

RESERVOIR SEDIMENT  
DATA SUMMARY

TORONTO LAKE

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

45-40

DATA SHEET NO.

DAM	1. OWNER <b>Corps of Engineers</b>			2. STREAM <b>Verdigris</b>			3. STATE <b>Kansas</b>					
	4. SEC. <b>36</b> TWP. <b>26S</b> RANGE <b>13E</b>			5. NEAREST P. O. <b>Toronto 5 SE</b>			6. COUNTY <b>Woodson</b>					
	7. LAT <b>37° 44' 30"</b> LONG <b>95° 56' 00"</b>			8. TOP OF DAM ELEVATION <b>946.0</b>			9. SPILLWAY CREST ELEV. <b>931.0</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		931.0		10,000		172,000		195,300		15 Mar 60	
	b. MULTIPLE USE		901.5		2,800		10,700		23,300			
	c. POWER										16. DATE NORMAL OPER. BEGAN	
	d. WATER SUPPLY											
	e. IRRIGATION											
	f. CONSERVATION											
	g. INACTIVE		896.7		1,910		12,600		12,600		21 Mar 60	
17. LENGTH OF RESERVOIR <b>22.7</b> MILES					AV. WIDTH OF RESERVOIR <b>0.688</b> MILES							
18. TOTAL DRAINAGE AREA <b>730</b> SQ. MI.					22. MEAN ANNUAL PRECIPITATION <b>34.92</b> INCHES							
19. NET SEDIMENT CONTRIBUTING AREA <b>714</b> SQ. MI.					23. MEAN ANNUAL RUNOFF <b>8.973</b> INCHES							
20. LENGTH <b>8.0</b> MILES			AV. WIDTH <b>8.69</b> MILES			24. MEAN ANNUAL RUNOFF <b>349,300</b> AC.-FT.						
21. MAX. ELEV. <b>1400</b>			MIN. ELEV. <b>856</b>			25. ANNUAL TEMP: MEAN <b>57°F</b> RANGE <b>-7° to 104°F</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/I. RATIO, AC.-FT. PER AC.-FT.		
	15 Mar 60		0	0	Range (D)		29	10,000	195,300	0.559		
	31 May 66		6.21	6.2	Range (D)		29	10,000	192,060	0.550		
	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			
	31 May 66		36.7		400,360	874,400	2,486,250	400,360	2,486,250			
	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				
	31 May 66		3240	522	0.731	3240	522	0.731				
	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				
31 May 66		50.4	802	802	0.267	1.66	1052	1052				

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	75-70	70-60	60-50	50-40	40-30	30-20	20-10	10-0	0-10	10-20	20-30				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
31 May 66	2.0	8.2	15.9	19.5	33.7	16.2	4.2	0.3							
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														
31 May 66	25.9	34.0	28.2	8.2	3.0	0.4	-0.3	0.6							

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1960	907.8	901.2	198,880	1)			
1961	928.4	901.3	874,420				
1962	919.6	900.9	615,980				
1963	908.1	899.3	121,920				
1964	906.4	897.3	68,800				
1965	923.0	900.9	539,400	2)			
1966	903.2	899.3	66,850				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
862	0	0	898	1920	12,680	930	9820	182,150
866	23	53	901.5	2550	21,000	931	10000	192,060
870	40	162	902	2640	21,960	934	11100	223,830
874	59	354	906	3380	34,090	938	13000	272,430
878	78	658	910	4160	41,100	942	15200	328,610
882	120	999	914	4970	67,120	946	17600	393,010
886	206	1650	918	5980	89,080	950	18900	466,270
890	430	2810	922	7150	115,650			
894	1250	6140	926	8540	146,390			

47. REMARKS AND REFERENCES

1) 16 March 1960 through 30 September 1960.

2) 1 October 1965 through 31 May 1966.

48. AGENCY MAKING SURVEY Tulsa District, Corps of Engineers, Dept. of the Army

49. AGENCY SUPPLYING DATA Corps of Engrs., Dept. of the Army

50. DATE 18 Aug. 71