



STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER



WATER MASTER REPORT  
PECOS VALLEY SURFACE WATER DISTRICT  
**2018**

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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 2018 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 2018, 447.63 acre-feet of measured private drain water were contributed to the Pecos River, with 305.9 acre feet of this being diverted. In 2017, 723.97 acre-feet of measured private water were contributed with 305.9 acre-feet being diverted.

## MEETINGS AND OTHER ACTIVITIES

In 2018, 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 2018 was 98,030 acre-feet, or 71 percent of average for the period of record, the average annual runoff for the current 20-year period is 109,400 acre feet. Peak flow for 2018 was 1,480 c.f.s. and occurred on September 6, 2018.

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 2,507 acre feet in 2018. The USGS gage at Rio Hondo near Roswell (08393610) recorded the maximum daily flow of 64.5 c.f.s. on June 3, 2018.

2018 stream flow in the lower Pecos River Basin (in New Mexico) as recorded at the USGS Pecos River near Artesia gage (08396500) was 86,670 acre feet or 56 percent of average for the period of record, the average annual runoff for the current 20-year period is which is 104,328 acre-feet. Peak flow for 2018 at the Artesia gage was 1,130 c.f.s. and occurred on September 11, 2018.

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 2018 was 6,950 acre-feet or 79 percent of average for the period of record, the average annual runoff for the current 20-year period is 6,810 acre feet. The peak flow was 2,770 c.f.s. on October 6, 2018. The Carlsbad Irrigation District received the total of their decreed right of 2,800 acre-feet on September 28, 2017.

The 2018 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 4,250 acre feet or 43 percent of average for the period of record, the average annual runoff for the current 20-year period is 63,756 acre-feet. The peak flow of 913 c.f.s. occurred on September 4, 2018.

Summaries of reservoir content and stream flow during 2018 are shown in Tables 2 and 3 following herewith.

**TABLE 1**  
**SUMMARY OF WATER RELEASED FROM SUMNER LAKE – 2018**  
**IN ACRE FEET**

MONTH	SEEPAGE	OTHER	TO C.I.D.	TO F.S.I.D.	FCP BYPASS	BYPASS	TOTAL
JANUARY	-0-	-0-	-0-	-0-	-0-	1,347.37	1,347.37
FEBRUARY	-0-	438.27	-0-	1531.23	-0-	498.91	2,468.41
MARCH	-0-	-0-	-0-	4,055.39	-0-	-0-	4,055.39
APRIL	-0-	-0-	10,991.78	4,731.32	-0-	-0-	15,723.10
MAY	-0-	83.93	-0-	4,561.40	-0-	-0-	4,645.33
JUNE	-0-	1218.19	-0-	4,257.61	-0-	-0-	5,475.80
JULY	-0-	182.43	35,169.51	4,258.24	-0-	-0-	39,610.18
AUGUST	-0-	447.30	-0-	3,797.52	-0-	-0-	4,244.82
SEPTEMBER	2.15	107.08	11,671.64	4,457.17	-0-	-0-	16,238.04
OCTOBER	2.62	-0-	-0-	2,632.84	-0-	-0-	2,635.46
NOVEMBER	11.19	258.49	-0-	-0-	-0-	-0-	269.68
DECEMBER	-0-	203.47	-0-	-0-	746.26	-0-	949.73
<b>TOTAL</b>	15.96	2,939.26	57,832.93	34,282.72	746.26	1,846.28	97,663.31

**TABLE 2**  
**SUMMARY OF RESERVOIR CONTENT - 2018**  
**CONTENT IN ACRE FEET**

RESERVOIR	SPILLWAY CREST	12/31/17 STORAGE	2018 MAXIMUM	2018 MINIMUM	12/31/18 STORAGE
SANTA ROSA LAKE	438,400	94,684	94,720 Jan 04	51,845 Oct 16-17	53,409
LAKE SUMNER	94,750	39,071	42,596 Mar 4-5	17,656 Sept. 8	
BRANTLEY LAKE	1,008,000	40,686	45,972 Feb. 28	8,865 July 10	29,583
LAKE AVALON	4,470	0.0	3,701 Mar 16-17	0.0 107 days	0.0
RED BLUFF	289,700	121,000	122,900 Jan 31 -Feb 3	95,320 Aug 27	108,300



