineer issued an Order extending the District and on May 11, 1959, and June 4, 1963, orders were issued reducing the District, for economical and satisfactory operation, to its present boundaries. The District now includes the Pecos River and most of the tributaries from a line south of Santa Rosa dividing Sections 19 and 30 in Township 8 North, Range 22 East, N.M.P.M., south to the New Mexico – Texas state line.

The waters of the District are administered in conformance with specific State Engineer Findings and Order's, permits and licenses, and adjudications by the courts, including the following:

United States v. Hope Community Ditch et al., No. 712 Equity, United States District Court for the District of New Mexico (1933).

Livingston v. Neeson et al., No. 5144, Fifth Judicial District in and for Eddy County, New Mexico (1931).

United States v. Harkey et al., No. 1610 Equity, United States District Court for the District of New Mexico.

Harkey v. Parkhurst et al., No. 3258, District Court for Eddy County, New Mexico (1920).

United States v. Judkins et al., No. 112, Fifth Judicial District for the Territory of New Mexico (1912).

State of New Mexico v. L.T. Lewis, et al., Chaves County Cause Nos. 20294 and 22600 Consolidated, Partial Final Decree, Pecos River Pump Section (1992).

State Engineer Findings and Order: June 10, 1964, September 22, 1972, and approved amendment January 8, 1982.

March 17, 1980 – “Determination of Ft. Sumner Irrigation District Direct Flow Right with the Los Esteros Project in Operation.”

The waters within the District are administered by the Water Master who is appointed by the State Engineer in accordance with New Mexico Statutes Annotated, Chapter 72, Article 3, Section 3. This appointment is subsequently confirmed by order of the District Court. The Pecos River Water Master maintains offices in the District II Office of the State Engineer at 1900 West Second Street in Roswell.

GENERAL

Timothy B Williams served as Pecos River Water Master and Secretary Computer for the 2016 irrigation season.

The operation of the Pecos Valley Surface Water District, PVSWD, is financed by assessment of the water users in the District (in accordance with New Mexico Statute 72-3-4), which includes four counties: Chaves, De Baca, Eddy and Guadalupe. The rate of assessment is determined by dividing the total approved budget for the next fiscal year by the total acre feet of water diverted in the past calendar year. Each user is then assessed his proportionate share based on the quantity of water diverted.

The field work of the Water Master consists generally of apportioning water among the users, servicing automatic water-stage recorders, making discharge measurements, and making field inspections for water use, supply and unauthorized diversions and waste.

Office work consists of computing and checking current meter measurement notes and discharge records; computing, tabulating and distributing records of drain water supply and use; computing and compiling assessment rolls; compiling reports, operating budgets; routine correspondence, and conferences with water users. Activities of the Water Master are reported to the State Engineer at the end of each irrigation season (January 1 through December 31) in accordance with New Mexico Statutes 72-3-5.

Personnel of the District II Office of the State Engineer assisted in servicing water-stage recorders, reading meters, making discharge measurements, and conducting various field investigations. Special thanks to Guy Chamberlin and Alvaro Alvarado from District II for their assistance.

Personnel of the Water Resources Branch of the United States Geological Survey were most cooperative, especially U.S.G.S. personnel within the Carlsbad, Albuquerque and Las Cruces offices. They furnished equipment, records, and technical information, which were of great value in the administration of public surface water within the PVSWD. The Carlsbad Irrigation District and the Ft. Sumner Irrigation District extended full cooperation to the Water Master.

PRIVATE DRAIN WATER

Private drain water comes under the Water Master's jurisdiction as the river is used as a carrier. All drain water diverted is metered and recorded. The flow available for use is considered to be the flow of the drain at any time, less ten percent loss in transit. With the exception of one drain line, those remaining have either been purchased along with public surface water rights, or are no longer operational.

In 2016, 1,465 acre-feet of measured private drain water were contributed to the Pecos River, with 368 acre feet of this being diverted. In 2015, 2,042 acre-feet of measured private water were contributed with 327 acre-feet being diverted.

MEETINGS AND OTHER ACTIVITIES

In 2016, numerous meetings were held with water users in the field to discuss and share operational information. Discussions dealt with access problems, water usage, stream gauging techniques, recorder and flume operation and general ditch, flume and recorder maintenance. Two new recorders were installed at Rattlesnake Springs Park south of Carlsbad for recording the flow of waters for the Park Service and Washington Ranch. During the irrigation season, weekly conference calls were attended concerning operations on the Pecos River. Participants represented numerous state and federal agencies including the NM Interstate Stream Commission, NM Office of the State Engineer, Carlsbad Irrigation District, Fort Sumner Irrigation District, US Bureau of Reclamation, US Army Corps of Engineers, US Fish and Wildlife Service, NM State Parks, NM Department of Game and Fish, and the US Geological Society.

SUPPLY AND STORAGE

Data on daily gage heights, contents of reservoirs and flow of the Pecos River at various points are collected and tabulated by the United States Geological Survey, Water Resources Branch, in cooperation with the New Mexico State Engineer and other state, local and federal agencies. These data are published annually.

