



STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER



WATER MASTER REPORT  
PECOS VALLEY SURFACE WATER DISTRICT  
**2017**

TIMOTHY B WILLIAMS  
WATER MASTER

TABLE OF CONTENTS

TEXT

INTRODUCTION..... 1

ADMINISTRATION:

  General..... 2

  Private Drain..... 3

  Meetings and Other Activities..... 3

WATER AVAILABILITY:

  Supply and Storage..... 4-7

WATER DIVERSION..... 8-15

SUMMARY..... 16

FINANCIAL STATEMENTS:

  Expenditures for 2016..... 17

  Budget for Fiscal Year 2017..... 18

TABLES

Table 1: Annual Summary of Water Released from Sumner Lake..... 5

Table 2: Summary of Reservoir Content..... 6

Table 3: Summary of Stream Flow..... 7

Table 4: Summary of Water Diverted..... 10-14

Table 5: Summation of Annual Water Diverted..... 15

APPENDICES

A: Records of Stream Flow and Diversion

  Ft. Sumner Main Canal..... 19

  Carlsbad Main Canal at Head..... 20

  Pecos River below Dark Canyon at Carlsbad..... 21

B: Records of Individual Diversion Records in Alphabetical Order

## 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 2017 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 2017, 723.97 acre-feet of measured private drain water were contributed to the Pecos River, with 305.9 acre feet of this being diverted. In 2016, 1,465 acre-feet of measured private water were contributed with 368 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 2017 was 102,500 acre-feet, or 74 percent of average for the period of record, the average annual runoff for the current 20-year period is 114,471 acre feet. Peak flow for 2017 was 1,570 c.f.s. and occurred on June 26, 2017.

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 2,983 acre feet in 2017. The USGS gage at Rio Hondo near Roswell (08393610) recorded the maximum daily flow of 103 c.f.s. on May 9 2017.

2017 stream flow in the lower Pecos River Basin (in New Mexico) as recorded at the USGS Pecos River near Artesia gage (08396500) was 101,011 acre feet or 65 percent of average for the period of record, the average annual runoff for the current 20-year period is which is 116,645 acre-feet. Peak flow for 2017 at the Artesia gage was 1,280 c.f.s. and occurred on October 9, 2017.

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 2017 was 6,800 acre-feet or 77 percent of average for the period of record, the average annual runoff for the current 20-year period is 6,521 acre feet. The peak flow was 128 c.f.s. on September 26, 2017. The Carlsbad Irrigation District received the total of their decreed right of 2,800 acre-feet on October 11, 2017.

The 2017 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 46,930 acre feet or 47 percent of average for the period of record, the average annual runoff for the current 20-year period is 65,205 acre-feet. The peak flow of 164 c.f.s. occurred on September 24, 2017.

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 – 2017**  
**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-	1,460.65	1,460.65
FEBRUARY	-0-	-0-	-0-	638.48	-0-	527.44	1,165.92
MARCH	-0-	-0-	101.41	4,638.93	693.75	-0-	5,436.11
APRIL	-0-	-0-	-0-	5,327.62	188.35	616.31	6,132.28
MAY	-0-	-0-	-0-	4,937.90	-0-	1,068.06	6,005.96
JUNE	0.47	-0-	29,035.59	5,791.86	-0-	1,220.42	36,048.34
JULY	-0-	-0-	12,408.99	5,435.77	31.39	-0-	17,876.15
AUGUST	-0-	-0-	-0-	5,444.64	-0-	-0-	5,444.64
SEPTEMBER	-0-	-0-	-0-	5,561.57	-0-	-0-	5,561.57
OCTOBER	4.79	-0-	-0-	3,362.87	-0-	-0-	3,367.66
NOVEMBER	14.35	224.4	-0-	-0-	-0-	-0-	238.75
DECEMBER	41.11	858.50	-0-	-0-	-0-	-0-	899.61
<b>TOTAL</b>	<b>60.72</b>	<b>1,082.90</b>	<b>41,545.99</b>	<b>40,599.64</b>	<b>913.49</b>	<b>4,892.88</b>	<b>89095.62</b>

**TABLE 2**  
**SUMMARY OF RESERVOIR CONTENT - 2017**  
**CONTENT IN ACRE FEET**

RESERVOIR	SPILLWAY CREST	12/31/16 STORAGE	2017 MAXIMUM	2017 MINIMUM	12/31/17 STORAGE
SANTA ROSA LAKE	438,400	56,240	96,537 Oct 20	34,452 July 29	94,684
LAKE SUMNER	94,750	27,080	39,071 Dec 31	19,452 Sept. 23	39,071
BRANTLEY LAKE	1,008,000	34,820	40,686 Dec. 31	11,839 June 24	40,686
LAKE AVALON	4,470	2,300	3,190 Mar 6-19	0.0 Nov 3-Dec 31	0.0
RED BLUFF	289,700	140,100	143,200 Feb 18	114,100 Sept 23	121,000



