

RESERVOIR SEDIMENTATION
DATA SUMMARY

Escondido No. 11
NAME OF RESERVOIR

SOIL CONSERVATION SERVICE
52 - 9
DATA SHEET NO.

DAM	1. OWNER			2. RIVER Trib. of Escondido Cr.			3. STATE Texas									
	4. SEC. TWP. RANGE		5. NEAREST TOWN Kenedy			6. COUNTY Karnes										
	7. STREAM BED ELEV. 286.0			8. TOP OF DAM ELEV. 323.8			9. SPILLWAY CREST ELEV. 317.8									
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		317.8		310.8		2,577.9		2,728.0		7-11-58					
	b. POWER															
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION		300.7		34.0		150.1		150.1							
	f. INACTIVE															
17. LENGTH OF RESERVOIR 1.80				MILES				AV. WIDTH OF RESERVOIR 0.270				MILES				
WATERSHED	18. TOTAL DRAINAGE AREA 8.43				SQ. MI.				22. MEAN ANNUAL PRECIPITATION 25.65				INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA 7.94				SQ. MI.				23. MEAN ANNUAL RUNOFF 3.00				INCHES			
	20. LENGTH				MILES				AV. WIDTH				MILES			
	24. MEAN ANNUAL RUNOFF 159.99 ac. ft. / sq. mi.															
	21. MAX. ELEV.				MIN. ELEV. 286.0				25. CLIMATIC CLASSIFICATION Sub-humid							
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.	
	1/ 7-11-1958		-		-		Range		30		310.8		2,728.0		323.61	
	2/ 7-11-1958		-		-		Detail		30		34.0		150.1		17.81	
	3/ 7-11-1960		2.0		2.0		"		30		310.8		2,667.8		316.47	
	4/ 7-11-1960		2.0		2.0		"		30		34.0		161.0		19.10	
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW ACRE- FEET		36. WATER INFL. TO DATE AQ- FT.									
					a. MEAN ANNUAL		b. MAX. ANNUAL		c. PERIOD TOTAL		d. MEAN ANNUAL		e. TOTAL TO DATE			
	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			
	1/ 7-11-1958		-		-		-		-		-		-		-	
2/ 7-11-1958		-		-		-		-		-		-		-		
3/ 7-11-1960		60.2		30.1		3.79		60.2		30.1		3.79				
4/ 7-11-1960		-		-		-		-		-		-		-		
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. ANNUAL		b. TOT. TO DATE		a. PERIOD		b. TOT. TO DATE		
3/ 7-11-1960		47.08 (3)		3,886.2		3,886.2		1.10		2.21						
4/ 7-11-1960		53.24(10)		4,394.8		4,394.8		1.10		2.21						

1/ Both pools.
 2/ Sediment pool only.
 3/ Average wt. of 3 samples from site 11 used.
 4/ Average wt. of samples from sites 1 and 11 Escondido Creek used.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, 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.

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
290.0	2.6	4.0	302.0	46.0	210.0	316.0	262.6	2,152.3
292.0	6.1	18.2	304.0	63.0	320.0	317.8	293.5	2,667.8
294.0	10.8	30.3	306.0	87.4	472.5	318.0	297.1	2,720.0
296.0	14.0	55.1	308.0	117.1	671.3	320.0	342.1	3,360.0
298.0	20.2	92.6	310.0	153.0	929.8	322.0	388.1	4,080.0
300.0	29.1	142.4	312.0	185.0	1278.9			
300.7	34.0	161.0	314.0	220.2	1671.1			

47. REMARKS AND REFERENCES
 Land Use: Cropland = 11.1%; Grassland, 84.5%; Misc. 4.4%.
 Average CI Ratio: Detention Pool = 2.00; Sediment Pool = 0.12
 Estimated Trap Efficiency = 99%.
 Total Annual sediment load, adjusted for trap efficiency = 3.83 ac.ft./sq.mi.

Soil Conservation Service

48. AGENCY SUPPLYING DATA Temple, Texas

49. DATE _____

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

Site 11, Escondido Creek Watershed

NAME OF RESERVOIR

52 - 9a

DATA SHEET NO.