**TABLE 3****SUMMARY OF STREAM FLOW – PECOS RIVER IN NEW MEXICO AT U.S.G.S. STATIONS – 2018**

STATION NAME & NO.	PERIOD OF RECORD			2018		2017	
	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)	81	138,765	109,400	135	98,030	142	102,500
BELOW SUMNER DAM (08384500)(Sec 2, T4N, R24E)	82	129,556	102,155	135	97,680	124	89,715
NEAR ACME(08386000) (Sec 14, T9S, R25E)	81	119,109	82,593	108	78,100	132	96,309
NEAR ARTESIA (08396500)(Sec18,T17S,R27E)	82	154,417	104,328	120	86,670	139	101,011
BELOW BRANTLEY DAM (08401500)	30	105,736	92,736	115	83,230	104	75,343
BELOW DARK CANYON AT CARLSBAD (08405200)(Sec 6, T22S, R27E)	49	40,303	35,501	23.6	17,080	29.1	21,090
NEAR MALAGA (08406500)(Sec 19, T24S, R29E)	82	100,978	57,960	60.8	44,000	65.3	47,920
AT RED BLUFF (08407500)(Sec 1, T26S, R28E)	81	100,123	63,756	58.9	42,650	64.8	49.626

## 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 2018 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 2018. 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 7,226.13 acre-feet in 2018. Water users under the Puerta de Luna West Community Ditch diverted 3,753.81 acre-feet of surface water from the Agua Negra in 2018.

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 Puerta de Luna, NM gage. The average flow available during the entire irrigation season was 79.68 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 exercise this right in 2018.

The water users in that reach of the Pecos River from Roswell to Artesia (Middle River Pumpers) had 101,000 acre-feet pass by the USGS Pecos River near Artesia gage. This was 65 percent of average.

The Carlsbad Irrigation District diverted 72,160 acre-feet from the Pecos River in 2018, as compared with 72,190 acre-feet diverted in 2017 and 72,400 in 2016. 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 2018, a total of 137,584.33 acre-feet of public surface water was diverted under the jurisdiction of the Pecos River Water Master, of which 122,763.11 acre-feet was diverted for irrigation purposes, and 14,821.22 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, 313.17 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 351.556 acre-feet in 2018.

A summation of water diverted within the District above Red Bluff gage during 2018 (Table 4) and a summation of annual water diverted, by various reaches, from 2013 through 2017 (Table 5) follows.

**TABLE 4**  
**SUMMARY OF WATER DIVERTED - 2017**  
**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>
<b><u>PECOS RIVER ABOVE SUMNER DAM</u></b>						
EAST PUERTA DE LUNA DITCH	352.06		5,695.26			16.18
WEST PUERTA DE LUNA DITCH	247.30		3,753.81			15.18
SANCHEZ, ARSENIO	63.93		0.00			0.0
<i>TOTAL</i>	<u>663.29</u>		<u>9,449.07</u>			
<b><u>PECOS RIVER FROM SUMNER DAM TO THE MOUTH OF -SALT CREEK-</u></b>						
FT. SUMNER IRRIGATION DISTRICT	6,500.00		35,250.00			5.42
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
<i>TOTAL</i>	<u>6,530.86</u>		<u>35,250.00</u>			
<b><u>PECOS RIVER FROM THE MOUTH OF SALT CREEK TO BRANTLEY RESERVOIR</u></b>						
<b><u>-BERRENDO CREEK-</u></b>						
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
<i>TOTAL</i>	<u>366.86</u>		<u>0.00</u>			0.00
<b><u>-RIO HONDO-</u></b>						
HAGERMAN CANAL CO. (c, e)	8,332.07		1,862.53			0.22
<i>TOTAL</i>	<u>8,332.07</u>		<u>1,862.53</u>			

**TABLE 4 – cont.**  
**SUMMARY OF WATER DIVERTED - 2017**  
**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>
<b>-PECOS RIVER-</b>						
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		82.72	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
PVACD	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
POLLARD, CECIL	60.00		145.89	0.00		2.13
RHODES, WANDA (c, d)	29.40		6.90	313.17		0.01
<b>TOTAL</b>	<u>4,183.27</u>	<u>742.95</u>	<u>235.51</u>	<u>313.17</u>	<u>0.00</u>	