**TABLE 3****SUMMARY OF STREAM FLOW – PECOS RIVER IN NEW MEXICO AT U.S.G.S. STATIONS – 2017**

STATION NAME & NO.	PERIOD OF RECORD			2017		2016	
	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)	80	139,274	114,471	142	102,500	168	121,400
BELOW SUMNER DAM (08384500)(Sec 2, T4N, R24E)	81	129,949	106,502	124	89,715	178	128,600
NEAR ACME(08386000) (Sec 14, T9S, R25E)	80	119,621	86,940	132	96,309	119	86,320
NEAR ARTESIA (08396500)(Sec18,T17S,R27E)	81	155,253	108,675	139	101,011	146	105,500
NEAR LAKEWOOD (Kaiser Channel) (08399500)(Sec5,T19S,R27E)	66	-----	-----	135	98,607	141	102,300
BELOW BRANTLEY DAM (08401500)	29	106,512	95,634	104	75,343	137	98,720
BELOW DARK CANYON AT CARLSBAD (08405200)(Sec 6, T22S, R27E)	48	40,786	36,225	29.1	21,090	64.6	46,740
NEAR MALAGA (08406500)(Sec 19, T24S, R29E)	81	101,499	59,409	65.3	47,290	95.9	69,420
AT RED BLUFF (08407500)(Sec 1, T26S, R28E)	80	100,841	65,205	64.8	49,626	104	75.440

## 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 2017 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 2017. 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 4,011.14 acre-feet in 2017. Water users under the Puerta de Luna West Community Ditch diverted 2,813.85 acre-feet of surface water from the Agua Negra in 2017.

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 90.97 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 2017.

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 70,190 acre-feet from the Pecos River in 2017, as compared with 71,400 acre-feet diverted in 2016 and 61,600 in 2015. 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 2017, a total of 134,810.49 acre-feet of public surface water was diverted under the jurisdiction of the Pecos River Water Master, of which 119,956.89 acre-feet was diverted for irrigation purposes, and 14,853.60 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, 305.90 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 364.111 acre-feet in 2017.

A summation of water diverted within the District above Red Bluff gage during 2017 (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		4,011.14			11.39
WEST PUERTA DE LUNA DITCH	247.30		2,813.85			11.37
SANCHEZ, ARSENIO	63.93		111.64			1.75
<b>TOTAL</b>	<b>663.29</b>		<b>6,936.63</b>			
<b><u>PECOS RIVER FROM SUMNER DAM TO THE MOUTH OF -SALT CREEK-</u></b>						
<b><u>FT. SUMNER IRRIGATION DISTRICT</u></b>						
FT. SUMNER IRRIGATION DISTRICT	6,500.00		36,356.10			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
<b>TOTAL</b>	<b>6,530.86</b>		<b>36,356.10</b>			
<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
<b>TOTAL</b>	<b>366.86</b>		<b>0.00</b>			0.00
<b><u>-RIO HONDO-</u></b>						
HAGERMAN CANAL CO. (c, e)	8,332.07		1,961.46			0.67
<b>TOTAL</b>	<b>8,332.07</b>		<b>1,961.46</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>-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		9.65	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 (RHODES, M.L.) (c, d)	88.40	123.00	0.00	0.00		0.00
*INTERSTATE STREAM COMM (UTTERBACK, ROBERT) (c, d)	224.70	40.00	0.00	0.00		0.00
PVACD	217.60		0.00	0.00		0.00
LATHROP, COLIN & DIANA	13.30		0.00	0.00		0.00
MORRIS, BRAD	130.00		0.00	0.00		0.00
POLLARD, CECIL	60.00		106.18	0.00		2.13
RHODES, WANDA (c, d)	29.40		0.00	305.90		0.01
<b>TOTAL</b>	<b>4,183.27</b>	<b>742.95</b>	<b>115.83</b>	<b>305.90</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>PECOS RIVER FROM BRANTLEY RESERVOIR TO TEXAS STATE LINE -IRRIGATION-</b>						
CARLSBAD IRRIGATION DISTRICT (f)	25,055.00		70,190.00			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
<b>TOTAL</b>	<b>27,724.38</b>		<b>70,190.00</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		14,480.00 <u>373.60</u>			
<b>TOTAL</b>			<b>14,853.60</b>			
<b>-BLACK RIVER-</b>						
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>		1,076.20 2,900.00  0.00 0.00 <u>0.00</u>			1.50   0.00 0.00
<b>TOTAL</b>	<b>1,669.92</b>		<b>3,976.20</b>			
<b>IRRIGATION TOTAL</b>	<b>49,470.65</b>	<b>742.95</b>	<b>119,536.22</b>	<b>305.90</b>	<b>0.00</b>	
<b>COMMERCIAL TOTAL</b>			<b>14,853.60</b>			
<b>GRAND TOTAL</b>			<b>134,389.82</b>	<b>305.90</b>	<b>0.00</b>	

