

RESERVOIR SEDIMENT
DATA SUMMARY

Bureau of Reclamation

LAKE MEREDITH (SANFORD DAM)

NAME OF RESERVOIR

47-17

DATA SHEET NO.

DAM	1. OWNER Cdn. Rvr. Mun. Water Ath		2. STREAM Canadian River		3. STATE Texas				
	4. SEC. TWP. RANGE		5. NEAREST P.O. Sanford INW.		6. COUNTY Hutchinson				
	7. LAT 35° 42' 38" LONG 101° 33' 03"		8. TOP OF DAM ELEVATION 3011.0		9. SPILLWAY CREST ELEV. 2965				
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	2965	21,639	462,061	1,407,572	Feb. 1965			
	b. MULTIPLE USE	2941.3	17,317	81,114	945,511				
	c. POWER					June 1965			
	d. WATER SUPPLY	2936.5	16,505	785,157	864,397				
	e. IRRIGATION								
	f. CONSERVATION								
	g. INACTIVE	2860	4,495	79,240	79,240				
WATERSHED	17. LENGTH OF RESERVOIR 24.4 MILES			AV. WIDTH OF RESERVOIR 1.38 MILES					
	18. TOTAL DRAINAGE AREA 1/20,220 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 16(12-35) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 2/6018 SQ. MI.			23. MEAN ANNUAL RUNOFF 0.13 INCHES					
	20. LENGTH 341 MILES		AV. WIDTH 47.1 MILES		24. MEAN ANNUAL RUNOFF 139,244 AC. FT.				
	21. MAX. ELEV. 3/13676		MIN. ELEV. 2813		25. ANNUAL TEMP 4 MEAN 57° RANGE 44°-70°				
SURVEY DATA	26. DATE OF SURVEY 5/	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.	
	Feb. 1965			Range (D)	120 (R)	21,639	1,407,572	10.1	
	May 1980	15.3	15.3	Range (D) and Contour	62 (R)	21,642	1,382,478	9.9	
	26. DATE OF SURVEY 5/	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET 6/			36. WATER INFL. TO DATE, AC.-FT. 7/		
	Feb. 1965			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE	
	May 1980	17.4 inches	120,345	270,097	1,841,286	120,345	1,841,286		
	26. DATE OF SURVEY 5/	37. PERIOD CAPACITY LOSS, ACRE-FEET 7/			38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET 7/				
	Feb. 1965			a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR
	May 1980	25,094	1640.1	.273	25,094	1640.1	.273		
	26. DATE OF SURVEY 5/	39. AV. DRY WGT 3/ LBS. PER CU. FT.		40. SED. DEP. TONS PER SQ. MI.-YR.		41. STORAGE LOSS, PCT.		42. SED. INFLOW, PPM	
Feb. 1965			a. PERIOD	b. TOTAL TO DATE	a. AV. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
May 1980	80.5	478.6	478.6	.12	1.8	17,611	17,582		

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION 2965													
	152-115	115-105	105-95	95-85	85-75	75-65	65-55	55-45	45-35	35-25	25-Crest			
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Feb. 1965														
May 1980	2.9	2.3	7.4	11.9	19.1	23.8	19.2	10.3	3.1					
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														
Feb. 1965														
May 1980	2.1	2.3	2.1	10.2	25.5	28.5	24.4	4.9						
45. RANGE IN RESERVOIR OPERATION														
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.							
1966	2882.98	2881.80	78,416	1978	2898.61	2894.40	98,613							
1967	2894.95	2883.20	133,769	1979	2895.89	2890.98	75,590							
1968	2895.51	2894.37	64,225	1980	2890.14	2883.61	69,489							
1969	2908.16	2891.25	255,120											
1970	2908.73	2906.00	109,975											
1971	2906.34	2901.74	138,159											
1972	2914.65	2903.75	257,736											
1973	2914.85	2911.13	85,810											
1974	2910.23	2903.81	67,522											
1975	2907.40	2904.34	130,101											
1976	2904.21	2897.55	83,104											
1977	2900.21	2895.94	96,915											
46. ELEVATION-AREA-CAPACITY DATA														
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY						
	1965 Survey													
2813	0	0	2890	8,866	277,049	2970	22,587	1,518,141						
2820	261	916	2900	10,338	373,063	2980	24,351	1,752,590						
2830	1,032	7,386	2910	12,039	484,836	2990	26,829	2,008,253						
2840	1,718	21,020	2920	13,790	613,989	3000	29,169	2,288,135						
2850	2,773	43,049	2930	15,483	760,425	3010	31,919	2,593,242						
2860	4,495	79,240	2940	17,076	923,136									
2870	5,917	131,491	2950	18,979	1,103,363	2814.7	0	0						
2880	7,183	196,885	2960	20,696	1,301,744	2820	203	536						
47. REMARKS AND REFERENCES														
1/ Total drainage area includes 4172 square miles noncontributing.														
2/ Total drainage area between Ute Dam and Sanford Dam is 9,080 mi ² of which 3,062 mi ² are noncontributing.														
3/ Using Purgatoire Peak, Colorado, as reference point.														
4/ Degrees Fahrenheit.														
5/ Totals computed to end of month shown.														
6/ Computations based on WATER SUPPLY MASTER FILE 06620.														
7/ Computations based on April 1965 and May 1980 Area and Capacity Tables.														
8/ Weighted average based on volume of sediment.														
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.

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
2830	1,015	6,626	2920	13,659	589,627	3010	31,919	2,569,077
2840	1,702	20,213	2930	15,469	735,263			
2850	2,718	42,316	2940	17,076	897,985			
2860	4,403	77,924	2950	18,979	1,078,261			
2870	5,675	128,315	2960	20,696	1,276,635			
2880	6,805	190,714	2970	22,588	1,493,050			
2890	8,271	266,096	2980	24,351	1,727,743			
2900	9,736	356,131	2990	26,829	1,983,644			
2910	11,653	463,070	3000	29,169	2,263,635			

47. REMARKS AND REFERENCES

48. AGENCY MAKING SURVEY Bureau of Reclamation
 49. AGENCY SUPPLYING DATA Bureau of Reclamation
 50. DATE October 5, 1981