SCS-34
Jan. 1958

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

# RESERVOIR SEDIMENTATION DATA SUMMARY

Chalk Creek Debris Basin — NAME OF RESERVOIR

66-10 — DATA SHEET NO.

## DAM

| | | |
|---|---|---|
| 1. OWNER Fillmore City | 2. RIVER Chalk Creek | 3. STATE Utah |
| 4. SEC. 28 TWP. 21S RANGE 4W | 5. NEAREST TOWN Fillmore, Ut. | 6. COUNTY Millard |
| 7. STREAM BED ELEV. 5194* | 8. TOP OF DAM ELEV. 5225* | 9. SPILLWAY CREST ELEV. 5219* |

## RESERVOIR

| 10. STORAGE ALLOCATION | 11. ELEVATION TOP OF POOL | 12. SURFACE AREA ACRES | 13. STORAGE ACRE-FEET | 14. ACCUMULATED ACRE-FEET | 15. DATE STORAGE BEGAN |
|---|---|---|---|---|---|
| a. FLOOD CONTROL | 5219* | 5.52 | 44.12 | 44.12 | Feb. 1936 |
| b. POWER | | | | | |
| c. WATER SUPPLY | | | | | 16. DATE NORMAL OPER. BEGAN |
| d. IRRIGATION | | | | | |
| e. CONSERVATION | | | | | Feb. 1936 |
| f. INACTIVE | | | | | |

17. LENGTH OF RESERVOIR 0.25 MILES — AV. WIDTH OF RESERVOIR 0.035 MILES

## WATERSHED

| | | | |
|---|---|---|---|
| 18. TOTAL DRAINAGE AREA 60.8 SQ. MI. | | 22. MEAN ANNUAL PRECIPITATION 15-25 | INCHES |
| 19. NET SEDIMENT CONTRIBUTING AREA 60* SQ. MI. | | 23. MEAN ANNUAL RUNOFF 7.15 | INCHES |
| 20. LENGTH 10.0 MILES | AV. WIDTH 6.0 MILES | 24. MEAN ANNUAL RUNOFF 23,170 | AC.-FT. |
| 21. MAX. ELEV. 10,000 | MIN. ELEV. 5200 | 25. CLIMATIC CLASSIFICATION Semi-arid | |

## 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/W RATIO AC.-FT. PER SQ. MI. |
|---|---|---|---|---|---|---|---|
| July 28, '36 | 0.5 | 0.5 | Contour (R) | 5' | 5.52 | 44.12 | 0.725 |
| 1946 | 10± | 10± | -- | -- | -- | 0 | 0 |
| Mar. 23, '55 | 8.5 | 18.5 | Range (R) | 9 | -- | 0 | 0 |

| 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 |
| 7-28-36 | -- | -- | -- | 15,000* | -- | -- |
| 1946 | 15-25 | 23,170 | 25,800 | 231,700 | 23,170 | 231,700 |
| 3-23-55 | 15-25 | 23,170 | 25,800 | 196,945 | 23,170 | 428,645 |

| 26. DATE OF SURVEY | 37. PERIOD SEDIMENT DEPOSITS 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 |
| 7-28-36 | 44.0 1/ | 44.0 1/ | 0.73 1/ | -- | -- | -- |
| 1946 | 87.0 2/ | 8.7 3/ | 0.14 3/ | 121.0 2/ | -- | -- |
| 3-23-55 | 25.0 2/ | -- | -- | 156.0 2/ | -- | -- |

| 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. ANNUAL | b. TOT. TO DATE | a. PERIOD | b. TOT. TO DATE |
| 7-28-36 | 70* | 1112.9 | 1112.9 | 100 | 100 | 3290 | 3290 |
| 1946 | 75* | 228.7 3/ | -- | -- | -- | 451 3/ | -- |
| 3-23-55 | 75 | -- | -- | -- | -- | -- | -- |

* Assumed

1/ Basin filled with sediment by one summer flash flood

2/ Includes deposition above crest of spillway

3/ Has no meaning as a large portion of the sediment passes through the basin

| 26. DATE OF SURVEY | 43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION | | | | | | | | | | | |
| -- | | | | | | | | | | | | |

| 26. DATE OF SURVEY | 44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGH OF RESERVOIR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0-~~10~~ 30 | ~~10-20~~ 30-57 | ~~20-30~~ 57-100 | ~~30-40~~ 100-154 | ~~40-50~~ 154-186 | ~~50-60~~ 186-225 | ~~60-70~~ 225-256 | 70-80 | 80-90 | 90-100 | -105 | -110 | -115 | -120 | -125 |
| | PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION | | | | | | | | | | | | | | |
| 3-23-55 | 18.3 | 12.1 | 14.7 | 24.3 | 13.9 | 12.7 | 4.0 | | | | | | | | |

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 |
|---|---|---|---|---|---|---|---|---|
| -- | | | | | | | | |

47. REMARKS AND REFERENCES

Dam was constructed in February 1936 by the civilian conservation corps. Capacity table is not available.

The majority of the sediment yield is bedload. Basin is still effective in trapping coarse sediment and debris because of dense vegetation growing in and above the basin.

48. AGENCY SUPPLYING DATA Soil Conservation Service

49. DATE 9/18/61