U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

RESERVOIR SEDIMENTATION DATA SUMMARY

White Rock Reservoir — NAME OF RESERVOIR

51-8 — DATA SHEET NO.

DAM

1. OWNER City of Dallas	2. RIVER White Rock Creek	3. STATE Texas
4. SEC. – TWP. – RANGE –	5. NEAREST TOWN Dallas	6. COUNTY Dallas
7. STREAM BED ELEV.	8. TOP OF DAM ELEV.	9. SPILLWAY CREST ELEV. 457.45

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					1911
b. POWER					
c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN
d. IRRIGATION					
e. CONSERVATION	457.45	1,254	18,158	18,158	1911
f. INACTIVE					

17. LENGTH OF RESERVOIR 5.09 MILES | AV. WIDTH OF RESERVOIR 0.38 MILES

WATERSHED

18. TOTAL DRAINAGE AREA	99.1 SQ. MI.	22. MEAN ANNUAL PRECIPITATION	37 (55) INCHES
19. NET SEDIMENT CONTRIBUTING AREA	97.1 SQ. MI.	23. MEAN ANNUAL RUNOFF	INCHES
20. LENGTH MILES	AV. WIDTH MILES	24. MEAN ANNUAL RUNOFF	AC.-FT.
21. MAX. ELEV.	MIN. ELEV.	25. CLIMATIC CLASSIFICATION	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.
1911	–	–	–	–	1,254	18,158	183
April 1935	24	24	Range Detailed	13	1,150	14,276	144

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	d. 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
April 1935	3,882	162	1.67	3,882	162	1.67

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
April 1935	49 (8) 1/	1,782	1,782	0.89	21.38	–	–

1/ Sediment samples were taken October 1938.

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 Unpublished Report on Sedimentation in White Rock Lake, by V. H. Jones, 1935. The Dallas City Engineer office mapped the shoreline of the lake in 1923 and established 9 ranges but made no sediment measurements. Dean T. U. Taylor, University of Texas, supervised a re-survey in 1928 and made sediment measurements on part of the lake (Silting of Reservoirs, Univ.of Texas Bull.3025, 1930, pp.87-93).

Eakin, Henry M. and Brown, C. B. Silting of Reservoirs (revised), U. S. Dept. of Agric. Tech. Bull. 524, 1939, pp. 78-82.

White Rock Lake was the source of water supply for the City of Dallas, Texas, until Lake Dallas was completed in 1928. It is now being used for recreation.

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

49. DATE August 11, 1950

AGR-SCS-BELTSVILLE, MD. 2301 JANUARY 1952

SCS-34,
Jan. 1958

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

RESERVOIR SEDIMENTATION DATA SUMMARY

WHITE ROCK LAKE — NAME OF RESERVOIR

51-8a — DATA SHEET NO.

DAM

1. OWNER: City of Dallas	2. RIVER: White Rock Creek	3. STATE: Texas
4. SEC. TWP. RANGE	5. NEAREST TOWN: Dallas	6. COUNTY: Dallas
7. STREAM BED ELEV.: 415.0 M.S.L.	8. TOP OF DAM ELEV.: 468.5 M.S.L.	9. SPILLWAY CREST ELEV.: 457.45

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					April 1910
b. POWER					
c. WATER SUPPLY	457.45	1,254	18,158	18,158	16. DATE NORMAL OPER. BEGAN: 1910
d. IRRIGATION					
e. CONSERVATION					
f. INACTIVE					

17. LENGTH OF RESERVOIR: 3.21 Orig. 2.56 Pres. MILES — AV. WIDTH OF RESERVOIR: 0.38 MILES

WATERSHED

18. TOTAL DRAINAGE AREA: 99.1 SQ. MI.		22. MEAN ANNUAL PRECIPITATION: 36.16 (76)	INCHES
19. NET SEDIMENT CONTRIBUTING AREA: 97.4 SQ. MI.		23. MEAN ANNUAL RUNOFF: 4.29	INCHES
20. LENGTH: 22.9 MILES	AV. WIDTH: 4.35 MILES	24. MEAN ANNUAL RUNOFF: 229 ac. ft./sq. mi.	AC.-FT.
21. MAX. ELEV.: 700 M.S.L.	MIN. ELEV.: 415.0 M.S.L.	25. CLIMATIC CLASSIFICATION: 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.
April 1910	-	-	-	-	1,254	18,158	183
April 1935	25	25	Range Detail	13	1,150	14,276	144
March 1956	20.9	45.9	"	9	1,095	12,321	124

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
April 1935	3,882	155	1.60	3,882	155	1.60
March 1956	1,955	94	0.97	5,837	127	1.30

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
April 1935	49 (8) 1/	1,708	1,708	0.89	21.38	-	-
	-	-	-	0.70	32.15	-	-

1/ Sediment samples were taken October 1938.

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

C/W Ratio = .655
Estimated Trap Efficiency = 97%
Total Annual Sediment Load Adjusted for Trap Efficiency = 1.08 ac.ft./sq.mi.

48. AGENCY SUPPLYING DATA — Soil Conservation Service, Temple, Texas

49. DATE ~~April 1956~~

1958

RESERVOIR SEDIMENT
DATA SUMMARY
SCS-34 Rev. 6-66

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

WHITE ROCK LAKE
NAME OF RESERVOIR

51- 8b
DATA SHEET NO.

