

RESERVOIR SEDIMENT
DATA SUMMARY

Upper Green River #5 (Pilot)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

18-13a

DATA SHEET NO.

Halls Gap Quadrangle

| DAM | 1. OWNER | | | 2. STREAM South Fork | | | 3. STATE Kentucky | | | | | | | | | |
|--------------------|------------------------------------|-------------------------------------|---------------------------------|-------------------------------------|--|------------------------|---------------------------------------|----------------------|----------------------------------|-------------------------------------|-----------------------------|--|-------------------------------------|--|--|--|
| | 4. SEC. | | TWP. | | RANGE | | 5. NEAREST P. O. | | 6. COUNTY Lincoln | | | | | | | |
| | 7. LAT. 37° 24' 32" | | | LONG. 84° 40' 42" | | | 8. TOP OF DAM ELEVATION 1067.5 | | | 9. SPILLWAY CREST ELEV. 1062 | | | | | | |
| 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 | | 1062 | | 22.0^{1/} | | 267.0^{1/} | | 320.71 | | Sept., 1955 | | | | | |
| | b. MULTIPLE USE | | | | | | | | | | | | | | | |
| | c. POWER | | | | | | | | | | | | | | | |
| | d. WATER SUPPLY | | | | | | | | | | 16. DATE NORMAL OPER. BEGAN | | | | | |
| | e. IRRIGATION | | | | | | | | | | | | | | | |
| | f. CONSERVATION | | | | | | | | | | Winter 1955 | | | | | |
| g. INACTIVE | | 1042 | | 7.7 | | 53.71 | | 53.71 | | | | | | | | |
| WATERSHED | 17. LENGTH OF RESERVOIR | | | | 0.15^{2/} MILES | | | | AV. WIDTH OF RESERVOIR | | | | 0.23^{2/} MILES | | | |
| | 18. TOTAL DRAINAGE AREA | | | | 1.44 SQ. MI. | | | | 22. MEAN ANNUAL PRECIPITATION | | | | 45.18 INCHES | | | |
| | 19. NET SEDIMENT CONTRIBUTING AREA | | | | 1.41 SQ. MI. | | | | 23. MEAN ANNUAL RUNOFF | | | | 19 INCHES | | | |
| | 20. LENGTH | | 2.0 MILES | | AV. WIDTH | | 0.72 MILES | | 24. MEAN ANNUAL RUNOFF | | 1459 AC.-FT. | | | | | |
| | 21. MAX. ELEV. | | 1405 | | MIN. ELEV. | | 1025 | | 25. ANNUAL TEMP: MEAN RANGE | | | | | | | |
| 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., 1955 | | - | - | - | | - | | 7.7 | | 320.71 | | 0.22 | | | |
| | 4/27/66 | | 10.5 | 10.5 | Range/ Contour | | 5 ranges | | 7.7^{2/} | | 49.86^{2/} | | 0.22 | | | |
| | 6/30/71 | | 5.16 | 15.66 | Range/ Contour (D) | | 9 contours | | 21.66^{3/} | | 316.59^{3/} | | 0.22 | | | |
| | 6/30/71 | | 5.16 | 15.66 | Range/ Contour (D) | | 5 ranges | | 7.37^{2/} | | 41.24 | | 0.21 | | | |
| | 6/30/71 | | 5.16 | 15.66 | Range/ Contour (D) | | 9 contours | | 21.65^{3/} | | 307.16^{3/} | | 0.21 | | | |
| | 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 | | | |
| | 4/27/66 | | 44.64-62.08 | | | | | | | | | | | | | |
| | 6/30/71 | | 41.95-51.12 | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| 4/27/66 | | 3.85^{2/} | 0.37 | 0.26 | 3.85^{2/} | 0.37 | 0.26 | | | | | | | | | |
| 4/27/66 | | 4.12^{4/} | 0.39 | 0.28 | 4.12^{4/} | 0.39 | 0.28 | | | | | | | | | |
| 6/30/71 | | 8.62^{2/} | 1.67 | 1.18 | 12.52^{2/} | 0.80 | 0.56 | | | | | | | | | |