**TABLE 4 – cont.  
SUMMARY OF WATER DIVERTED - 2017  
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>
<b>PECOS RIVER FROM BRANTLEY RESERVOIR TO TEXAS STATE LINE -IRRIGATION-</b>						
CARLSBAD IRRIGATION DISTRICT (f)	25,055.00		72,160.00			2.88
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
<b>TOTAL</b>	<b>27,724.38</b>		<b>72,160.00</b>		<b>0.00</b>	

**TABLE 4 – cont.**  
**SUMMARY OF WATER DIVERTED - 2017**  
**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>
<b>-COMMERCIAL-</b>						
CITY OF CARLSBAD – TANSIL DAM BATAAN REC. LAKE	COMMERCIAL COMMERCIAL		14,447.62 <u>373.60</u>			
<i>TOTAL</i>			<i>14,821.22</i>			
<b>-BLACK RIVER-</b>						
BLUE SPRINGS RANCH CARLSBAD IRRIGATION DIST. (g) LORENTZEN, JOHN & DENA & SAVAGE, MARK S.	1,076.20		1,006.00 2,800.00			0.93
*INTERSTATE STREAM COMM WILLOW LAKE (STORAGE & IRRIGATION)	13.34 6.70 <u>573.71</u>		0.00 0.00 <u>0.00</u>			0.00 0.00
<i>TOTAL</i>	<i>1,669.92</i>		<i>3,806.00</i>			
<i>IRRIGATION TOTAL</i>	<i>49,470.65</i>	<i>742.95</i>	<i>122,763.11</i>	<i>313.17</i>	<i>0.00</i>	
<i>COMMERCIAL TOTAL</i>			<i>14,821.22</i>			
<i>GRAND TOTAL</i>			<i>137,584.33</i>	<i>313.17</i>	<i>0.00</i>	

## 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)	2014	2015	2016	2017	2018	5 YEAR AVERAGE
ABOVE SUMNER LAKE (2)	663	6,280	5,918	7,392	6,937	9,449	7,195
FT. SUMNER IRRIGATION DIST.	6,500	37,140	36,080	39,750	36,356	35,520	36,969
SUMNER LAKE TO ACME	36	-0-	-0-	-0-	-0-	-0-	-0-
ACME TO AVALON (3)							
BERRENDO CREEK (5)	367	-0-	-0-	-0-	-0-	-0-	
RIO HONDO (4)	8,332	2,272	4,025	4,125	1,961	1,863	2,849
PECOS RIVER (6)	4,183	126	129	129	106	233	
CARLSBAD IRRIGATION DIST.	25,055	60,110	61,600	71,400	70,190	72,160	67,092
AVALON TO STATE LINE							
PECOS RIVER (7)	2,669	13,680	13,680	7,674	14,854	14,786	12,935
BLACK RIVER	1,670	4,893	4,517	4,477	4,407	3,806	4420
TOTALS	49,475	124,501	125,949	134,947	134,811	137,817	131,605

“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 93 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 7.8 percent on December 31, 2016, and 11.3 percent of total storage capacity on December 31, 2017.

Water users under the Puerta de Luna East Community Ditch diverted 4,011.14 acre-feet of water from the Pecos River and the Puerta de Luna West Community Ditch users diverted 2,813.85 acre feet from the Agua Negra in 2017. The Ft. Sumner Irrigation District diverted 36,356 acre-feet, and users in the reach from Ft. Sumner to Artesia had a 65 percent of average supply. Other users in the reach from Brantley Lake to the Texas state line had 52 percent of average supply of water for irrigation, municipal, and commercial purposes.

The flow in Black River south of Carlsbad was 6,800 acre-feet or 71 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.

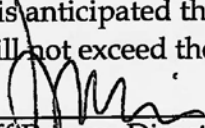
**PECOS VALLEY WATER MASTER**  
**EXPENDITURES FOR CALENDAR YEAR 2017**  
**JANUARY – DECEMBER 2017**

	JANUARY – JUNE 2018	JULY – DECEMBER 2018	TOTAL
SALARIES/BENEFITS	42,785.28	44,157.09	86,942.37
EMPLOYEE MEALS	0.00	0.00	0.0
FUEL & OIL	3,706.04	2,549.94	6,255.98
TRANSPORTATION POOL	0.0	2070.00	2,070.00
FIELD SUPPLIES	92.41	0.00	92.41
SUPPLIES-INVENTORY IT	65.00	0.00	65.00
RENT	2,343.06	3,319.82	5,662.88
TELECOMMUNICATIONS	48.57	149.35	197.92
SUBSCRIPTIONS AND DUES	0.00	0.00	0.00
<b>TOTAL EXPENDITURES</b>	<b>49,040.36</b>	<b>52,246.20</b>	<b>101,286.56</b>