Santa Rosa Dam has regulated the flows at the USGS Pecos River near Puerto de Luna gage (08383500) since April 1980. The recorded stream-flow for 2016 was 124,400 acre-feet, or 87 percent of average for the period of record, the average annual runoff for the current 20-year period is 117,659 acre feet. Peak flow for 2016 was 1,600 c.f.s. and occurred on August 26, 2016.

The Rio Hondo at Roswell gage was closed permanently on May 18, 1997. The U.S.G.S. opened the Rio Hondo near Roswell gage, located east of Roswell. The recorded runoff in the lower part of the Hondo River water shed, a major tributary of the Pecos River, was 2,920 acre feet in 2016. The USGS gage at Rio Hondo near Roswell (08393610) recorded the maximum daily flow of 17 c.f.s. on May 18 and September 7, 2016.

2016 stream flow in the lower Pecos River Basin (in New Mexico) as recorded at the USGS Pecos River near Artesia gage (08396500) was 105,500 acre feet or 68 percent of average for the period of record, the average annual runoff for the current 20-year period is which is 111,634 acre-feet. Peak flow for 2016 at the Artesia gage was 1,030 c.f.s. and occurred on August 31, 2016.

The quantities measured at the Artesia gage include releases from Sumner Reservoir made by the Carlsbad Irrigation District. Water released from Sumner Lake is summarized in Table 1 following herewith. This information was provided by Mike Cantrell, Sumner Lake Damtender.

Below Carlsbad, flow at the USGS Black River above Malaga gage (08405500) in 2016 was 7,010 acre-feet or 79 percent of average for the period of record, the average annual runoff for the current 20-year period is 6,948 acre feet. The peak flow was 436 c.f.s. on August 24, 2016. The Carlsbad Irrigation District received the total of their decreed right of 2,800 acre-feet on September 21, 2016.

The 2016 flow of the Pecos River from Carlsbad to the Texas state line, as measured at the USGS Pecos River at Red Bluff gage (08407500), was 75,440 acre feet or 74 percent of average for the period of record, the average annual runoff for the current 20-year period is 67,465 acre-feet. The peak flow of 899 c.f.s. occurred on August 29, 2016.

Summaries of reservoir content and stream flow during 2016 are shown in Tables 2 and 3 following herewith.

TABLE 1
SUMMARY OF WATER RELEASED FROM SUMNER LAKE – 2016
IN ACRE FEET

MONTH	SEEPAGE	OTHER	TO C.I.D.	TO F.S.I.D.	FCP BYPASS	BYPASS	TOTAL
JANUARY	-0-	-0-	310.66	-0-	-0-	1731.77	2,042.43
FEBRUARY	-0-	-0-	3285.56	-0-	-0-	925.37	4,210.93
MARCH	-0-	-0-	-0-	5,832.74	-0-	900.70	6,733.44
APRIL	-0-	-0-	4,394.09	5,576.16	-0-	348.44	10,318.69
MAY	-0-	-0-	15,523.22	4,610.98	-0-	165.39	20,299.59
JUNE	-0-	-0-	8,362.32	5,928.75	-0-	1,476.55	15,767.62
JULY	-0-	-0-	16,506.54	5,611.74	212.16	-0-	22,330.44
AUGUST	-0-	121.62	29,533.70	4,510.47	788.96	-0-	34,954.75
SEPTEMBER	1.50	48.59	28.91	4,582.18	-0-	-0-	4,661.18
OCTOBER	-0-	802.76	-0-	5,328.37	-0-	-0-	6,131.13
NOVEMBER	14.80	472.04	-0-	-0-	-0-	-0-	486.84
DECEMBER	-0-	1,056.15	-0-	-0-	-0-	119.97	1,176.12
TOTAL	13.30	2,501.16	77,945.00	37,922.05	1,001.12	5,668.19	129,113.20

TABLE 2
SUMMARY OF RESERVOIR CONTENT - 2016
CONTENT IN ACRE FEET

RESERVOIR	SPILLWAY CREST	12/31/15 STORAGE	2016 MAXIMUM	2016 MINIMUM	12/31/16 STORAGE
SANTA ROSA LAKE	438,400	96,960	106,560 June 5	55,360 Aug 27	56,240
LAKE SUMNER	94,750	43,860	46,600 Jan 30	17,690 Oct. 31	27,080
BRANTLEY LAKE	1,008,000	43,620	44,680 Jan 6	14,240 Aug. 22	34,820
LAKE AVALON	4,470	2,700	5,000 Jan 10-29	757 Nov 1	2,300
RED BLUFF	289,700	145,600	147,500 Mar 28	123,600 Aug 14	140,000

