U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

RESERVOIR SEDIMENTATION DATA SUMMARY

Santa Rosa Lake — NAME OF RESERVOIR

50 - 7 — DATA SHEET NO.

DAM

1. OWNER W. T. Waggoner Estate	2. RIVER Beaver Creek	3. STATE Texas
4. SEC. – TWP. – RANGE –	5. NEAREST TOWN Vernon	6. COUNTY Wilbarger
7. STREAM BED ELEV. 66	8. TOP OF DAM ELEV. 107	9. SPILLWAY CREST ELEV. 104*1/

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					
b. POWER					Oct. 1929
c. WATER SUPPLY	104	1,500	15,755	15,755	16. DATE NORMAL OPER. BEGAN
d. IRRIGATION					
e. CONSERVATION					Oct. 1929
f. INACTIVE					

17. LENGTH OF RESERVOIR 5.9 MILES — AV. WIDTH OF RESERVOIR 0.5 (main body) MILES

WATERSHED

18. TOTAL DRAINAGE AREA 336 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 26 *	INCHES
19. NET SEDIMENT CONTRIBUTING AREA 334 SQ. MI.		23. MEAN ANNUAL RUNOFF	INCHES
20. LENGTH 36 MILES	AV. WIDTH 10 MILES	24. MEAN ANNUAL RUNOFF	AC.-FT.
21. MAX. ELEV.	MIN. ELEV.	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.
Oct. 1929	-	-	-	-	1,423 2/	15,755 3/	46.9
Jan. 1948	18.2	18.2	Range recon.	9	1,500 3/	11,568	34.4

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

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	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR
Jan. 1948	4,187	230	0.689	4,187	230	0.689

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
Jan. 1948	-	-	-	1.5	26.6	-	-

* Assumed

1/ Spillway raised 2 ft. 2/ At original spillway elevation of 102 ft.

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 LENGH 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

47. REMARKS AND REFERENCES

3/ Surface area was increased to about 1,525 acres when spillway was raised. This has decreased somewhat due to sedimentation. The raised spillway had relatively small effect upon storage capacity.

Reference: Reconnaissance Investigation of Sediment in Santa Rosa Lake by V. H. Jones, October 1948. (Unpublished)

The bulk of the sediment in Santa Rosa Lake is red clay and silt.

48. AGENCY SUPPLYING DATA: Region 4, Soil Conservation Service, U. S. Dept. of Agriculture, Fort Worth, Texas

49. DATE August 3, 1950

ASR-SCS-BELTSVILLE, MD. 2301 JANUARY 1952