

RESERVOIR SEDIMENT
DATA SUMMARY

Mark Twain Lake

NAME OF RESERVOIR

25-27

DATA SHEET NO

| DAM | 1. OWNER D.A. Corps of Engineers | | 2. STREAM Salt River | | 3. STATE Missouri | | | |
|-----------------|--|-------------------------------------|------------------------------------|----------------------------------|--|----------------------------|-------------------------|-------------------------------------|
| | 4. SEC. 23&26 TWP. 55N RANGE 7W | | 5. NEAREST P.O. Center | | 6. COUNTY Ralls | | | |
| | 7. LAT. 39° 31' 29" LONG. 91° 38' 36" | | 8. TOP OF DAM ELEVATION 653.0 | | 9. SPILLWAY CREST ELEV 639.0 1/ | | | |
| 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 | 638.0 | 38,580 | 884,061 | 1,428,055 | Sept. 1983 | | |
| | b. MULTIPLE USE | 606.0 | 18,650 | 456,967 2/ | 543,994 | | | |
| | c. POWER | --- | --- | --- | --- | | | |
| | d. WATER SUPPLY | --- | --- | --- | --- | 16. DATE NORMAL OPER. BEGA | | |
| | e. IRRIGATION | --- | --- | --- | --- | | | |
| | f. CONSERVATION | --- | --- | --- | --- | Sept. 1983 | | |
| | 8. INACTIVE | 567.2 | 5,970 | 87,027 | 87,027 | | | |
| WATERSHED | 17. LENGTH OF RESERVOIR 134.9 3/ | | MILES | | AV. WIDTH OF RESERVOIR 0.45 | | | |
| | 18. TOTAL DRAINAGE AREA 2,318 | | SQ. MI. | | 22. MEAN ANNUAL PRECIPITATION 39.75 (39) | | | |
| | 19. NET SEDIMENT CONTRIBUTING AREA 2,258 | | SQ. MI. | | 23. MEAN ANNUAL RUNOFF 9.43 (6E) | | | |
| | 20. LENGTH 129 | | MILES | | 24. MEAN ANNUAL RUNOFF 1,165,727 (6E) | | | |
| | 21. MAX. ELEV. 1000 | | MIN. ELEV. 515 | | 25. ANNUAL TEMP: MEAN 54.60 RANGE -210 TO 1080 | | | |
| 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. |
| | Sept. 1983 (date of operation) | 4.08 | 4.08 | Range (D) | 49 | 38,580 | 1,428,055 | 1.23 |
| | Sept.-Oct. 1987 | | | Range (D) | 49 | 38,580 | 1,410,987 | 1.21 |
| | 26. DATE OF SURVEY | 34. PERIOD ANNUAL PRECIPITATION | 35. PERIOD WATER INFLOW. ACRE-FEET | | 36. WATER INFL. TO DATE. AC.- | | | |
| | Sept. 1983 | 46.1 | a. MEAN ANNUAL | b. MAX. ANNUAL | c. PERIOD TOTAL | a. MEAN ANNUAL | b. TCTAL TO DATE | |
| | Sept.-Oct. 1987 | | 1,714,942 4/ | 1,898,303 4/ | 6,859,768 4/ | 1,714,942 4/ | 6,859,768 | |
| | 26. DATE OF SURVEY | 37. PERIOD CAPACITY LOSS, ACRE-FEET | | | 38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET | | | |
| | Sept. 1983 | a. PERIOD TOTAL | b. AV. ANNUAL | c. PER SQ. MI.-YEAR | a. TOTAL TO DATE | b. AV. ANNUAL | c. PER SQ. MI. | |
| | Sept.-Oct. 1987 | 17,068 | 4,183 | 1.85 | 17,068 | 4,183 | 1.85 | |
| | 26. DATE OF SURVEY | 39. AV. DRY WGT., LBS. PER CU. FT. | 40. SED. DEP., TONS PERSQ. MI.-YR. | | 41. STORAGE LOSS. PCT. | | 42. SED. INFLOW. P | |
| Sept. 1983 | a. PERIOD | b. TOTAL TO DATE | a. AV. ANN. | b. TOT. TO DATE | a. PERIOD | c. TOT. TO DATE | | |
| Sept.-Oct. 1987 | 29.1 | 1,174 | 1,174 | 0.29 | 1.20 | 1,160 | 1.1 | |