**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	200.00
Other Costs	<u>16,000.00</u>
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: 2019-02-21 18:26  
 Lowest aging status in period is APPROVED  
 DD #1 Discharge, cubic feet per second

CALENDAR YEAR JANUARY TO DECEMBER 2017												
DAILY MEAN VALUES												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	52.1	83.2	79.3	75.8	105	84	16.8	92	0.5	0
2	0	0	51.7	83.8	83.1	85.4	105	79.6	16.6	90	0	0
3	0	0	52.2	83.8	87.7	88.9	103	79.1	16.1	86.2	0	0
4	0	0	52.6	83.5	87.6	91.7	80	81.2	16.7	92.3	0	0
5	0	0	52.5	84.3	88.6	86.9	75.8	81.63	16.6	94.9	0	0
6	0	0	53.4	84.4	89.2	85.5	86.9	81.7	14.7	92.9	0	0
7	0	0	54.2	88.1	87.2	84.9	95.3	80.8	67.7	97.3	0	0
8	0	0	54.7	85.9	82.6	87.6	89.2	82.9	47.7	32.2	0	0
9	0	0	53	83	81.1	98.2	80.6	86.3	39.4	0.0	0	0
10	0	0	47.4	86.2	80.8	99.9	91.9	89.3	16.1	0.0	0	0
11	0	0	50.4	87.8	80.8	96.2	88.6	3.06	2.84	0.0	0	0
12	0	0	56.8	30.5	78	104	75.3	1.29	2.26	0.0	0	0
13	0	0	58.4	63.6	76.5	109	81.4	0.85	53.8	0.0	0	0
14	0	0	58.7	88.3	75.7	115	77.4	0.48	105	0.0	0	0
15	0	46	68.4	86.8	75.6	114	75.8	0.48	85.6	0.0	0	0
16	0	82.5	85.9	86.1	75.6	116	73.5	0.48	79.2	0.0	0	0
17	0	79.2	86.6	85.8	83.2	115	73.1	0.48	78.3	0.0	0	0
18	0	53	86.3	85.3	84.9	113	78.7	0.48	77.9	0.0	0	0
19	0	42.3	85.6	84.5	90.8	105	77.1	0.48	79.8	0.0	0	0
20	0	41.2	87.3	83.3	95.4	102	78.9	0.48	93.2	0.0	0	0
21	0	49.4	85.8	83.1	97	102	75.1	0.48	100	0.0	0	0
22	0	59	85	83.1	99.1	106	72.9	0.48	93.3	0.0	0	0
23	0	60.1	86.3	74.1	90.6	106	71.3	56.9	90	0.0	0	0
24	0	60.4	83.3	84.8	83.6	106	68.7	99.5	87.5	0.0	0	0
25	0	60.7	83.8	75.7	80.3	105	66.7	101	90.9	0.0	0	0
26	0	61.3	83.4	74	80.6	106	67.8	103	87.7	0.0	0	0
27	0	62.2	77.5	77.3	81.1	105	68	103	88.5	0.0	0	0
28	0	59.8	75	81.3	80.2	105	67.4	103	91.2	0.0	0	0
29	0	---	77.3	78.9	78.3	104	69.1	107	91.7	0.0	0	0
30	0	---	79.9	79.7	77.3	104	72.7	103	92.5	33	0	0
31	0	---	82.3	---	75.1	---	77.8	90.4	---	64.8	---	0
TOTAL	0	817.1	2147.8	2420.2	2857	3023	2480	1682	1840	775.6	0.5	0
MEAN	0	29.18	69.28	80.67	83.45	101	80.0	54.27	61.32	25.02	0.02	0
MAX	0	82.5	87.3	88.3	99.1	116	105	107	105	97.3	0.5	0
MIN	0	0	47.4	30.5	75.1	75.8	66.7	0.48	2.26	0	0.00	0
AC-FT	0	1620.7	4260.2	4800.5	5131	5996	4919	3337	3649	1538	1	0
.CAL YR	2018	TOTAL 18,043	MEAN 49	MAX 116	MIN 0.00	AC-FT 35,253						
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: 2019-02-13 10:01  
 Lowest aging status in period is APPROVED  
 DD #1 Discharge, cubic feet per second

