

RESERVOIR SEDIMENTATION  
DATA SUMMARY

ALAMOGORDO

NAME OF RESERVOIR  
Carlsbad Project

DATA SHEET NO.

DAM	1. OWNER Bureau of Reclamation			2. RIVER Pecos			3. STATE New Mexico			
	4. SEC. 34 TWP. 5N RANGE 24 E			5. NEAREST TOWN Guadalupe near Fort Sumner			6. COUNTY De Baca			
	7. STREAM BED ELEV. 4273			8. TOP OF DAM ELEV. 4285			9. SPILLWAY CREST ELEV. 4275			
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET	14. ACCUMULATED ACRE- FEET	15. DATE STORAGE BEGAN				
	a. FLOOD CONTROL	4275	4650		156,750	May 27, 1937				
	b. POWER									
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN				
	d. IRRIGATION									
	e. CONSERVATION									
f. INACTIVE	4200		450	8,750	8,750					
WATERSHED	17. LENGTH OF RESERVOIR 13.7 <sup>9</sup> MILES			18. AV. WIDTH OF RESERVOIR 0.36 MILES						
	18. TOTAL DRAINAGE AREA 4393 SQ. MI.			19. MEAN ANNUAL PRECIPITATION 14.21 14/ INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 3749 <sup>2</sup> SQ. MI.			20. MEAN ANNUAL RUNOFF INCHES						
	20. LENGTH 120 MILES AV. WIDTH 36.6 MILES			21. MEAN ANNUAL RUNOFF 524 <sup>10</sup> 561 <sup>11</sup> / AC.-FT.						
	21. MAX. ELEV. 13,000 MIN. ELEV. 4275			22. CLIMATIC CLASSIFICATION Semi-Arid at dam						
SURVEY DATA	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/W RATIO AC.-FT. PER SQ. MI.		
	1936	0	0	Contour	5 Int.	4,650	156,750	41.81		
	Sept. 1, 1940	3.25	3.25	Range	61 Ranges	4,639 <sup>5</sup>	146,071 <sup>3</sup>	31.49		
	Oct. 1, 1943	3.08	6.33	Range	61 Ranges	4,600 ?	130,280 ?	34.75?		
April 1, 1944	0.50	6.83	Range	61 R	4,627	132,171 <sup>3</sup>	35.26			
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION <sup>7</sup>			35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AC.-FT.		
		a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	d. MEAN ANNUAL	e. TOTAL TO DATE				
	1936	0	(est.)	(est.)	(est.)	(est.)	(est.)	(est.)		
Sept. 1, 1940	12.58"	175,500	232,750 <sup>12</sup>	599,500	175,500	599,500				
Oct. 1, 1943	20.39"	---	---	---	---	---				
April 1, 1944	9.10"	379,265	766,136	1,327,429 <sup>8</sup>	195,372	1,341,220 <sup>13</sup>				
SURVEY DATA	26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE- FEET			38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET.					
		a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	d. TOTAL TO DATE	e. AV. ANNUAL	f. PER SQ. MI.-YEAR			
	1936	0			0	0	0			
Sept. 1, 1940	10,679	3,286	0.876	10,679	3,286	0.876				
Oct. 1, 1943	---	---	---	---	---	---				
April 1, 1944	13,900	3,880	1.03	24,579	3,599	0,960				
SURVEY DATA	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	c. AV. ANNUAL	d. TOT. TO DATE	e. PERIOD	f. TOT. TO DATE			
	1936	0								
Sept. 1, 1940		1,410	1,410	2.98	6.82	20,950	20,950			
Oct. 1, 1943		---	---	---	---	---	---			
April 1, 1944	73.5 (est.)	1,649	1,537	2.30	15,68	12,350	15,120			

Based on date of storage. Includes periods from September 1, 1940 to April 1, 1944. From date of storage the water supply papers are divided by Item 19. As recorded at Carlsbad, New Mexico.