| 6/30/71 | | 9.43^{4/} | 1.82 | 1.30 | 13.6^{4/} | 0.87 | 0.62 | | | | | | | | | |
| 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 | | | | | | | |
| 4/27/66 | | 59.9 | | 335^{2/} | 335 | 0.68 | 7.17 | -- | -- | | | | | | | |
| 4/27/66 | | 59.9 | | 364^{4/} | 364 | 0.12 | 1.28 | -- | -- | | | | | | | |
| 6/30/71 | | 59.9 | | 762.2 | 730.5^{2/} | 1.48 | 23.22 | -- | -- | | | | | | | |
| 6/30/71 | | 59.9 | | 1670. | 808.2^{4/} | 0.2F | 4.23 | -- | -- | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|------------|-----------------|------------|---------------|------------|-----------------|----------|---------------|---|---------------|------|------|------|--------|
| 26. DATE OF SURVEY | 43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION | | | | | | | | | | | | | | |
| | 1025 | 1027 | 1029 | 1030 | 1032 | 1034 | 1036 | 1038 | 1040 | 1042 | 1045 | | | | |
| | PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION | | | | | | | | | | | | | | |
| 4/27/76 | 0 | 0 | 10 | 6 | 10 | 14 | 11 | 20 | 14 | 9 | 6 | | | | |
| 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 | | | | | | | | | | | | | | |
| 4/27/66 6/30/71 | <u>Seg. 1</u> | | <u>Seg. 2</u> | | <u>Seg. 3</u> | | <u>Seg. 4</u> | | <u>Seg. 5</u> | | <u>Seg. 6</u> | | | | |
| | 3% | | 28% | | 5% | | 33% | | 15% | | 16% | | | | |
| | 4.8% | | 39.8% | | 4.7% | | 18.5% | | 17.7% | | 14.5% | | | | |
| 45. RANGE IN RESERVOIR OPERATION | | | | | | | | | | | | | | | |
| WATER YEAR | MAX. ELEV. | MIN. ELEV. | INFLOW, AC.-FT. | WATER YEAR | MAX. ELEV. | MIN. ELEV. | INFLOW, AC.-FT. | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 46. 1966 Capacity ELEVATION-AREA-CAPACITY DATA | | | | | | | | | | | | | | | |
| ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | | | | | | | |
| 1025 | 0. | 0. | 1035 | | 9.801 | 1045 | | | | | | | | | 72.726 |
| 1026 | 0.016 | 0.002 | 1036 | 4.750 | 14.100 | | | | | | | | | | |
| 1027 | 0 | 0.019 | 1037 | | 18.798 | | | | | | | | | | |
| 1028 | 0.02 | 0.041 | 1038 | 5.781 | 23.807 | | | | | | | | | | |
| 1029 | | 0.364 | 1039 | | 29.545 | | | | | | | | | | |
| 1030 | 0.417 | 0.713 | 1040 | 6.926 | 35.929 | | | | | | | | | | |
| 1031 | | 1.197 | 1041 | | 42.788 | | | | | | | | | | |
| 1032 | 1.262 | 2.182 | 1042 | 7.70 | 49.862 | | | | | | | | | | |
| 1033 | | 3.938 | 1043 | | 57.195 | | | | | | | | | | |
| 1034 | 3.430 | 6.438 | 1044 | | 64.807 | | | | | | | | | | |
| 47. REMARKS AND REFERENCES | | | | | | | | | | | | | | | |
| <u>1/</u> Work Plan Data <u>2/</u> Sediment Pool - Below Elev. 1042 <u>3/</u> Flood Pool <u>4/</u> Sediment Accumulations Below Elev. 1045 (Includes Delta Deposits in Floodpool) | | | | | | | | | | KNOBS Physiographic Region Land Use 75% Woodland 25% Cropland & Pasture | | | | | |
| 48. AGENCY MAKING SURVEY Watershed Planning Party - Lexington, Kentucky | | | | | | | | | | | | | | | |
| 49. AGENCY SUPPLYING DATA Soil Conservation Service | | | | | | | | | | | | | | | |
| 50. DATE June 1971 | | | | | | | | | | | | | | | |