TABLE 3**SUMMARY OF STREAM FLOW – PECOS RIVER IN NEW MEXICO AT U.S.G.S. STATIONS – 2016**

STATION NAME & NO.	PERIOD OF RECORD			2016		2015	
	YEARS OF RECORD	AVERAGE ANNUAL RUNOFF	CURRENT 20 YEARS	MEAN C.F.S.	ACRE FEET	MEAN C.F.S.	ACRE FEET
NEAR PUERTO DE LUNA (08383500)(Sec 20, T6N, R23E)	78	139,739	117,659	168	121,400	150	108,300
BELOW SUMNER DAM (08384500)(Sec 2, T4N, R24E)	80	130,452	110,008	178	128,600	139	100,700
NEAR ACME(08386000) (Sec 14, T9S, R25E)	79	119,916	90,584	119	86,320	132	95,570
NEAR ARTESIA (08396500)(Sec18,T17S,R27E)	80	155,931	111,631	146	105,500	162	117,300
NEAR LAKEWOOD (Kaiser Channel) (08399500)(Sec5,T19S,R27E)	65	-----	-----	141	102,300	183	132,300
BELOW BRANTLEY DAM (08401500)	28	107,626	98,720	137	98,910	210	151,800
BELOW DARK CANYON AT CARLSBAD (08405200)(Sec 6, T22S, R27E)	47	41,206	38,159	64.6	46,740	95.7	69,300
NEAR MALAGA (08406500)(Sec 19, T24S, R29E)	80	102,177	61,880	95.9	69,420	144	104,500
AT RED BLUFF (08407500)(Sec 1, T26S, R28E)	79	101,523	67,465	104	75,440	140	101.100

WATER DIVERSION

The waters of the Pecos Valley Surface Water District are administered in accordance with licenses and court decrees as set forth in the introduction of this report. In these licenses and decrees, the annual duties or diversion per irrigated acre, vary from 2.0 to 4.0 acre feet. By reaches, the various general annual duties set out in the decrees are 2.0 acre feet per acre from the Puerto de Luna area to Sumner Lake, 2.5 acre feet per acre from Sumner Lake to the mouth of Salt Creek; and 3.0 acre feet per acre (plus conveyance loss) from the mouth of Salt Creek to the Texas state line. Some individual rights in the reach below Carlsbad have decreed annual duties of 3.75 and 4.0 acre feet per acre.

At the end of the 2016 irrigation season there were 31 recording devices serviced by the Water Master in the Pecos Valley Surface Water District. Data from four U.S.G.S. stations are used to administer surface water rights within the PVSWD. Approximately 18 other recording stations are visited on a regular basis but not serviced. These are stations in which the water rights have been purchased or leased by the Interstate Stream Commission or the Bureau of Reclamation and were not irrigated in 2016. Other stations have had the power disconnected, or water for irrigation is no longer available in sufficient quantity to make pumping practical. No diversion of surface water was observed at those river and tributary diversion points in the District that were not equipped with recording devices.

The water users under the Puerto de Luna East Community Ditch below Santa Rosa, which divert from the Pecos River, diverted 4,559.43 acre-feet in 2016. Water users under the Puerto de Luna West Community Ditch diverted 2,746.63 acre-feet of surface water from the Agua Negra in 2016.

The adjudicated Direct Flow Right of the Ft. Sumner Irrigation District during March 1 through October 31 is the first 100 c.f.s. normal flow occurring at both the above Santa Rosa Lake, NM gage and the near Puerto de Luna, NM gage. The average flow available during the entire irrigation season was 92.9 c.f.s. The Irrigation District also has a right to divert for two periods, not in the regular season and not to exceed eight days each, during the months of November through February. The District did not exercise this right in 2016.

The water users in that reach of the Pecos River from Roswell to Artesia (Middle River Pumpers) had 105,500 acre-feet pass by the USGS Pecos River near Artesia gage. This was 68 percent of average.

The Carlsbad Irrigation District diverted 71,400 acre-feet from the Pecos River in 2016, as compared with 61,600 acre-feet diverted in 2015 and 60,110 in 2014. Some of the water right acreage in this District also received water from individually owned supplemental wells, and the District has a decreed right of 2,800 acre-feet from Black River.

In 2016, a total of 134,946.79 acre-feet of public surface water was diverted under the jurisdiction of the Pecos River Water Master, of which 127,273.19 acre-feet was diverted for irrigation purposes, and 7,673.60 acre-feet was available for municipal and commercial purposes. The municipal and commercial use includes the water rights of the City of Carlsbad. In addition, 352.94 acre-feet of private water (Pecos River Drain Pool) and 0.0 acre-feet of supplemental ground water were diverted under the Water Master's jurisdiction.

The Red Bluff Water Power Control District, under Permit No. 3254, approved by the State Engineer on March 30, 1971, may divert Pecos River water in New Mexico for salinity alleviation of water entering Red Bluff reservoir and for industrial use in Texas.