1/. An additional 597 acre-feet of deposition above crest, total deposition is 25,176 acre-feet.  
 2/. Does not include 644 Square miles of non-contributing area.  
 3/. Computed by contour method.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION												
	crest-5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	75-132				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
April 1, 1944	6.31	7.60	9.57	9.11	11.96	7.24	5.82	7.93	34.46				

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
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
	NO DATA AVAILABLE														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1936	---	---					
1937	4256.8	0	232,750				
1938	4257.6	4178.0	106,800				
1939	4264.8	4215.5	137,500				
1940	4263.5	4202.9	122,450				
1941	4275.0	4211.4	690,143				
1942	4275.4	4225.0	455,303				
1943	4273.55	4227.6	124,495				
1944	4248.55	4209.0	127,951				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
4143	0	0	4275	4627	132.17			
4200	227	0.28						
4210	483	3.83						
4220	730	9.90						
4230	1022	18.62						
4240	1491	31.18						
4250	2161	49.44						
4260	3069	75.59						
4270	3956	110.72						

47. REMARKS AND REFERENCES

Data obtained from Project Histories, Drawing and Data Files, Denver, Colorado and Hydrology Division, Sedimentation Section, Basin Study File 1943 survey results believed questionable.

48. AGENCY SUPPLYING DATA Bureau of Reclamation

49. DATE 12-14-50

RESERVOIR SEDIMENT  
DATA SUMMARY

ALAMOGORDO  
NAME OF RESERVOIR

58-2a  
DATA SHEET NO.

DATA	1. OWNER <b>Bureau of Reclamation</b>		2. STREAM <b>Pecos</b>		3. STATE <b>New Mexico</b>				
	4. SEC. <b>34</b> TWP. <b>5N</b> RANGE <b>24E</b>		5. NEAREST P. O. <b>Ft. Sumner 12NW</b>		6. COUNTY <b>DeBaca</b>				
	7. LAT. <b>34° 36' 30"</b> LONG. <b>104° 23' 10"</b>		8. TOP OF DAM ELEVATION <b>4301</b>		9. SPILLWAY CREST ELEV. <b>4275</b>				
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					May 27, 1937			
	b. MULTIPLE USE					16. DATE NORMAL OPER. BEGAN			
	c. POWER								
	d. WATER SUPPLY								
	e. IRRIGATION	4275	4650	148,000	156,750				
	f. CONSERVATION								
WATERSHED	g. INACTIVE	4200	450	8,750	8,750				
	17. LENGTH OF RESERVOIR <b>13.7 1/</b> MILES		AV. WIDTH OF RESERVOIR <b>0.36</b> MILES						
	18. TOTAL DRAINAGE AREA <b>4393</b> SQ. MI.		22. MEAN ANNUAL PRECIPITATION <b>13.74</b> INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA <b>3749 2/</b> SQ. MI.		23. MEAN ANNUAL RUNOFF <b>.71 (50 yrs) 3/</b> INCHES						
	20. LENGTH <b>120</b> MILES	AV. WIDTH <b>36.6</b> MILES	24. MEAN ANNUAL RUNOFF <b>165,770 (50 yrs) 3/</b> AC.-FT.						
21. MAX. ELEV. <b>13,000</b>	MIN. ELEV. <b>4150</b>	25. ANNUAL TEMP: MEAN <b>58.8°</b> RANGE <b>106° to -13° 4/</b>							
SURVEY DATA	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/W RATIO, AC.-FT. PER AC.-FT.	
	1936	0	0	Contour	5 Int.	4,650	156,750	35.7	
	Sept 1, 1940	3.25	3.25	Range	61 ranges	4,639 6/	146,071 7/	33.3	
	Oct. 1, 1943	3.08	6.33	Range	61 ranges	4,600 7	130,280 7	29.7	
	Apr. 1, 1944	0.50	6.83	Range	61 ranges	4,627	132,171 7/	30.1	
	Sept. 1, 1964	20.42	27.25	Range (D)	61 ranges	4,560	110,655 7/	25.2	
		5/							
	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. 1, 1940	12.58"	210,000	192,700	12/	682,600	210,000	682,600	
	Oct. 1, 1943	20.39"	--	--	10/, 12/	--	--	--	--
	Apr. 1, 1944	9.10"	356,700	730,400	1,277,100	286,900	1,959,700	1,959,700	
	Sept. 1, 1964	9.36"	139,300	271,700	2,845,100 12/	176,300	4,804,800	4,804,800	
	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. 1, 1940	10,679	3,286	0.876	10,679	3,286	0.876	0.876	
	Oct. 1, 1943	--	--	--	--	--	--	--	
Apr. 1, 1944	13,900	3,880	1.03	24,579 3/	3,599	0.960	0.960		
Sept. 1, 1964	21,516	1,054	.281	46,095	1,692	0.451	0.451		
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. PERIOD	b. TOT. TO DATE	
Sept. 1, 1940	73.5*	1,410	1,410	2.10	6.82	18,400	18,400		
Oct. 1, 1943	--	--	--	--	--	--	--		
Apr. 1, 1944	73.5*	1,649	1,537	2.30	15.68	12,800	14,800		
Sept. 1, 1964	73.5*	450	722	1.08	29.4	8,900	11,300		