## 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)	2013	2014	2015	2016	2017	5 YEAR AVERAGE
ABOVE SUMNER LAKE (2)	663	6,439	6,280	5,918	7,392	6,937	6,593
FT. SUMNER IRRIGATION DIST.	6,500	34,560	37,140	36,080	39,750	36,356	36,777
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	1,178	2,272	4,025	4,125	1,961	2,712
PECOS RIVER (6)	4,183	260	126	129	129	106	150
CARLSBAD IRRIGATION DIST.	25,055	32,970	60,110	61,600	71,400	70,190	59,254
AVALON TO STATE LINE							
PECOS RIVER (7)	2,669	9,187	13,680	13,680	7,674	14,854	11,815
BLACK RIVER	1,670	5,133	4,893	4,517	4,477	4,407	4685
TOTALS	49,475	89,727	124,501	125,949	134,947	134,811	121,987

“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.

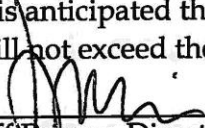
**PECOS VALLEY WATER MASTER  
EXPENDITURES FOR CALENDAR YEAR 2016  
JANUARY – DECEMBER 2017**

	JANUARY – JUNE 2017	JULY – DECEMBER 2017	TOTAL
SALARIES/BENEFITS	42,766.99	42,783.00	85,549.99
EMPLOYEE MEALS	0.00	214.00	214.00
FUEL & OIL	2,426.15	2,082.91	4,509.06
TRANSPORTATION POOL	2415.00	4140.00	6,555.00
FIELD SUPPLIES	0.00	0.00	0.00
SUPPLIES-INVENTORY IT	0.00	76.99	76.99
RENT	2,297.14	3,254.30	5,551.44
TELECOMMUNICATIONS	58.17	58.39	116.56
SUBSCRIPTIONS AND DUES	20.00	0.00	20.00
<b>TOTAL EXPENDITURES</b>	<b>49,983.45</b>	<b>52,609.59</b>	<b>102,593.04</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: 2018-02-16 16:04 - By agrazian  
 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	0	1.13	1.17	96.9	94.8	77.6	88.2	0.71	0	0
2	0	0	21.7	1.15	97.9	94	94	77.9	92.3	0.7	0	0
3	0	0	47.5	76.4	1.16	96	90.9	75.9	0	0.69	0	0
4	0	0	67.1	89.5	1.15	93	86.4	39.9	92.1	0.67	0	0
5	0	0	76.6	89.4	1.19	93.6	88.8	1.3	91.9	0.66	0	0
6	0	0	77	90.9	73.4	93.3	91.3	1.31	93	0.65	0	0
7	0	0	77.6	91.5	99.2	94	91.1	1.51	96	0.64	0	0
8	0	0	78.7	91.3	99.3	98.7	91	1.54	98.3	0.63	0	0
9	0	0	81.5	91.3	89.7	97.7	91.3	1.39	98.1	0.62	0	0
10	0	0	83.9	91.4	76.9	97.6	91.6	57.5	98	0.61	0	0
11	0	0	84	91.6	78.4	97.5	91.8	74.7	94.8	0.6	0	0
12	0	0	84.9	91.7	77.9	97.7	92.2	82.6	85.6	0.59	0	0
13	0	0	83	92.4	77.4	97.7	93.3	88.1	86.9	0.57	0	0
14	0	0	81.6	91.8	76.9	98.3	94.2	82.7	87.2	0.57	0	0
15	0	0	79.1	91.9	76.3	98.4	93.8	85.6	86.7	1.55	0	0
16	0	0	78.5	91.7	78.7	98.1	94.1	86	86.2	0.54	0	0
17	0	0	79.9	91.7	85.3	97	87.6	84.9	85.4	34.5	0	0
18	0	0	79.6	92.1	89.1	93.8	84.1	84.4	85.6	90.9	0	0
19	0	0	78.8	93.3	89.6	97.7	84.6	84.5	84.9	91.6	0	0
20	0	0	78.9	95	89.7	98.7	84.1	84.5	84.8	91.2	0	0
21	0	0	74.8	97.8	89.3	65.6	81.6	84.4	85.2	91.4	0	0
22	0	0	78.2	97.7	89.7	96.5	80.9	84.1	85.3	91.6	0	0
23	0	0	80.5	97.5	89.9	97.9	82.3	84	89.1	92.2	0	0