This permit was approved subject to an agreement signed by the Pecos River Commissioners for Texas and New Mexico and with the understanding that water measured at the existing United States Geological Survey gage, "Pecos River at Red Bluff, New Mexico," which is upstream from the Red Bluff Water Power Control District diversion, shall be considered and accounted for as water delivered at the New Mexico-Texas state line, notwithstanding the fact that the water under Permit No. 3254 will be diverted upstream from the New Mexico-Texas state line. The Red Bluff Water Power Control District submitted the usage in acre-feet on a monthly basis which was 201.194 acre-feet in 2016.

A summation of water diverted within the District above Red Bluff gage during 2016 (Table 4) and a summation of annual water diverted, by various reaches, from 2012 through 2016 (Table 5) follows.

**TABLE 4
SUMMARY OF WATER DIVERTED - 2016
PECOS VALLEY SURFACE WATER DISTRICT**

<u>DIVERSION UNIT AND SOURCE</u>	<u>ACRES OF WATER RIGHT</u>		<u>ACRE FEET DIVERTED (a)</u>			<u>ACRE FEET/ACRE (b)</u>
	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>WELL (h)</u>	<u>PUBLIC</u>
<u>PECOS RIVER ABOVE SUMNER DAM</u>						
EAST PUERTA DE LUNA DITCH	352.06		4,459.43			12.67
WEST PUERTA DE LUNA DITCH	247.30		2,746.63			11.09
SANCHEZ, ARSENIO	63.93		186.39			2.92
TOTAL	663.29		7,392.45			
<u>PECOS RIVER FROM SUMNER DAM TO THE MOUTH OF -SALT CREEK-</u>						
<u>FT. SUMNER IRRIGATION DISTRICT</u>						
FT. SUMNER IRRIGATION DISTRICT	6,500.00		39,750.00			6.12
ATKINS, BARRETT & BETTY	9.045		0.00			0.00
ATKINS, HARVEY & BARBARA	11.543		0.00			0.00
ATKINS, JACK & SANDRA	0.273		0.00			0.00
ROSWELL LIVESTOCK AUCTION SALES, INC.	10.00		0.00			0.00
TOTAL	6,530.86		39,750.00			
<u>PECOS RIVER FROM THE MOUTH OF SALT CREEK TO McMILLAN RESERVOIR</u>						
<u>-BERRENDO CREEK-</u>						
ATKINS, JACKIE (i)	13.50		0.00			0.00
BLACKWELL, E. CLYDE (i)	38.30		0.00			0.00
BROWNING, CHARLES (h, i)	74.52		0.00			0.00
GONZALES, STEVEN & MARLA (h, i)	52.54		0.00			0.00
JENNINGS, EMMITT M. (h, i)	188.00		0.00			0.00
TOTAL	366.86		0.00			0.00
<u>-RIO HONDO-</u>						
HAGERMAN CANAL CO. (c, e)	8,332.07		4,125.46			0.67
TOTAL	8,332.07		4,125.46			

TABLE 4 – cont.
SUMMARY OF WATER DIVERTED - 2016
PECOS VALLEY SURFACE WATER DISTRICT

<u>DIVERSION UNIT AND SOURCE</u>	<u>ACRES OF WATER RIGHT</u>		<u>ACRE FEET DIVERTED (a)</u>			<u>ACRE FEET/ACRE (b)</u>
	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>WELL (h)</u>	<u>PUBLIC</u>
-PECOS RIVER-						
BARBE, MADELINE	80.00		0.00	0.00		0.00
CHASE FARMS (h)	15.00		0.00	0.00	0.00	0.00
GAME & FISH (BUREAU OF RECL) (e)	56.47		0.00	0.00		0.00
GOMEZ, GILBERT	174.00		0.00	0.00		0.00
*INTERSTATE STREAM COMM (CHOAT, ROY) (c, d)	405.00	54.40	0.00	0.00		0.00
*INTERSTATE STREAM COMM (c, d)	80.00		0.00	0.00		0.00
*INTERSTATE STREAM COMM (LAKE ARTHUR FARMS) (c, d)	303.30		0.00	0.00		0.00
*INTERSTATE STREAM COMM (ANGELL, LEWIS) (c, d)	280.30	155.30	0.00	0.00		0.00
*INTERSTATE STREAM COMM (BRAMBLETT, BUFFELO VALLEY & PARKER UPPER) (d, e)	270.00		0.00	0.00		0.00
*INTERSTATE STREAM COMM (GLOVER, KATHY) (c)	1405.30	255.30	0.00	0.00		0.00
*INTERSTATE STREAM COMM (LANGENEGGER, JIM) (c, d)	92.70		0.00	0.00		0.00
*INTERSTATE STREAM COMM (RHODES, M.L.) (c, d)	257.80		0.00	0.00		0.00
*INTERSTATE STREAM COMM (UTTERBACK, ROBERT) (c, d)	88.40	123.00	0.00	0.00		0.00
LANKFORD, ROYCE	224.70	40.00	0.00	0.00		0.00
LATHROP, COLIN & DIANA	217.60		0.00	0.00		0.00
MORRIS, BRAD	13.30		0.00	0.00		0.00
POLLARD, CECIL	130.00		0.00	0.00		0.00
RHODES, WANDA (c, d)	60.00		127.74	0.00		2.13
	29.40	<u>114.95</u>	<u>0.91</u>	<u>352.94</u>		0.01
TOTAL	<u>4,183.27</u>	<u>742.95</u>	<u>128.65</u>	<u>352.94</u>	<u>0.00</u>	