CALENDAR YEAR JANUARY TO DECEMBER 2018												
DAILY MEAN VALUES												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	196	0	280	208	203	244	206	0	0
2	0	0	0	235	0	256	210	127	225	218	0	0
3	0	0	0	232	0	225	245	112	192	234	0	0
4	0	0	0	210	0	220	210	136	188	214	62.1	0
5	0	0	0	157	0	206	206	178	179	196	87.6	0
6	0	0	0	124	0	216	187	211	134	170	92.5	0
7	0	0	0	159	47.5	248	196	233	27.9	32.2	88.7	0
8	0	0	0	129	244	234	181	220	0	.03	84.2	0
9	0	0	0	119	265	208	195	221	0	0	85.8	0
10	0	0	0	178	270	204	233	153	0	0	84.4	0
11	0	0	0	174	257	215	239	60.4	0	0	91.3	0
12	0	0	0	156	267	219	181	0.78	0	.01	81.1	0
13	0	0	0	205	286	249	194	0.37	0	0	63.8	.41
14	0	0	0	241	278	295	185	44.9	0	0	9.35	0
15	0	0	0	229	276	279	138	211	0	0	2.02	0
16	0	0	0	226	284	259	105	226	0	0	1.14	0
17	0	0	0	248	282	213	75.9	205	0	0	2.2	0
18	0	0	35.8	275	281	198	15.4	204	0	.01	.07	0
19	0	0	16.5	295	261	200	0	173	0	0	0	0
20	0	0	119	252	221	238	0	156	50.5	0	0	0
21	0	0	203	228	211	201	0	178	195	48.4	0	0
22	0	0	205	198	184	222	0	174	199	141	0	0
23	0	0	233	213	201	205	50.5	178	163	151	0	0
24	0	0	282	253	175	212	262	190	170	92.3	0	0
25	0	0	283	219	128	222	314	152	203	0	.03	0
26	0	0	280	203	93.9	173	310	153	201	0	0	0
27	0	0	262	198	0	161	295	197	181	0	0	0
28	0	0	254	152	0	220	277	209	146	0	0	0
29	0	0	253	110	0	239	286	252	162	0	0	0
30	0	----	205	39.7	0	240	297	269	197	0	0	0
31	0	----	186	----	44.2	----	207	267	----	0	----	0
TOTAL	0	0	2817	5854	4557	6757	5503	5294	3057	1703	836	.41
MEAN	0	0	90.9	195	147	225	178	171	102	55	28	.01
MAX	0	0	283	295	286	295	314	269	244	234	92.5	.41
MIN	0	0	0	39.7	0	161	0	0.37	0	0	0	0
AC-FT	0	0	5588	11611	9038	13403	10915	10502	6064	3378	1659	0.8

CAL YR 2018 TOTAL 36379 MEAN 99.3 MAX 314 MIN 0.00 AC-FT 72,158

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: 2019-02-13 11:30  
 Lowest aging status in period is APPROVED  
 DD #1 Discharge, cubic feet per second