DAM	1. OWNER <u>Nixon, Audilet, Ingram</u>			2. STREAM <u>San Antonio River</u>			3. STATE <u>Texas</u>												
	4. SEC. TWP. RANGE			5. NEAREST P. O. <u>Kenedy</u>			6. COUNTY <u>Karnes</u>												
	7. LAT. <u>28° 51' 35"</u> LONG. <u>97° 50' 41"</u>			8. TOP OF DAM ELEVATION <u>323.8</u>			9. SPILLWAY CREST ELEV. <u>317.8</u>												
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		317.8 1/		300.2		2508.7		2665.4		7-11-58								
	b. MULTIPLE USE																		
	c. POWER																		
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN								
	e. IRRIGATION																		
	f. CONSERVATION										7-11-58								
g. INACTIVE		300.7 3/		34.0		156.7		156.7											
17. LENGTH OF RESERVOIR				1.80		MILES		AV. WIDTH OF RESERVOIR				0.26		MILES					
18. TOTAL DRAINAGE AREA				8.43		SQ. MI.		22. MEAN ANNUAL PRECIPITATION				31.73 (26)		INCHES					
19. NET SEDIMENT CONTRIBUTING AREA				7.96		SQ. MI.		23. MEAN ANNUAL RUNOFF				3.0		INCHES					
20. LENGTH				4.0		MILES		AV. WIDTH		2.1		MILES		24. MEAN ANNUAL RUNOFF		1348.7		AC.-FT.	
21. MAX. ELEV.				425.0		MIN. ELEV.		286.0		25. ANNUAL TEMP: MEAN				70°F		RANGE		96°F - 44°F	
WATERSHED	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.				
	1/ 7-11-60		-		-		Range - Contour (D)		30 R 2 Ft. CI		300.2		2665.4		1.98				
	1/ 9-11-65		5.2		5.2						300.2		2634.4		1.95				
	1/ 5-15-71		8.7		13.9						300.2		2622.4		1.94				
	3/ 7-11-60		-		-						34.0		156.7		0.12				
	3/ 9-11-65		5.2		5.2						29.2		135.9		0.10				
	3/ 5-15-71		8.7		13.9						28.2		128.2		0.10				
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							
SURVEY DATA	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						
	1/ 5-15-71		12.0		1.38		0.17		43.0		3.09		0.39						
	3/ 5-15-71		7.7		0.89		0.11		28.5		2.05		0.26						
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					
1/ 5-15-71		55.04*		236.41		464.35		.12		1.61		--		--					
2/ 5-15-71		92.4 (2)		133.76		261.62		-		-		--		--					
3/ 5-15-71		35.8 (5)		102.65		202.73		1.31		18.19		--		--					

*Weighted Average

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
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							
290.0	0.70	0.47	304.0	61.09	279.69	317.8	300.2	2622.40							
292.0	5.58	5.97	306.0	84.07	424.31										
294.0	8.02	19.51	308.0	119.13	626.60										
296.0	11.08	38.53	310.0	154.06	899.17										
298.0	17.58	66.96	312.0	186.59	1239.47										
300.7	28.20	128.20	314.0	219.91	1645.72										
302.0	44.18	174.82	316.0	256.49	2121.89										
47. REMARKS AND REFERENCES															
<u>1/</u> Total Reservoir below crest elevation (317.8') <u>2/</u> Detention Pool only <u>3/</u> Sediment Pool only Land Use in Watershed: Cropland 10%, Pasture & Rangeland 86%, Miscellaneous 4% Land Resource Area: Rio Grande Plain Geology: Oakville Formation, Fleming Group, Miocene Age															
48. AGENCY MAKING SURVEY				Soil Conservation Service											
49. AGENCY SUPPLYING DATA				Temple, Texas				50. DATE 7-73							

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.

46. 1979 ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
292	1.88	1.25	304	61.00	269.22	316	256.33	2102.27
294	7.95	10.38	306	83.34	412.98	317.8	300.20	2602.63
296	10.88	29.13	308	118.08	613.39			
298	17.41	57.17	310	153.69	884.38			
300.7	28.11	118.05	312	185.59	1223.16			
302	44.09	164.59	314	219.07	1627.36			

47. REMARKS AND REFERENCES
1/ Total reservoir below crest elevation (317.8).
2/ Detention pool only.
3/ Sediment pool only.

Geology: Oakville Formation, Fleming Group, Miocene Age.
Land Resource Area: Rio Grande Plain.
Land Use: cropland 3%, pasture & rangeland 87%, miscellaneous 10%.

48. AGENCY MAKING SURVEY SCS, Temple, Texas
49. AGENCY SUPPLYING DATA SCS, Temple, Texas
50. DATE 1-80