TABLE 4 – cont.
SUMMARY OF WATER DIVERTED - 2016
PECOS VALLEY SURFACE WATER DISTRICT

<u>DIVERSION UNIT AND SOURCE</u>	<u>ACRES OF WATER RIGHT</u>		<u>ACRE FEET DIVERTED (a)</u>			<u>ACRE FEET/ACRE (b)</u>
	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>WELL (h)</u>	<u>PUBLIC</u>
PECOS RIVER FROM BRANTLEY						
RESERVOIR TO TEXAS STATE LINE						
-IRRIGATION-						
CARLSBAD IRRIGATION DISTRICT (f)	25,055.00		71,400.00			2.96
BENSON ENTERPRISES, LLC	1.00		0.00			0.00
CITY OF CARLSBAD – GOLF COURSE – NORTH & SOUTH PUMPS	167.98		0.00			0.00
CONQUISTADOR COUNCIL	10.60		0.00			0.00
EDEAL, PATRICK, & CAROLE	1.00		0.00			0.00
*INTERSTATE STREAM COMM (McDONALD, CLARENCE)	473.00		0.00			0.00
SIBLEY, WILLIAM C.	97.10	SUPPLEMENTAL UNDERGROUND			0.00	0.00
*INTERSTATE STREAM COMM (CITY OF CARLSBAD – HARROUN CANAL)	<u>1,918.70</u>		<u>0.00</u>		<u>0.00</u>	0.00
TOTAL	27,724.38		71,400.00		0.00	

TABLE 4 – cont.
SUMMARY OF WATER DIVERTED - 2016
PECOS VALLEY SURFACE WATER DISTRICT

<u>DIVERSION UNIT AND SOURCE</u>	<u>ACRES OF WATER RIGHT</u>		<u>ACRE FEET DIVERTED (a)</u>			<u>ACRE FEET/ACRE (b)</u>
	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>WELL (h)</u>	<u>PUBLIC</u>
-COMMERCIAL-						
CITY OF CARLSBAD – TANSIL DAM BATAAN REC. LAKE	COMMERCIAL COMMERCIAL		7,300.00 <u>373.60</u>			
TOTAL			7,673.60			
-BLACK RIVER-						
BLUE SPRINGS RANCH CARLSBAD IRRIGATION DIST. (g) LORENTZEN, JOHN & DENA & SAVAGE, MARK S. *INTERSTATE STREAM COMM WILLOW LAKE (STORAGE & IRRIGATION)	1,076.20 13.34 6.70 <u>573.71</u>		1,576.63 2,900.00 0.00 0.00 <u>0.00</u>			1.50 0.00 0.00
TOTAL	1,669.92		4,476.63			
IRRIGATION TOTAL	49,470.65	742.95	127,273.19	352.94	0.00	
COMMERCIAL TOTAL			7,673.60			
GRAND TOTAL			134,946.79	352.94	0.00	

EXPLANATIONS

- a. Quantities diverted are inclusive of permitted carriage losses. In some cases, as at Puerto de Luna, quantities diverted include water returned, but not measured, to the river.
 - b. Water per acre does not reflect private water used.
 - c. Private water also used to supplement river right.
 - d. Pecos River Pumpers Association Drain Pool members; acreage irrigated is included in both public and claimed private-right figures.
 - e. Part of these rights, totaling 522.70 acres in addition to the 8,322.07 under the Hagerman Canal are combined with decreed groundwater rights and are duplicated in the Roswell Basin Water Master's records.
 - f. The acre feet/acre figure includes both Pecos River and Black River diversions.
 - g. Acreage under this right is part of the 25,055 acres of the C.I.D. shown as irrigated from Pecos River.
 - h. Well water is supplemented to surface right and figures are duplicated in the Roswell Basin Water Master's records.
 - i. These surface waters are no longer diverted due to insufficient quantities of water, but are supplemented by underground water. The supplemental underground water usage is reflected in the R.A. Basin Water Master's records.
- * All water rights appurtenant to these lands have been purchased by the ISC and no further diversions to them will be made.