\*Assumed

26. DATE OF SURVEY Crest	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION									
	5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	75-132	147
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Apr. 1, 1944	6.31	7.60	9.57	9.11	11.96	7.24	5.82	7.93	34.46	
Crest -	26	26-31	31-41	41-51	51-61	61-71	71-81	81-91	91-156	
Sep. 1, 1964	--	4.51	7.24	10.14	11.19	11.01	11.37	11.63	30.91	

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
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
NO DATA AVAILABLE														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1937			11/ 12/ 245,200 (June-Dec.)	1944			11/ 12/ 27,700 (Jan-Mar)
1938	9/	9/	192,700	1944	4248.55	4248.55	101,500
1939	4265.35	4247.4	149,300				(Apr-Dec)
1940	4263.45	4205.90	95,400	1945	4245.30	4210.15	122,700
			(Jan-Aug)	1946	4240.15	4205.00	130,900
1940			27,200	1947	4250.00	4205.35	87,200
			(Sep.-Dec)	1948	4245.00	4205.00	120,200
1941	4275.0	4211.4	730,400	1949	4270.05	4213.00	224,300
1942	4275.3	4270.45	367,800	1950	4269.00	4252.95	148,800
1943	4273.55	4227.80	124,000	1951	4269.70	4200.70	86,000

46. ELEVATION-AREA-CAPACITY DATA (1964 Survey)								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
4210	0	0						
20	320	1,468						
30	780	6,978						
40	1,235	16,901						
50	1,890	32,747						
60	2,840	56,325						
70	3,900	89,485						
75	4,560	110,655						

47. REMARKS AND REFERENCES

- 1/ Main arm 13.7 mi., north arm 6.54 mi.
- 2/ Does not include 644 sq. mi. non-contributing area.
- 3/ From U.S.G.S. "Surface Water Records of New Mexico, 1964."
- 4/ Maximum and minimum recorded.
- 5/ Based on date of storage.
- 6/ Interpolated from 1944 surveys.
- 7/ Computed by contour method.
- 8/ As recorded at Carlsbad, New Mexico.
- 9/ Obtained from Water Supply Papers.
- 10/ Includes from September 1, 1940, to April 1, 1944.

RESERVOIR SEDIMENT  
DATA SUMMARY

Bureau of Reclamation

LAKE SUMNER (ALAMOGORDO)  
NAME OF RESERVOIR

58-20 b

DATA SHEET NO.