24	0	0	83.9	97.5	89.9	102	81.4	84.2	86.9	93.1	0	0
25	0	0	81.2	97.7	88.9	97	80.8	83.9	92	93.4	0	0
26	0	0	80.9	97.9	88.5	103	81	84.2	88.6	93.4	0	0
27	0	0	82.9	97.9	88.2	98.3	80.8	84.2	42.8	93.6	0	0
28	0	0	88.8	98	97.3	98.4	80.5	85.9	0.74	93.4	0	0
29	0	----	60.2	58.7	99.3	96.9	80.2	88.5	0.73	93.4	0	0
30	0	----	1.4	1.18	96.7	95.7	82	88.7	0.72	93.4	0	0
31	0	----	1.16	----	96.2	----	83	88.5	----	77.7	----	0
TOTAL	0	0	2134	2479	2278	2915	2706	2114	2379	1325	0	0
MEAN	0	0	68.8	82.6	73.5	97.2	87.3	68.2	79.3	42.7	0	0
MAX	0	0	88.8	98	99.3	103	95	89	98	94	0	0
MIN	0	0	0	1.13	1.15	93	80.2	1.3	0.72	0.54	0.00	0
AC-FT	0	0	4233	4917	4518	5782	5366	4194	4719	2628	0	0
.CAL YR 2017 TOTAL 18,329 MEAN 50 MAX 103 MIN 0.00 AC-FT 36,536												
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: 2018-02-16 10:01 - By agrazian  
 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	0	244	118	161	159	201	181	0	103	0
2	0	0	0	201	154	158	175	151	146	0	109	0
3	0	0	0	152	177	132	168	191	122	0	23.8	0
4	0	0	0	139	203	124	167	170	182	0	3.9	0
5	0	0	0	124	189	160	243	122	232	0	2.42	0
6	0	0	0	110	189	167	228	109	234	0	0.35	0
7	0	0	0	133	187	175	232	163	197	0	0.34	0
8	0	0	0	108	211	154	241	229	205	0	0.44	0
9	0	0	0	97.1	187	138	207	219	238	0	0	0
10	0	0	0	95	182	120	181	179	215	0	0	0
11	0	0	0	127	208	144	270	82.9	190	0	0	0
12	0	0	0	87.7	236	226	264	.01	164	0	2.25	0
13	0	0	0	0	242	271	265	0	169	0	0	0
14	0	0	0	0	202	287	230	0	187	0	0	0
15	0	0	0	0	167	266	217	0	195	66.7	0	0
16	0	0	0	0	169	244	166	0	190	196	0	0
17	0	0	0	50	152	187	140	41.9	166	231	0	0
18	0	0	0	192	155	163	134	167	207	241	0	0
19	0	0	78.5	217	127	170	150	174	206	247	0	0
20	0	0	188	241	149	195	76.9	140	223	243	0	0
21	0	0	184	259	160	268	0	137	218	218	0	0
22	0	0	209	260	197	291	0	142	200	207	0	0
23	0	0	232	238	165	283	0	159	169	217	0	0
24	0	0	221	257	122	259	0	166	39.1	214	0	0
25	0	0	220	250	118	230	47.6	175	0	224	0	0
26	0	0	221	218	137	223	258	67.9	0	231	0	0
27	0	0	233	190	139	179	263	0	0	223	0	0
28	0	0	287	160	117	145	252	0	0	206	0	0
29	0	0	267	140	118	151	282	40.2	0	173	0	0
30	0	----	232	117	108	152	239	152	0	199	0	0
31	0	----	236	----	110	----	229	189	----	144	----	0
TOTAL	0	0	2809	4407	5095	5823	5485	3568	4475	3481	246	0
MEAN	0	0	90.6	147	164	194	177	115	149	112	8.2	0
MAX	0	0	287	260	242	291	282	229	238	247	109	0
MIN	0	0	0	0	108	120	0	0	0	0	0	0
AC-FT	0	0	5571	8741	10106	11550	10879	7077	8876	6904	487	0
CAL YR	2017	TOTAL	35387	MEAN	96.5	MAX	291	MIN	0.00	AC-FT	70,190	
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: 2018-02-16 10:01 - By agrazian  