| 26. DATE OF SURVEY | 43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION | | | | | | | | | | | | | |
|--|---|------------|-----------------|------------|------------|-----------------|-----------------|----------|-------|--------|------|------|------|------|
| | Bottom -100 | 100-85 | 85-70 | 70-55 | 55-40 | 40-25 | 25-10 | 10-Crest | | | | | | |
| PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION | | | | | | | | | | | | | | |
| Sept. 1983 | 7.4 | 6.2 | 6.8 | 16.7 | 16.7 | 10.2 | 10.4 | 25.6 | | | | | | |
| Sept.-Oct. 1987 | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | |
| Sept. 1983 | 26.3 | 22.0 | 12.5 | 8.0 | 15.3 | 8.7 | 5.0 | 0.9 | 0.3 | 1.0 | | | | |
| Sept. -Oct. 1987 | | | | | | | | | | | | | | |
| 45. RANGE IN RESERVOIR OPERATION | | | | | | | | | | | | | | |
| WATER YEAR | MAX. ELEV. | MIN. ELEV. | INFLOW, AC.-FT. | WATER YEAR | MAX. ELEV. | MIN. ELEV. | INFLOW, AC.-FT. | | | | | | | |
| 1984 | 613.18 | 596.88 | 1,898,303 | | | | | | | | | | | |
| 1985 | 629.87 | 596.60 | 1,832,823 | | | | | | | | | | | |
| 1986 | 630.56 | 600.22 | 1,886,852 | | | | | | | | | | | |
| 1987 | 627.12 | 600.12 | 1,241,790 | | | | | | | | | | | |
| 46. ELEVATION-AREA-CAPACITY DATA | | | | | | | | | | | | | | |
| ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | | | | | | |
| 520 | 0 | 0 | 565 | 5,208 | 71,275 | 605 | 17,866 | 515,056 | | | | | | |
| 525 | 0 | 0 | 567.2 | 5,741 | 83,699 | 606.0 | 18,283 | 533,300 | | | | | | |
| 530 | 46 | 210 | 570 | 6,434 | 100,856 | 610 | 20,251 | 611,783 | | | | | | |
| 535 | 163 | 927 | 575 | 7,752 | 136,699 | 615 | 22,872 | 721,152 | | | | | | |
| 540 | 395 | 2,875 | 580 | 9,180 | 179,438 | 620 | 25,601 | 843,849 | | | | | | |
| 545 | 1,079 | 7,272 | 585 | 10,688 | 229,625 | 624.8 | 28,361 | 974,775 | | | | | | |
| 550 | 1,948 | 15,752 | 590 | 12,298 | 287,732 | 625 | 28,479 | 980,388 | | | | | | |
| 555 | 2,958 | 28,938 | 595 | 14,034 | 354,280 | 630 | 31,996 | 1,131,47 | | | | | | |
| 560 | 4,039 | 47,330 | 600 | 15,897 | 429,846 | 635 | 35,673 | 1,300,34 | | | | | | |
| 47. REMARKS AND REFERENCES | | | | | | 638.0 | 38,580 | 1,410,98 | | | | | | |
| <p>1/ Elevation of top of gates in closed position. Flood control pool (638.0) was used in items 19, 31, 32, 33, 41, 43.</p> <p>2/ Includes 20,000 acre-feet for water supply.</p> <p>3/ 50.8 miles, Salt River and North Fork; 20.0 miles, South Fork; 29.3 miles, Middle Fork; 12.2 miles, Elk Fork; 13.3 miles, Lick Creek; 9.3 miles, Indian Creek.</p> <p>4/ For period 10/1/83 through 9/30/87</p> | | | | | | | | | | | | | | |
| 48. AGENCY MAKING SURVEY | | | | | | 50. DATE FEB 92 | | | | | | | | |
| 49. AGENCY SUPPLYING DATA U.S. Army Corps of Engineers, SLD | | | | | | | | | | | | | | |