

RESERVOIR SEDIMENT
DATA SUMMARY

LAKE MEAD (HOOVER DAM)

NAME OF RESERVOIR

62-1a

DATA SHEET NO.

DAM	1. OWNER Interior - Bureau of Reclamation			2. STREAM Colorado			3. STATE Nevada - Arizona									
	4. SEC. 29 TWP. T22S RANGE R65E			5. NEAREST P.O. Boulder City 6NE			6. COUNTY Clark-Mohave									
	7. LAT 36° 01' " LONG 114° 44' "			8. TOP-OF DAM ELEVATION 1232 1/			9. SPILLWAY CREST ELEV. 1221.4 2/									
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		1229		162,600		1,587,000		32,471,000		Feb. 1, 1935					
	b. MULTIPLE USE 3/		1219.61		156,600		27,661,000		30,884,000							
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
	g. INACTIVE		895		33,400		3,223,000		3,223,000		Mar. 1, 1936					
17. LENGTH OF RESERVOIR 152 4/				MILES				AV. WIDTH OF RESERVOIR 1.65				MILES				
18. TOTAL DRAINAGE AREA 167,800				SQ. MI.				22. MEAN ANNUAL PRECIPITATION 10 6/				INCHES				
19. NET SEDIMENT CONTRIBUTING AREA 167,600 5/				SQ. MI.				23. MEAN ANNUAL RUNOFF 1.30				INCHES				
20. LENGTH				MILES				AV. WIDTH				MILES				
21. MAX. ELEV. 14,400				MIN. ELEV. 640				25. ANNUAL TEMP: MEAN				RANGE				
WATERSHED	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 8/		33. C/I. RATIO, AC.-FT. PER AC.-FT.	
	2-1-35		-		-		(D)		10 ft.		163,000		32,471,000		2.80	
	9-30-48		13.7		13.7		(D)		10 ft.		163,000		31,047,000		2.67	
	10-14-64		16.0		29.7		(D)		10 ft.		163,000		29,755,000		2.56	
	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			
	9-30-48				12,526,000		17,260,000		175,362,000		12,526,000		175,362,000			
	10-14-64				10,083,000		18,160,000		161,335,000		11,610,000		336,697,000			
	26. DATE OF SURVEY		37. 8/ 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			
9-30-48		1,424,000		104,000		0.621		1,424,000		104,000		0.621				
10-14-64		1,292,000		80,750		0.482		2,716,000		91,450		0.546				
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				
9-30-48		65 9/		879		879		0.320 4.39		8,460		8,460				
10-14-64		60		572		714		0.282 8.36		7,700		7,760				
SURVEY DATA	26. DATE OF SURVEY		37. 8/ 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			
	9-30-48		1,424,000		104,000		0.621		1,424,000		104,000		0.621			
10-14-64		1,292,000		80,750		0.482		2,716,000		91,450		0.546				
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								
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9-30-48		65 9/		879		879		0.320 4.39		8,460		8,460				
10-14-64		60		572		714		0.282 8.36		7,700		7,760				

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION <u>10'</u>										
	Below 499	499-399	399-299	299-199	199-99	99- Crest					
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
9-30-48	14	21	11	17	21	16					
10-14-64	8	14	14	20	28	16					

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. LAKE MEAD RANGE IN RESERVOIR OPERATION Flow near Grand Canyon, Arizona							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1936	1025.85	905.2	12,320,000	1952	1201.10	1133.24	18,160,000
1937	1102.90	1021.90	12,410,000	1953	1168.96	1145.78	8,879,000
1938	1173.90	1094.65	15,630,000	1954	1145.74	1105.40	6,229,000
1939	1183.45	1156.10	9,618,000	1955	1106.70	1089.47	7,580,000
1940	1182.2	1164.2	7,435,000	1956	1116.98	1083.23	8,860,000
1941	1220.45	1166.75	16,940,000	1957	1184.07	1089.63	17,500,000
1942	1213.45	1171.05	17,260,000	1958	1205.89	1161.00	14,550,000
1943	1202.41	1176.70	11,430,000	1959	1185.82	1167.28	6,935,000
1944	1200.35	1157.20	13,530,000	1960	1184.21	1162.99	9,584,000
1945	1182.49	1146.55	11,870,000	1961	1165.12	1152.90	7,050,000
1946	1164.30	1146.50	9,089,000	1962	1204.18	1153.14	15,250,000
1947	1180.24	1133.91	13,740,000	1963	1193.14	1136.88	2,742,000
1948	1192.79	1154.46	13,870,000	1964	1136.84	1088.09	2,727,000
1949	1196.61	1145.50	14,370,000	1965	1129.74	1087.99	10,980,000
1950	1177.54	1149.95	11,080,000	1966	1133.84	1127.20	8,328,000
1951	1168.97	1141.19	9,839,000	1967			8,257,000

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
740	2,100	10,599	920	34,600	3,172,112	1120	97,300	15,737,447
760	5,200	88,619	940	39,100	3,909,899	1140	105,900	17,770,850
780	7,200	212,321	960	44,200	4,741,892	1160	118,700	20,007,828
800	12,300	395,654	980	49,100	5,675,145	1180	132,300	22,519,668
820	16,200	684,047	1000	54,800	6,710,590	1200	144,900	25,294,558
840	19,600	1,039,199	1020	61,200	7,871,659	1220	157,100	28,316,731
860	23,300	1,469,036	1040	67,500	9,157,105	1229	162,700	29,755,371
880	26,300	1,966,061	1060	75,100	10,581,403			
900	29,900	2,525,433	1080	82,200	12,154,669			
			1100	89,500	13,869,388			

47. REMARKS AND REFERENCES

See supplemental sheet

48. AGENCY MAKING SURVEY	U.S. Coast and Geodetic Survey	50. DATE	July 1969
49. AGENCY SUPPLYING DATA	Bureau of Reclamation		

Data Sheet No.

SUPPLEMENT TO RESERVOIR SEDIMENT
DATA SUMMARY—LAKE MEAD

47. REMARKS AND REFERENCES

¹ All elevations refer to powerhouse datum. Add 0.55 foot to convert to datum of 1929, leveling at 1935.

² Spillway gates in raised position.

³ Flood control, municipal and industrial, irrigation, and power use. Originally (1935) the top of the multiple-use pool was at elevation 1213.17 feet above which 2,500,000 acre-feet were provided for flood control storage space. Flood control regulations for Hoover Dam and Lake Mead published in the Federal Register, Vol. 33, No. 147, July 30, 1968, pages 10,801—10,802, revised the flood control space to 1.5 million acre-feet. Elevation 1219.61 feet is the reservoir level established from the 1964 survey to provide the currently required 1.5 million acre-feet of flood control space. This elevation will change with each subsequent survey in order to maintain the fixed flood control storage allocation.

⁴ Colorado River about 121 miles; Overton Arm about 31 miles.

⁵ Not adjusted for numerous small reservoirs.

⁶ Estimated for six states in Colorado River Basin.

⁷ Colorado River at Grand Canyon, 1935-64 (30 years).

⁸ Capacities at elevation 1229 feet.

⁹ Based on measured and estimated sediment inflow of 2 billion tons in 13.7 years.

¹⁰ Based on elevation 1229 feet.