 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	38.2	29.7	30.3	31.2	29.4	31.8	27.3	30.2	28.3	29	28.8	26.6
2	34.6	29.7	30.4	30.2	29.3	31.4	26.3	26.7	28.5	28.6	28	26.1
3	31.9	29.6	30.4	31.1	29.4	31.2	26.5	26.7	28.3	28.3	28.1	25.9
4	32.6	29.2	30.6	31.3	28.7	31.1	26.9	26.7	28.2	28.4	28.1	25.2
5	32.8	29.5	31.1	29.6	28.9	30.9	26.8	27.1	28.2	29	27.9	23.7
6	32.1	29.3	31	30.9	29.2	30.9	26.2	27.3	27.7	29.4	27.4	23.9
7	31.6	29.9	29.9	31.4	29.2	30.6	26.2	35	28.2	28.2	27.4	24.6
8	32.2	29	30.5	31.5	29.8	35.5	26.4	27.1	28.4	28.8	31.8	23.8
9	32.3	29.5	30.6	31.3	31	30.7	26.7	26.7	28.1	30	27.7	23.7
10	32.5	30	30.1	30.5	30.7	30.5	25.7	26.6	27.9	26.5	27.8	23.6
11	32.6	29.4	31.7	30.8	30.3	30	25.1	26.7	27.9	28.4	28.3	24
12	32.4	29.4	29.4	39.7	30.8	30	24.5	50.5	27.8	28.8	27.5	23.3
13	32.2	31.4	30.1	30.9	31.1	29.5	24.4	26.6	27.5	28.7	27.5	24.3
14	32.4	30.8	30.7	30	29.1	29.5	24.9	26.4	27.3	28.6	27.6	23.7
15	36.2	30.6	30.4	29.9	29.4	29.5	25.8	26.7	27.3	27.4	27.3	23
16	32.8	30.9	30.5	29.8	29.8	29.4	25.5	26.3	34.8	27.2	27.3	23.9
17	32.6	30.8	30.3	29.5	28.1	28.7	25.5	26	27.4	28.1	27.2	24
18	32.6	31	30.1	29.9	29.4	28.3	25.4	25.9	26.9	28.6	26.1	24
19	32.3	31.4	30.5	29.4	29.1	28.6	25.4	26.5	27	31.4	26.3	23.8
20	31.8	30.3	30.7	29.4	28.7	28.3	25.4	67.8	26.6	36.6	27.2	23.2
21	33.4	30.2	30.8	29.7	28.7	28.3	25.6	31.4	26.8	29.5	27	23.5
22	29.4	32.3	30.6	28.6	50.8	27.9	36.1	28.2	30.8	28.9	26	22.7
23	30.1	30.9	33.2	28.6	32.2	27.9	26.8	28.2	29.2	29	26.7	23.1
24	30.1	30	25.6	29.4	31.2	27.1	26	36.7	28.1	28.1	26.9	22.9
25	28.8	30.3	29	29.1	31.1	28.3	26.2	38.3	54.5	28.3	26.6	23.4
26	29.2	31.4	30	27.8	30.8	31.9	30.3	29.7	34.6	29.4	26.3	23.1
27	29.3	31.2	29.9	29.2	30.5	28.7	27.2	28.6	28.8	27.9	26.5	22.5
28	29.6	31.3	30.9	29.8	30.2	27.9	26.5	28.6	29.3	28.5	26.8	23.2
29	29.6	---	29.5	29.8	30.4	28	26.6	28.5	34.7	28.9	25.2	22.9
30	29.6	---	30.1	28.5	30.5	27.9	26.8	28.5	28.8	28.8	26.5	22.5
31	29.9	---	30.8	---	31.4	---	28.4	28.4	---	28.4	---	22.3
TOTAL	988	849	940	909	949	890	823	945	888	896	820	736
MEAN	32	30	30.3	30.3	30.6	29.7	26.6	30.5	29.6	28.9	27.3	23.8
MAX	38	32	33	40	50.8	35.5	36.1	67.8	54.5	36.6	31.8	26.6
MIN	29	29	26	28	28.1	27.1	24.4	26	27	27	25	22.3
AC-FT	1959	1684	1864	1803	1883	1766	1633	1874	1761	1777	1626	1461
CAL YR	2017 TOTAL 10,633 MEAN 29.1 MAX 67.8 MIN 25 AC-FT 21,090											
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. Tom Blaine, P.E.  
New Mexico State Engineer  
Office of the State Engineer  
P.O. Box 25102  
Santa Fe, New Mexico 87504-5102

Dear Mr. Blaine:

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)