DAM		1. OWNER Bureau of Reclamation		2. STREAM Pecos		3. STATE New Mexico		
DAM		4. SEC. 34 TWP. 5N. RANGE 24E.		5. NEAREST P.O. Ft. Sumner 12NW		6. COUNTY DeBaca		
DAM		7. LAT 34° 36' 30" LONG 104° 23' 10"		8. TOP OF DAM ELEVATION 4301		9. SPILLWAY CREST ELEV. 4275		
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	4297	7846 <sup>±</sup>		237,820	May 27, 1937		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION							
	f. CONSERVATION	4261	2928	59,181	59,181			
g. INACTIVE	4225.3	565	3823	3823				
WATERSHED		17. LENGTH OF RESERVOIR 13.7 MILES		AV. WIDTH OF RESERVOIR 0.36 MILES				
WATERSHED		18. TOTAL DRAINAGE AREA 4393 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 12.7 INCHES				
WATERSHED		19. NET SEDIMENT CONTRIBUTING AREA 3749 SQ. MI.		23. MEAN ANNUAL RUNOFF 0.67 INCHES				
WATERSHED		20. LENGTH 120 MILES		AV. WIDTH 36.6 MILES		24. MEAN ANNUAL RUNOFF 157,200 AC.-FT.		
WATERSHED		21. MAX. ELEV. 13,000 <sup>±</sup>		MIN. ELEV. 4150		25. ANNUAL TEMP: MEAN 59° RANGE 106° to -13°		
SURVEY DATA	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.
	1936	0	0	Contour	5 Int.	4,650	156,750	.95
	Sept. 1, 1940	3.25	3.25	Range	61 Ranges	4,639	146,071	.88
	Oct. 1, 1943	3.08	6.33	Range	61 Ranges	4,600	130,280	.79
	Apr. 1, 1944	0.50	6.83	Range	61 Ranges	4,627	132,171	.80
	Sept. 1, 1964	20.42	27.25	Range (D)	61 Ranges	4,560	110,655	.67
	Nov. 30, 1973	9.2	36.45	Range (D)	61 Ranges	4,537	101,610	.65
	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. 1, 1940	12.58"	210,000	192,700	682,600	210,000	682,600	
Oct. 1, 1943	20.39"							
Apr. 1, 1944	9.10"	356,700	730,400	1,277,100	286,900	1,959,700		
Sept. 1, 1964	9.36"	139,300	271,700	2,845,100	176,300	4,804,800		
Nov. 30, 1973	12.69"	143,400	274,686	1,319,280	157,200	6,124,080		
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. 1, 1940	10,679	3,286	0.876	10,679	3,286	0.876		
Oct. 1, 1943								
Apr. 1, 1944	13,900	3,880	1.030	24,579	3,599	0.960		
Sept. 1, 1964	21,516	1,054	0.281	46,095	1,692	0.451		
Nov. 30, 1973	9,045	983	0.262	55,140	1,513	0.404		
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. 1, 1940	73.5*	1,410	1,410	2.10	6.82	18,400	18,400	
Oct. 1, 1943								
Apr. 1, 1944	73.5*	1,649	1,537	2.30	15.68	12,800	14,800	
Sept. 1, 1964	73.5*	450	722	1.08	29.40	8,900	11,300	
Nov. 30, 1973	76.1	510	670	1.10	23.19	9,811	10,981	

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	0-5	5-15	15-25	25-35	45-55	55-65	65-75	75-132							
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Apr. 1, 1944	6.31	7.60	9.57	9.11	11.96	7.24	5.82	7.93	34.46						
Sept 1, 1964	0-26	26-31	31-41	41-51	51-61	61-71	71-81	81-91	91-156						
	0.0	4.51	7.24	10.14	11.19	11.01	11.37	11.63	30.91						
Nov. 30, 1973	0-31	31-41	41-51	51-61	61-71	71-81	81-91	91-101							
	3.8	11.1	10.3	24.9	25.1	19.2	5.6	.							
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
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
Nov. 30, 1973	40.2	27.7	8.6	1.4	1.0	2.6	1.0	0.0							
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.								
1965	4251.50	4218.00	134,278												
1966	4261.20	4222.70	143,393												
1967	4265.15	4234.40	115,768												
1968	4265.90	4242.00	117,524												
1969	4265.75	4224.70	167,156												
1970	4268.90	4247.10	113,499												
1971	4261.20	4226.65	101,582												
1972	4261.10	4225.05	152,874												
1973	4275.40	4260.70	249,635												
46. ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
	1964 Survey		4250	1,890	32,747	4210	3	12							
4210	0	0	4255	2,360	43,271	4215	72	200							
4215	133	332	4260	2,840	56,325	4220	235	966							
4220	320	1,468	4265	3,300	71,559	4225	351	2,429							
4225	550	3,650	4270	3,900	89,485	4230	569	4,738							
4230	780	6,978	4275	4,560	110,655	4235	779	8,107							
4235	975	11,377		1973 Survey		4240	991	12,393							
4240	1235	16,901	4200	0	0	4245	1,283	18,078							
4245	1590	23,948	4205	1	2	4250	1,789	25,984							
47. REMARKS AND REFERENCES															
1/ Based on 1973 Area and Capacity Tables. (Dam modifications were made in 1955)															
2/ Based on Truchas Peak, New Mexico.															
3/ All data previous to this report are taken from July 25, 1966 Reservoir Sediment Data Summary (Data Sheet No. 58-2a).															
4/ Based on November 1973 Area and Capacity Tables.															
5/ Compiled from Water Supply Master File 00050.															
48. AGENCY MAKING SURVEY Bureau of Reclamation															
49. AGENCY SUPPLYING DATA Bureau of Reclamation				50. DATE October 5, 1981											

25. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
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
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
45. RANGE IN RESERVOIR OPERATION														
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.							
46. ELEVATION-AREA-CAPACITY DATA														
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY						
4255	2,265	36,119	4295	7,545	222,429									
4260	2,740	48,630	4297	7,846	237,820									
4265	3,215	63,517												
4270	3,690	80,780												
4275	4,537	101,610												
4280	5,289	126,173												
4285	6,041	154,497												
4290	6,793	186,583												
47. REMARKS AND REFERENCES														
48. AGENCY MAKING SURVEY Bureau of Reclamation														
49. AGENCY SUPPLYING DATA Bureau of Reclamation														
50. DATE <u>October 5, 1981</u>														

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											

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
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
			<u>11/ 12/</u>				<u>11/ 12/</u>
1952	4242.60	4202.60	137,500	1962	4273.40	4256.50	119,300
1953	4244.90	4208.00	97,500	1963	4265.60	4221.75	116,600
1954	4242.75	4204.00	138,700	1964	4257.15	4220.00	47,400
1955	4269.30	4243.00	155,700				(thru Aug.)
1956	4266.15	4214.90	77,000				
1957	4261.80	4209.50	214,700				
1958	4276.10	4256.15	271,700				
1959	4275.80	4265.30	128,300				
1960	4275.05	4261.75	160,800				
1961	4275.10	4252.00	158,300				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

11/ Inflow based on Calendar Year.

12/ Computed by Pecos River Commission.

13/ Additional 597 a.f. above crest, total = 25,176

14/ Based on crest elevation of 4,285.



RESERVOIR SEDIMENT  
DATA SUMMARY

ALAMOGORDA, Lake Sumner  
NAME OF RESERVOIR

58-22C  
DATA SHEET NO.

D A M	1. OWNER Bureau of Reclamation		2. STREAM Pecos		3. STATE New Mexico			
	4. SEC 34 T 5N R24E		5. NEAREST PO Ft. Sumner 12NW		6. COUNTY DeBaca			
	7. LAT 34°36'30" LONG 104°23'10"		8. TOP OF DAM 4301		9. SPILLWAY CREST 4275			
R E S E R V O I R	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. ORIGINAL SURFACE AREA, Ac	13. ORIGINAL CAPACITY, AF	14. GROSS STORAGE ACRE FEET	15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL	4297	7,846'		237,820	5/27/1937		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPERATION BEGAN		
	e. IRRIGATION							
	f. CONSERVATION	4261	2,928	59,181	59,181			
g. INACTIVE	4225.3	565	3,823	3,823				
17. LENGTH OF RESERVOIR 13.7 MILES				AVG. WIDTH OF RESERVOIR 0.36 MILES				
B A S I N	18. TOTAL DRAINAGE AREA 4,393 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 12.7 IN.					
	19. NET SEDIMENT CONTRIBUTING AREA 3,749		23. MEAN ANNUAL RUNOFF 0.66 IN.					
	20. LENGTH 120 MI	AV. WIDTH 36.6 MI		24. MEAN ANNUAL RUNOFF 153,910 AC.-FT.				
	21. MAX. ELEV. 13,000'	MIN. ELEV. 4150 ELEV.		25. ANNUAL TEMP. MEAN 59° RANGE 106°				
S U R V E Y  D A T A	26. DATE OF SURVEY <sup>3</sup>	27. PER.	28. ACCL.	29. TYPE OF SURVEY	30. NO. OF RANGES OR	31. SURFACE AREA, AC. <sup>4</sup>	32. CAPACITY	33. C/1 RATIO AF/AF
	1936	0	0	Contour	5 ft	4,650	156,750	.95
	11/30/1973	9.2	36.45	Range	61 R	4,537	101,610	.65
	5/19/1989	15.55	52.0	Contour	5 ft	4,453	94,747	.62
	26. DATE OF SURVEY <sup>3</sup>	34. PERIOD ANNUAL PRECIP.		35. PERIOD WATER INFLOW, ACRE FEET <sup>5</sup>			36. WATER INFLOW TO DATE, AF <sup>5</sup>	
		a. MEAN ANN.	b. MAX. ANN.	c. TOTAL	a. MEAN ANN.	b. TOTAL		
	1936							
	11/30/1973	12.7	143,400	274,686	1,319,280	157,200	6,124,080	
	5/19/1989	16.0	117,450	208,661	1,879,220	153,910	8,003,300	
	26. DATE OF SURVEY <sup>3</sup>	37. PERIOD CAPACITY LOSS, ACRE-Feet			38. TOTAL SEDIMENT DEPOSITS TO DATE, AF			
	a. TOTAL	b. AV. ANN.	c. /MI. <sup>2</sup> -YR.	a. TOTAL	b. AV. ANNUAL	c. /MI. <sup>2</sup> -YR.		
1936								
11/30/1973	9,045	983	0.26	55,140	1,513	0.40		
5/19/1989	6,863	441	0.11	62,003	1,192	0.31		
26. DATE OF SURVEY <sup>3</sup>	39. AV. DRY WT. (#/FT <sup>2</sup> )		40. SED. DEP. TONS/MI. <sup>2</sup> -YR.		41. STORAGE LOSS, PCT.		42. SED. INFLOW, PPM	
	a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TOTAL TO DATE	a. PER.	b. TOT.		
1936								
11/30/1973	76.1	510	670	1.10	23.19	9,811	10,981	
5/19/1989	76.1*	190	510	0.50	26.07	4,337	9,448	