CALENDAR YEAR JANUARY TO DECEMBER 2018												
DAILY MEAN VALUES												
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	21.5	22.3	29.4	23.2	20.8	19.7	21	24.9	25	25.1	24.4	22.4
2	22.3	22.4	30.6	23.4	20.7	18.8	20.6	25.7	25.7	25	24.7	23.9
3	21.8	24	31.6	22.1	20	21.4	22.4	25.8	25.4	24.9	25.7	23.5
4	22.1	23.4	29.1	20.7	19.8	21.6	23.3	25.4	26.6	24.7	25.1	23.9
5	21.5	24.2	24.8	23.9	19.8	21.2	21.6	25.5	41	24.5	26.1	23.4
6	21.5	24.6	21.9	25.1	19.6	20.9	20.4	25.9	31.2	33.3	26.1	23.6
7	21.6	24.5	21.2	22.3	19.6	20.1	20.9	26.2	24.7	26.5	26	22.7
8	20.5	24.8	22.7	24.9	20.6	19.5	21.6	26.2	24.6	26.9	24.6	24.7
9	21.3	25.6	23.4	23.9	20.6	20.3	24.3	25.9	24.4	27.7	23.8	23.3
10	22.2	25.8	23.6	21.5	21.2	20.1	23.7	33	24.8	25.2	23.9	22.9
11	20.9	26	22.1	20.8	20.9	21.5	23.3	26.1	24.3	25.6	25.8	23.7
12	21.1	25.9	21.1	21	20.1	20.6	22.3	25.7	23.3	26.6	22.9	24.6
13	20.4	26.3	21.9	20.4	19.4	19.8	36.7	26	23.2	29.6	22.7	22
14	20.6	26.6	21.9	18.5	19.7	20	24.6	26.3	23.2	26.4	24	19.5
15	22.1	27	23.4	20.1	20	19.5	24.5	25.8	22.6	22.3	24.5	20.9
16	18	27.1	21.8	20.7	19.8	25.9	23.6	25.9	22.4	24.5	24.5	20.8
17	20.3	27.9	21.9	20.4	19.8	21.9	23.8	25.8	22.5	25.6	24.3	20.8
18	21.5	27.7	22.4	19.4	20.5	22.2	23.9	25.9	22.6	33.2	23.9	21.7
19	22.1	28	20.3	19.2	20.3	21.9	23.4	26	22.2	25.8	24.4	21.6
20	22.3	27.7	21.1	20.4	19.8	22.5	22.8	32	25.9	25.3	23.7	19.9
21	21.9	27	21.7	20.1	20.3	21.5	22.5	26	24.3	25.1	24	21.2
22	21.5	27.4	21.9	19.7	21.6	21.2	22.2	25.9	21.5	25.5	24.3	20.6
23	21.3	28.2	22.2	20.4	21.6	22.7	22.4	26	22.8	28.9	24.3	19.7
24	21.1	28.4	22.6	22	21.1	22.9	21.4	26.6	23	71	24.5	21.2
25	21.5	28	21.7	18.2	21.1	21.7	21.9	27	24	25.4	23.3	21.5
26	22.8	27.4	22.2	21.6	22.7	22.6	25.4	26	26.7	24.8	23.3	23
27	21.4	29.5	23.3	18.6	24.6	22.8	23.2	38.3	23.6	24.5	24.2	19.8
28	22	30.5	21.5	20.8	21.3	22.2	23.2	25.9	24.5	24.2	24.6	20.7
29	21.5	----	22.1	20.8	19.3	22.2	23	25.7	24	24.7	24.3	20.5
30	22.4	----	22.1	21.4	19.5	22.4	25	24.8	25	24.8	25.7	21
31	23.3	----	23.1	----	19.3	----	30.5	24.7	----	28.7	----	20.9
TOTAL	666	738.2	720.6	635.5	635	642	729	827	745	856	734	680
MEAN	21.49	26.36	23.25	21.18	20.5	21.9	23.53	28.7	24.83	27.62	24.45	21.93
MAX	23.3	30.5	31.6	25.1	24.6	25.9	36.7	38.3	41	71	26.1	24.7
MIN	18	22.3	20.3	18.2	19.3	18.8	20.4	24.7	21.5	22.3	22.7	19.5
AC-FT	1322	1464	1429	1261	1260	1273	1447	1640	1478	1699	1455	1349
CAL YR	2018 TOTAL 8608.7 MEAN 23.6 MAX 71 MIN 18 AC-FT 17,075											
U.S. DEPARTMENT OF THE INTERIOR – US GEOLOGICAL SURVEY – WATER RESOURCES												



**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

**Tom Blaine, P.E.  
STATE ENGINEER**

**DISTRICT II  
1900 WEST SECOND STREET  
ROSWELL, NEW MEXICO 88201  
PHONE: (575)622-6521  
FAX: (575)623-8559**

June 2, 2018

Mr. John D'Antonio, P.E.  
New Mexico State Engineer  
Office of the State Engineer  
P.O. Box 25102  
Santa Fe, New Mexico 87504-5102

Dear Mr. D'Antonio:

I herewith transmit to you, in accordance with New Mexico Statutes Annotated Section 72-3-5 (1985 Repl. pamp.), the Annual Report of the Water Master of the Pecos Valley Surface Water District for calendar year 2017. This report covers activities of the Water Master and his assistant(s) during the irrigation season.

Respectfully submitted,

Timothy B. Williams, Water Master  
Pecos Valley Surface Water District

TBW



A pdf version of this report will be available on the OSE website:

[http://www.ose.state.nm.us/water\\_info\\_awrm\\_pecos\\_reports.html](http://www.ose.state.nm.us/water_info_awrm_pecos_reports.html)