DAM

1. OWNER City of Dallas	2. STREAM White Rock Creek	3. STATE Texas
4. SEC. TWP. RANGE	5. NEAREST P. O. Dallas	6. COUNTY Dallas
7. LAT. 32° 49'00" LONG. 96° 43' 45"	8. TOP OF DAM ELEVATION 468.5	9. SPILLWAY CREST ELEV. 458.0

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					April 1910
b. MULTIPLE USE	458.0	1254	18,158	18,158	
c. POWER					16. DATE NORMAL OPER. BEGAN
d. WATER SUPPLY					
e. IRRIGATION					1910
f. CONSERVATION					
g. INACTIVE					

17. LENGTH OF RESERVOIR 2.80 MILES — AV. WIDTH OF RESERVOIR 0.61 MILES

WATERSHED

18. TOTAL DRAINAGE AREA	99.1 SQ. MI.	22. MEAN ANNUAL PRECIPITATION	34.55 (85) INCHES
19. NET SEDIMENT CONTRIBUTING AREA	97.4 SQ. MI.	23. MEAN ANNUAL RUNOFF	4.29 INCHES
20. LENGTH 22.9 MILES	AV. WIDTH 4.35 MILES	24. MEAN ANNUAL RUNOFF	22,673 AC.-F T.
21. MAX. ELEV. 700	MIN. ELEV. 434	25. ANNUAL TEMP.: MEAN 66°F	RANGE 46°F - 86°F

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.
April, 1910	--	--			1,254	18,158	0.80
April, 1935	25	25	Range	13	1,150	14,276	0.63
March, 1956	20.9	45.9	Detail	9	1,095	12,321	0.54
Oct., 1970	14.6	60.5		9	1,119	10,743	0.47

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 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
March 1935	3,882	155	1.60	3,882	155	1.60
March 1956	1,955	94	0.97	5,837	127	1.30
Oct. 1970	1,578	108	1.11	7,415	122	1.25

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
March 1935	49 (8)	1,708	1,708	0.89	21.38	--	--
March 1956	35 (5)	151	991	0.70	32.15	--	--
Oct. 1970	32 (6)	505	871	0.67	40.83	--	--

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. ELEVATION-AREA-CAPACITY DATA

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

48. AGENCY MAKING SURVEY Soil Conservation Service

49. AGENCY SUPPLYING DATA Sedimentation Survey Party-Texas

50. DATE 3-71

RESERVOIR SEDIMENT
DATA SUMMARY
SCS-34 Rev. 6-66

White Rock Lake
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

51 - 8c
DATA SHEET NO.

DAM

1. OWNER City of Dallas	2. STREAM White Rock Creek	3. STATE Texas
4. SEC. TWP. RANGE	5. NEAREST P. O. Dallas	6. COUNTY Dallas
7. LAT. 32° 49' 00" LONG. 96° 43' 45"	8. TOP OF DAM ELEVATION	9. SPILLWAY CREST ELEV. 458.0

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					April 1910
b. MULTIPLE USE	458.0	1254	18,158	18,158	
c. POWER					16. DATE NORMAL OPER. BEGAN
d. WATER SUPPLY					
e. IRRIGATION					1910
f. CONSERVATION					
g. INACTIVE					

17. LENGTH OF RESERVOIR	2.80 MILES	AV. WIDTH OF RESERVOIR	0.7 MILES

WATERSHED

18. TOTAL DRAINAGE AREA	99.1 SQ. MI.	22. MEAN ANNUAL PRECIPITATION	34.55 (90) INCHES
19. NET SEDIMENT CONTRIBUTING AREA	97.14 SQ. MI.	23. MEAN ANNUAL RUNOFF	4.29 INCHES
20. LENGTH 22.9 MILES	AV. WIDTH 4.35 MILES	24. MEAN ANNUAL RUNOFF	22,673 AC.-FT.
21. MAX. ELEV. 700	MIN. ELEV. 434	25. ANNUAL TEMP.: MEAN 66° F	RANGE 46° - 86° F

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.
April 1910	-	-			1254	18,158	0.80
April 1935	25.0	25.0	Range (D)	13 R	1150	14,276	0.63
March 1956	20.9	45.9	"	9 R	1095	12,321	0.54
Oct. 1970	14.6	60.5	"	9 R	1119	10,743	0.47
April 1977	6.5	67.0	"	9 R	1075	10,721	0.47

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 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
April 1935	3882	155	1.60	3882	155	1.60
March 1956	1955	94	0.96	5837	127	1.31
Oct. 1970	1578	109	1.11	7415	123	1.27
April 1977	1/ 22			2/ 7437	2/ 111	2/ 1.14

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
April 1935	49 (8)	1706	1706	0.85	21.38		
March 1956	35 (5)	151	999	0.70	32.15		
Oct. 1970	32 (6)	506	885	0.68	40.83		
April 1977	44 (14)		2/ 1092	2/ 0.61	2/ 40.96		

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.

45. ELEVATION–AREA–CAPACITY DATA

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

1/ Approximately 850 acre-feet sediment dredged from segment 12 during 1974.
2/ Figures do not reflect the 850 acre-feet of dredged material during 1974.

Land Resource Area: Texas Blackland Prairie.

48. AGENCY MAKING SURVEY SCS, Temple, Texas
49. AGENCY SUPPLYING DATA SCS, Temple, Texas
50. DATE 3-78