**TABLE 5
SUMMATION OF ANNUAL WATER DIVERTED
PECOS VALLEY SURFACE WATER DISTRICT
YEAR OF DIVERSION**

AREA OF DIVERSION	ACRES (1)	2012	2013	2014	2015	2016	5 YEAR AVERAGE
ABOVE SUMNER LAKE (2)	663	9,133	6,439	6,280	5,918	7,392	7,031
FT. SUMNER IRRIGATION DIST.	6,500	36,560	34,560	37,140	36,080	39,750	36,818
SUMNER LAKE TO ACME	36	-0-	-0-	-0-	-0-	-0-	-0-
ACME TO AVALON (3)							
BERRENDO CREEK (5)	367	-0-	-0-	-0-	-0-	-0-	-0-
RIO HONDO (4)	8,332	3,530	1,178	2,272	4,025	4,125	3,026
PECOS RIVER (6)	4,183	151	260	126	129	129	159
CARLSBAD IRRIGATION DIST.	25,055	29,710	32,970	60,110	61,600	71,400	51,158
AVALON TO STATE LINE							
PECOS RIVER (7)	2,669	7,723	9,187	13,680	13,680	7,674	10,389
BLACK RIVER	1,670	5,042	5,133	4,893	4,517	4,477	4812
TOTALS	49,475	91,849	89,727	124,501	125,949	134,947	113,393

“P” Indicates incomplete. (1) Approximate acres irrigated or claimed. (2) Above Sumner Lake water was not metered until 1967; much of that diverted returns to the Pecos. (3) Quantities diverted include drain waters and supplemental well water. (4) Includes Hagerman Irrigation Co. waters at diversion dam. (5) Surface water from these sources are not diverted due to insufficient quantities, but are supplemented by underground waters. Supplemental well diversions are reflected in the records of the Roswell Basin Water Master. (6) Water rights appurtenant to approximately 3,318 acres of land in this area have been purchased by the Interstate Stream Commission and no further diversion to these lands will be made. (7) Water rights appurtenant to approximately 461 acres of land in this area have been purchased by the I.S.C. and no further diversion to these lands will be made.

SUMMARY

Stream flow from Sumner Lake in the lower reach of the Pecos River basin, as measured at the gaging station near Artesia, was 95 percent of the current 20-year average. Combined storage in the four major irrigation storage reservoirs in the District (Santa Rosa which began storage April 21, 1980, Lake Brantley which began storage August 30, 1988, Sumner, and Avalon) was 12.1 percent on December 31, 2015, and 14.2 percent of total storage capacity on December 31, 2016.

Water users under the Puerta de Luna East Community Ditch diverted 4,459.43 acre-feet of water from the Pecos River and the Puerta de Luna West Community Ditch users diverted 2,746.63 acre feet from the Agua Negra in 2016. The Ft. Sumner Irrigation District diverted 39,750 acre-feet, and users in the reach from Ft. Sumner to Artesia had a 67 percent of average supply. Other users in the reach from Brantley Lake to the Texas state line had a 74 percent of average supply of water for irrigation, municipal, and commercial purposes.

The flow in Black River south of Carlsbad was 7,010 acre-feet or 79 percent of average. The Carlsbad Irrigation District did receive the total of their decreed right from Black River on September 21, 2016. No diversion of water to Willow Lake was observed in 2016. The Interstate Stream Commission purchased the Willow Lake water rights on October 26, 2001.

Continued surveillance was maintained of surface water use throughout the District.

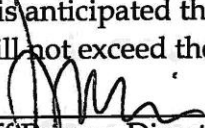
**PECOS VALLEY WATER MASTER
EXPENDITURES FOR CALENDAR YEAR 2016
JANUARY – DECEMBER 2016**

	JANUARY – JUNE 2016	JULY – DECEMBER 2016	TOTAL
SALARIES/BENEFITS	42,852.66	43,091.53	85,944.19
EMPLOYEE MEALS	210.00	111.00	321.00
FUEL & OIL	917.19	2,168.87	3,086.06
TRANSPORTATION POOL	2303.00	1725.00	4,028.00
FIELD SUPPLIES	46.56	0.00	46.56
RENT	2,705.62	3,190.46	5,896.08
TELECOMMUNICATIONS	79.88	70.54	150.42
TOTAL EXPENDITURES	49,114.91	50,357.40	99,472.31

FY 2017 Pecos Valley Surface Water Master Operating Budget

<u>Object Item</u>	<u>Amount</u>
Permanent Postion F/T	67,100.00
Group Insurance	0.00
Retirement	12,100.00
FICA	5,300.00
Workers Compensation	0.00
Retiree Health Care Act	1,600.00
Salaries and Benefits:	<u>86,100.00</u>
I/S Meals and Lodging	300.00
Gas & Oil Transportation	3,600.00
State Transportation Pool	4,000.00
Furniture, Fixtures & Equipr.	400.00
Office Supplies	200.00
Field Supplies	1,200.00
Postage & Mail Service	1,000.00
Rent/Land & Buildings	5,100.00
Telecommunications	<u>200.00</u>
Other Costs	16,000.00
Grand Total:	<u><u>102,100.00</u></u>

It is anticipated that the object code amounts may vary, but the total will not exceed the total amount for the fiscal year.