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW AND ABOVE CREST ELEVATION														
	0-5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	75-132						
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
11/73	3.8	11.1	10.3	24.9	25.1	19.2	5.6	0.0							
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	100-105	105-110	110-115	115-120	120-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
11/73	40.2	27.7	8.6	1.4	1.0	2.6	1.0	0.0							

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AF	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AF
1965	4251.5	4218.0	134,278	1978	4259.9	4225.1	86,277
1966	4261.2	4222.7	143,393	1979	4263.1	4231.0	208,661
1967	4265.2	4234.4	115,768	1980	4274.3	4222.7	102,127
1968	4265.9	4242.0	117,524	1981	4254.0	4224.2	88,243
1969	4265.8	4224.7	167,156	1982	4259.9	4226.1	137,548
1970	4268.9	4247.1	113,499	1983	4256.2	4229.0	168,040
1971	4261.2	4226.7	101,582	1984	4251.6	4229.8	125,905
1972	4261.1	4225.1	152,874	1985	4259.1	4235.7	101,778
1973	4275.4	4260.7	249,635	1986	4261.1	4237.0	136,249
1974	4274.2	4224.3	73,313	1987	4266.4	4254.6	192,442
1975	4262.4	4236.4	105,187	1988	4259.2	4241.3	150,511
1976	4253.5	4224.6	99,612	1989	4255.0	4240.5	135,389
1977	4251.1	4225.1	103,329				

46. ELEVATION - AREA - CAPACITY DATA FOR 1989

ELEV.	AREA	CAP.	ELEV.	AREA	CAP.	ELEV.	AREA	CAP.
4207.5	0.0	0	4240	715	7,582	4275	4,453	94,747
4210	0.3	1	4245	1,196	12,358	4280	5,167	118,798
4215	9.4	25	4250	1,639	19,445	4285	5,924	146,524
4220	112	328	4255	2,178	28,807	4290	6,643	177,939
4225	203	1,115	4260	2,701	41,004	4295	7,292	212,776
4230	337	2,467	4265	3,338	56,099	4297	7,615	227,683
4235	497	4,553	4270	3,834	74,028			

47. REMARKS AND REFERENCES

- <sup>1</sup> Based on 1973 Area and Capacity Tables (Dam modifications were made in 1955).
- <sup>2</sup> Based on Truchas Peak, New Mexico.
- <sup>3</sup> All data previous to this report are taken from November 30, 1973 Reservoir Sediment Data Summary (data Sheet No. 58-2a).
- <sup>4</sup> Based on Original Area and Capacity Tables with upper elevation of 4275 Ft.
- <sup>5</sup> Inflow for water years 1965 to 1973 compiled from Water Supply Master File 00050; those for water years 1974 to 1989 compiled from U. S. Geological Survey Gage, Pecos River near Pueblo de Luna, New Mexico (08383500).

48. AGENCY MAKING SURVEY Bureau of Reclamation

49. AGENCY SUPPLYING DATA Bureau of Reclamation

DATE December 1991