

RESERVOIR SEDIMENT
DATA SUMMARY

Table 4
Santa Rosa Lake
NAME OF RESERVOIR

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

58-15
DATA SHEET NO

DAM	1. OWNER Dept. of Army COE			2. STREAM Pecos River			3. STATE New Mexico																													
	4. SEC. 2 TWP. 9N RANGE 21E			5. NEAREST P O Santa Rosa, NM			6. COUNTY Guadalupe																													
	7. LAT 35° 01' 47" LONG 104° 41' 30"			8. TOP OF DAM ELEVATION 4824			9. SPILLWAY CREST ELEV. 4,797																													
RESERVOIR	10. STORAGE ALLOCATION		11. ELEVATION TOP OF POOL		12. ORIGINAL SURFACE AREA. ACRES		13. ORIGINAL CAPACITY. ACRE-FEET		14. GROSS STORAGE, ACRE-FEET		15. DATE STORAGE BEGAN																									
	a. FLOOD CONTROL		4797.0		10,685		180,554		447,087		21 April 1980																									
	b. MULTIPLE USE																																			
	c. POWER																																			
	d. WATER SUPPLY										16. DATE NORMAL OPER BEGAN																									
	e. IRRIGATION		4776.5		7,092		266,445		266,533		21 April 1980																									
	f. CONSERVATION																																			
g. INACTIVE		4630.0		15		88		88																												
17. LENGTH OF RESERVOIR			10.94 1/			MILES			AV. WIDTH OF RESERVOIR			0.5 MILES																								
WATERSHED	18. TOTAL DRAINAGE AREA				2.434				SQ. MI				22. MEAN ANNUAL PRECIPITATION				13.56 (81)				INCHES															
	19. NET SEDIMENT CONTRIBUTING AREA				2.417				SQ. MI				23. MEAN ANNUAL RUNOFF				0.63				INCHES															
	20. LENGTH				138.6				MILES				AV. WIDTH				17.53				MILES				24. MEAN ANNUAL RUNOFF				81,140 (11) 2/				AC.-FT.			
	21. MAX. ELEV.				13,102				MIN. ELEV.				4616				25. ANNUAL TEMP MEAN								58°F				RANGE -18 to 108°F							
	26. DATE OF SURVEY		27. PERIOD YEARS		28. ACCL. YEARS		29. TYPE OF SURVEY		30. NO. OF RANGES OR CONTOUR INT.		31. SURFACE AREA. ACRES		32. CAPACITY. ACRE-FEET		33. C/I RATIO. AC.-FT. PER AC.-FT.																					
April 1980 ^{3/}		-		-		Range - Contour (D)		24 Ranges		10,685		447,087		5.51																						
Sept. 1987		7.42		7.42		Range (D)		24 Ranges		10,594		439,860		5.42																						
26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW. ACRE-FEET		36. WATER INFL. TO DATE. AC.-FT.																														
		a. MEAN ANNUAL		b. MAX ANNUAL		c. PERIOD TOTAL		a. MEAN ANNUAL		b. TOTAL TO DATE																										
Sept. 1987 ^{4/}		16.60		98,364		154,870		729,862		98,364		729,862																								
26. DATE OF SURVEY		37. PERIOD CAPACITY LOSS, ACRE-FEET				38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET																														
		a. PERIOD TOTAL		b. AV ANNUAL		c. PER SQ MI YEAR		a. TOTAL TO DATE		b. AV ANNUAL		c. PER SQ MI YEAR																								
Sept. 1987		7,227		974		0.40		7,227		974		0.40																								
26. DATE OF SURVEY		39. AV DRY WGT. LBS PER CU FT		40. SED DEP. TONS PER SQ MI.-YR		41. STORAGE LOSS. PCT.		42. SED. INFLOW. PPM																												
		a. PERIOD		b. TOTAL TO DATE		a. AV ANN		b. TOT. TO DATE		a. PERIOD		b. TOT. TO DATE																								
Sept. 1987		64.8		564.54		564.54		0.22 1.61		10,207		10,207																								

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION 4797.0														
	180-160	160-140	140-120	120-100	100-80	80-60	60-40	40-20	20-0						
Sept. 1987	4.43	11.51	1.42	6.20	11.20	26.38	18.80	13.36	6.70						
26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120	-125
Sept. 1987	31.60	29.33	24.85	2.63	3.33	6.85	0.81	-0.36	0.77	0.18					
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.								
1979	empty	empty	74,540												
1980	4715.83	empty	46,217												
1981	4721.10	empty	62,915												
1982	4729.48	4705.97	75,745												
1983	4738.50	4717.20	103,277												
1984	4716.40	4672.81	64,567												
1985	4746.67	4706.28	140,098												
1986	4746.46	4737.80	88,050												
1987	4749.75	4745.89	154,870												
46. ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
4652	0	0	4695	481	6,867	4745	3,629	97,056							
4655	16	34	4700	663	9,691	4755	4,533	137,932							
4660	62	299	4705	870	13,577	4765	5,534	188,084							
4665	87	668	4710	1,106	18,474	4775	6,760	249,336							
4670	106	1,145	4715	1,365	24,541	4785	8,440	325,511							
4675	124	1,727	4720	1,719	32,213	4795	10,243	418,853							
4680	147	2,405	4725	1,985	41,386	4805	12,505	532,502							
4685	249	3,380	4730	2,329	52,187	4815	14,816	669,364							
4690	335	4,816	4735	2,756	64,950	4824	17,005	812,595							
47. REMARKS AND REFERENCES															
<p>1/ Length of lake at top of conservation pool.</p> <p>2/ Pecos River at Santa Rosa gage has 63 years of record (97,880 ac-ft/yr), prior to completion of Santa Rosa Dam. The gage is located 8.8 miles downstream from Santa Rosa Dam. Eleven years of record shown are for the Pecos River above Santa Rosa Dam gage which is 13.6 miles upstream.</p> <p>3/ Date storage began. Initial survey of sediment ranges June 1979.</p> <p>4/ Inflow for the period April 1980 through September 1987.</p>															
48 AGENCY MAKING SURVEY Corps of Engineers, Albuquerque							50. DATE _____								
49 AGENCY SUPPLYING DATA District, Southwestern Division															