Jeff Grimm, Director
Program Support

8/17/16
Date

STATION: 08385000 **FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM** TYPE: CANAL
 AGENCY: USGS STATE: 35 COUNTY: 011 LATITUDE: 343029.8 LONGITUDE: 1041642.1 NAD83
 DRAINAGE AREA: CONTRIBUTING DRAINAGE AREA: DATUM: 4034.70 NGVD29
 DATE PROCESSED: 2017-03-13 10:01 - By agrazian
 Lowest aging status in period is APPROVED
 DD #1 Discharge, cubic feet per second

CALENDAR YEAR JANUARY TO DECEMBER 2016												
DAILY MEAN VALUES												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	96	51	94	87	80	29	98	3.3	0
2	0	0	38	95	79	93	87	80	10	98	0	0
3	0	0	96	95	89	93	90	80	0	98	0	0
4	0	0	98	e92	86	92	91	79	0	90	0	0
5	0	0	98	e89	65	93	91	79	0.32	91	0	0
6	0	0	101	e89	59	95	94	80	9.3	91	0	0
7	0	0	100	e91	58	93	96	80	21	92	0	0
8	0	0	107	94	82	93	95	79	23	92	0	0
9	0	0	106	94	65	88	96	81	61	92	0	0
10	0	0	105	93	65	89	94	82	91	91	0	0
11	0	0	102	93	64	95	93	83	93	91	0	0
12	0	0	102	91	61	95	90	84	93	91	0	0
13	0	0	101	94	63	95	89	84	92	90	0	0
14	0	0	101	94	74	94	89	84	93	90	0	0
15	0	0	100	93	60	94	89	83	94	90	0	0
16	0	0	99	93	57	94	89	83	92	89	0	0
17	0	0	99	93	50	94	89	81	91	88	0	0
18	0	0	99	83	41	94	89	83	92	86	0	0
19	0	0	99	84	53	94	88	60	90	87	0	0
20	0	0	98	84	60	95	84	0	90	87	0	0
21	0	0	98	83	52	94	86	0	88	86	0	0
22	0	0	98	71	50	94	87	0	94	85	0	0
23	0	0	98	61	49	94	88	0	99	84	0	0
24	0	0	98	49	76	94	88	52	97	82	0	0
25	0	0	97	45	93	94	79	45	96	83	0	0
26	0	0	97	71	94	93	69	38	97	85	0	0
27	0	0	97	77	94	91	72	83	97	83	0	0
28	0	0	97	78	94	86	79	97	97	82	0	0
29	0	0	96	81	94	89	83	93	99	81	0	0
30	0	---	96	56	93	88	81	93	99	80	0	0
31	0	---	96	---	93	---	80	77	---	80	---	0
TOTAL	0	0	2917	2507	2164	2784	2702	2103	2127.62	2733	3.30	0
MEAN	0	0	94.1	83.6	69.8	92.8	87.2	67.8	70.9	88.2	0.11	0
MAX	0	0	107	96	94	95	96	97	99	98	3.30	0
MIN	0	0	0	45	41	86	69	0	0	80	0.00	0
AC-FT	0	0	5790	4970	4290	5520	5360	4170	4220	5420	6.5	0
CAL YR	2016	TOTAL	20040.92	MEAN	54.8	MAX	107	MIN	0.00	AC-FT	39,750	
U.S. DEPARTMENT OF THE INTERIOR – US GEOLOGICAL SURVEY – WATER RESOURCES												

STATION: 8403500 **CARLSBAD MAIN CANAL AT HEAD NEAR CARLSBAD, NM** TYPE: CANAL
 AGENCY: USGS STATE: 35 COUNTY: 015 LATITUDE: 322925.42 LONGITUDE: 1041509.82 NAD83 DRAINAGE
 AREA: CONTRIBUTING DRAINAGE AREA: DATUM: 3156.50 NGVD29
 DATE PROCESSED: 2017-03-13 10:01 - By agrazian
 Lowest aging status in period is APPROVED
 DD #1 Discharge, cubic feet per second

