

RESERVOIR SEDIMENT  
DATA SUMMARY

Lake Powell (Glen Canyon Dam)  
NAME OF RESERVOIR

62-19

DATA SHEET NO.

DAM	1. OWNER Dept of Int. - USBR			2. STREAM Colorado River			3. STATE Arizona & Utah					
	4. SEC. 24 TWP. 41N RANGE 8E			5. NEAREST P O Page, Arizona			6. COUNTY Coconino					
	7. LAT 36° 56' 12" LONG 111° 29' 00"			8. TOP OF DAM ELEVATION 3715			9. SPILLWAY CREST ELEV. 3700					
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		3711.0		169,790		1,821,000		28,821,000		3-13-63	
	b MULTIPLE USE		3700.0		161,390		20,876,000		27,000,000			
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION		3490.0		51,600		4,126,000		6,124,000		6-22-80	
	g INACTIVE		3370.0		20,640		1,998,000		1,998,000			
WATERSHED	17. LENGTH OF RESERVOIR 261 <sup>1</sup> MILES				AV. WIDTH OF RESERVOIR 0.43 <sup>2</sup> MILES							
	18. TOTAL DRAINAGE AREA 107,700 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 5-60 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 83,150 SQ. MI.				23. MEAN ANNUAL RUNOFF 2.25 INCHES							
	20. LENGTH MILES		AV. WIDTH MILES		24. MEAN ANNUAL RUNOFF 12,923,000 <sup>3</sup> AC.-FT.							
	21. MAX. ELEV. 14,000 (+)		MIN. ELEV. 3136		25. ANNUAL TEMP. MEAN 45 °F RANGE -60 °F -110 °F							
SURVEY DATA	26. DATE OF SURVEY		27. <sup>4</sup> PERIOD YEARS	28. <sup>4</sup> 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.			
	3/13/63				Contour (D)	10 ft.	161,389	27,083,092 <sup>5</sup>	2.10			
	4/86-9/86		23.5	23.5	Range (R)	407	160,784	26,214,861	2.03			
	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			
	3/13/63											
	4/86-9/86		5-60		12,063,000 <sup>6</sup>	20,620,000 <sup>6</sup>	271,424,000 <sup>6</sup>	12,063,000 <sup>6</sup>	271,424,000 <sup>6</sup>			
	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				
	3/13/63											
4/86-9/86		868,231	36,946	0.444	868,231	36,946	0.444					
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				
3/13/63												
4/86-9/86					0.128	3.01						

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 <sup>8</sup>							
WATER YEAR	MAX. ELEV. <sup>8</sup>	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1963 <sup>7</sup>	3409.7 <sup>8</sup>	3233.4	3,218,000	1975	3674.8	3645.3	12,077,000
1964	3491.9	3397.7	6,933,000	1976	3672.2	3655.3	8,516,000
1965	3534.6	3490.9	13,565,000	1977	3654.3	3630.0	5,268,000
1966	3544.9	3521.4	8,688,000	1978	3652.3	3622.7	9,247,000
1967	3532.5	3507.3	7,940,000	1979	3684.3	3628.0	14,029,000
1968	3548.7	3514.0	9,761,000	1980	3700.5	3673.0	12,678,000
1969	3580.5	3540.2	11,332,000	1981	3680.6	3667.5	6,167,000
1970	3600.9	3566.6	11,637,000	1982	3687.3	3662.8	10,767,000
1971	3620.8	3600.8	11,030,000	1983	3707.1	3682.1	19,528,000
1972	3619.6	3603.4	8,526,000	1984	3702.7	3674.1	20,620,000
1973	3648.8	3590.6	14,848,000	1985	3700.1	3676.1	17,486,000
1974	3667.4	3647.1	10,047,000	1986	3699.7	3680.7	17,516,000

46. ELEVATION-AREA-CAPACITY DATA (Original)								
ELEVATION	AREA	CAPACITY <sup>9</sup>	ELEVATION	AREA	CAPACITY <sup>9</sup>	ELEVATION	AREA	CAPACITY <sup>9</sup>
3136	0	0	3320	13,775	1,190,036	3520	61,747	7,885,201
3140	29	249	3340	15,986	1,488,663	3540	69,702	9,200,682
3160	1,047	15,513	3360	18,968	1,840,749	3560	78,805	10,686,422
3180	2,373	54,147	3380	22,479	2,256,798	3580	88,148	12,356,551
3200	4,103	123,652	3400	26,676	2,751,292	3600	98,468	14,223,177
3220	5,598	223,781	3420	30,649	3,326,181	3620	109,691	16,305,293
3240	6,962	351,650	3440	35,835	3,992,934	3640	121,511	18,617,762
3260	8,459	508,790	3460	42,113	4,774,505	3660	134,275	21,176,052
3280	10,485	702,070	3480	48,590	5,684,943	3680	147,492	23,994,098
3300	12,110	929,895	3500	54,790	6,719,409	3700	161,389	27,083,092
						3710	169,027	28,733,335

47. REMARKS AND REFERENCES

- <sup>1</sup> Includes 186 miles on Colorado River and 75 miles on San Juan River.
- <sup>2</sup> 252-mi<sup>2</sup> lake surface area divided by 580 miles which is total length of all tributaries surveyed by this study.
- <sup>3</sup> Colorado River at Lees Ferry Arizona. 1912-62.
- <sup>4</sup> 3/63-9/86
- <sup>5</sup> Adjusted for volume within river channel below surface contours and to conform to current computational method.
- <sup>6</sup> Colorado River near Cisco, Utah; Green River at Green River, Utah; and San Juan River near Bluff, Utah, (approximately 90 percent of all inflow).
- <sup>7</sup> 3/13/63-9/30/63
- <sup>8</sup> Maximum and minimums determined from end-of-month elevation table.

48. AGENCY MAKING SURVEY Bureau of Reclamation  
 49. AGENCY SUPPLYING DATA Bureau of Reclamation  
 50. DATE December, 1988

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. 1986 ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
3172	0	0	3360	18,504	1,698,475	3560	75,981	10,215,568							
3180	1,249	4,995	3380	22,102	2,104,540	3580	85,667	11,832,048							
3200	3,381	51,290	3400	26,062	2,586,177	3600	95,387	13,642,587							
3220	5,114	136,241	3420	30,045	3,147,240	3620	105,929	15,655,745							
3240	6,752	254,905	3440	34,699	3,794,678	3640	118,054	17,895,574							
3260	8,044	402,872	3460	40,361	4,545,281	3660	130,899	20,385,098							
3280	10,299	586,303	3480	46,275	5,411,639	3680	145,647	23,150,551							
3300	11,906	808,350	3500	52,386	6,398,246	3700	160,784	26,214,861							
3320	13,603	1,063,436	3520	59,476	7,516,870	3710	169,027	27,863,919							
3340	15,698	1,356,447	3540	67,206	8,783,697										
47. REMARKS AND REFERENCES															
<sup>9</sup> Adjusted to include area within river channel below surface contours with sediment.															
48. AGENCY MAKING SURVEY Bureau of Reclamation															
49. AGENCY SUPPLYING DATA Bureau of Reclamation															
50. DATE <u>December, 1988</u>															