CALENDAR YEAR JANUARY TO DECEMBER 2016												
DAILY MEAN VALUES												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	225	175	74	71	140	0	145	0	0
2	0	0	0	206	157	0	80	182	0	169	0	0
3	0	0	0	158	164	0	109	164	0	220	0	0
4	0	0	0	177	136	0	94	187	0	218	0	0
5	0	0	0	168	115	0	80	197	0	175	0	0
6	0	0	0	183	96	23	173	173	0	134	0	0
7	0	0	0	149	53	143	266	137	0	133	0	0
8	0	0	0	131	63	204	309	164	0	122	0	0
9	0	0	0	92	101	263	244	189	0	92	0	0
10	0	0	0	82	130	297	203	201	0	75	0	0
11	0	0	0	87	179	261	212	136	0	83	0	0
12	0	0	0	112	226	253	211	98	0	92	0	0
13	0	0	76	109	267	273	265	114	0	60	0	0
14	0	0	143	93	242	259	296	124	0	65	0	0
15	0	0	141	110	224	277	299	169	0	100	0	0
16	0	0	155	129	218	301	310	211	0	80	0	0
17	0	0	171	105	234	243	261	229	0	81	0	0
18	0	0	195	182	176	244	252	232	0	121	0	0
19	0	0	175	230	173	222	232	204	62	128	0	0
20	0	0	170	273	188	267	216	152	123	133	0	0
21	0	0	217	300	202	261	250	96	155	152	0	0
22	0	0	202	289	154	208	251	53	167	153	0	0
23	0	0	197	304	144	218	209	53	196	147	0	0
24	0	0	209	283	200	200	183	0	207	136	0	0
25	0	0	213	275	264	205	178	0	200	202	0	0
26	0	0	213	243	265	130	188	0	146	279	0	0
27	0	0	210	183	241	168	202	0	130	294	0	0
28	0	0	181	150	200	145	171	0	116	292	0	0
29	0	0	185	155	169	122	201	0	144	255	0	0
30	0	----	198	170	132	77	197	0	144	218	0	0
31	0	----	212	----	129	----	152	0	----	114	----	0
TOTAL	0	0	3463	5353	5417	5338	6365	3605	1790	4668	0	0
MEAN	0	0	112	178	175	178	205	116	59.7	151	0	0
MAX	0	0	217	304	267	301	310	232	207	294	0	0
MIN	0	0	0	82	53	0	71	0	0	60	0	0
AC-FT	0	0	6870	10620	10740	10590	12620	7150	3550	9260	0	0
CAL YR	2016	TOTAL	3599.00	MEAN	98.4	MAX	310	MIN	0.00	AC-FT	71,400	
U.S. DEPARTMENT OF THE INTERIOR – US GEOLOGICAL SURVEY – WATER RESOURCES												

STATION: 08405200 **PECOS RIVER BELOW DARK CANYON AT CARLSBAD, NM** TYPE: STREAM
 AGENCY: USGS STATE: 35 COUNTY: 011 LATITUDE: 322433.39 LONGITUDE: 1041253.90 NAD83
 DRAINAGE AREA: 18550 CONTRIBUTING DRAINAGE AREA: 18550* DATUM: 3075.190 NGVD29
 DATE PROCESSED: 2017-03-13 10:01 - By agrazian
 Lowest aging status in period is APPROVED
 DD #1 Discharge, cubic feet per second

CALENDAR YEAR JANUARY TO DECEMBER 2016												
DAILY MEAN VALUES												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	37	198	37	42	39	36	31	31	123	40	42	41
2	36	190	38	40	38	35	32	32	44	40	42	41
3	36	186	37	40	38	35	32	32	41	40	43	46
4	36	187	38	40	37	34	33	32	41	39	42	37
5	37	188	37	40	37	34	32	32	41	40	42	37
6	45	160	38	39	37	34	32	32	41	40	43	36
7	37	150	38	40	38	33	31	32	43	39	42	37
8	37	148	37	40	37	34	32	33	41	40	41	36
9	71	147	37	41	37	34	30	43	41	42	41	36
10	252	146	37	41	38	33	30	35	40	41	42	36
11	293	145	37	40	38	34	31	51	41	41	43	36
12	205	141	37	39	37	33	33	33	41	40	42	36
13	316	139	35	40	38	34	35	34	41	40	41	36
14	328	138	36	40	36	33	35	32	41	40	41	36
15	346	134	34	40	36	33	33	33	49	40	41	36
16	359	132	34	40	37	34	32	33	41	40	42	37
17	371	127	35	39	37	34	32	33	41	40	42	38
18	365	78	36	39	37	34	32	34	41	40	41	36
19	369	52	35	40	38	34	32	34	41	41	40	36
20	366	41	35	39	38	33	32	34	41	40	41	37
21	362	37	36	39	38	33	32	e45	41	40	42	37
22	360	37	37	39	38	33	32	e111	40	40	41	36
23	363	38	37	38	37	32	33	e225	40	41	40	37
24	365	38	37	38	37	33	33	e194	40	40	41	36
25	369	37	39	38	37	31	33	e85	39	42	40	37
26	359	37	40	38	38	31	32	e33	40	42	41	36
27	367	38	38	38	36	31	33	e38	40	42	41	36
28	366	38	40	39	38	31	33	e35	41	42	42	36
29	277	37	40	39	41	30	32	e41	40	41	40	36
30	221	----	40	39	39	30	32	39	40	42	41	37
31	203	----	39	----	40	----	31	773	----	41	----	36
TOTAL	7644	3164	1151	1184	1167	993	998	2304	1315	1256	1242	1147
MEAN	247	109	37.1	39.5	37.6	33.1	32.2	74.3	43.8	40.5	41.4	37.0
MAX	371	198	40	42	41	36	35	773	123	42	43	46
MIN	36	37	34	38	36	30	30	31	39	39	40	36
AC-FT	15160	6280	2280	2350	2310	1970	1980	4570	2610	2490	2460	2280
CAL YR	2016 TOTAL 23,565 MEAN 64.4 MAX 773 MIN 30 AC-FT 46,740											
U.S. DEPARTMENT OF THE INTERIOR – US GEOLOGICAL SURVEY – WATER RESOURCES												

