

RESERVOIR SEDIMENT DATA SUMMARY

Box Elder
NAME OF RESERVOIR

40 - 3
DATA SHEET NO.

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|-------------|--|-------------------------------------|--|----------------------------------|---|-----------------------------|----------------------------|-------------------------------------|
| DAM | 1. OWNER City of Plentywood | | 2. STREAM Box Elder Creek | | 3. STATE Montana | | | |
| | 4. SEC. 17 TWP. 35N RANGE 55E | | 5. NEAREST P.O. Plentywood | | 6. COUNTY Sheridan | | | |
| | 7. LAT. 48° 46' 25" LONG. 104° 33' 55" | | 8. TOP OF DAM ELEVATION 2120 | | 9. SPILLWAY CREST ELEV. 2113 | | | |
| 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 | 2113.0 | 211.0 | 3675 | 4700 | 1/65 | | |
| | b. MULTIPLE USE | | | | | | | |
| | c. POWER | | | | | | | |
| | d. WATER SUPPLY | 2090.5 | 92.0 | 700 | 1225 | 16. DATE NORMAL OPER. BEGAN | | |
| | e. IRRIGATION | | | | | | | |
| | f. CONSERVATION | | | | | | | |
| g. INACTIVE | | 48.0 | 325 | 325 | 1/65 | | | |
| WATERSHED | 17. LENGTH OF RESERVOIR 1.12 MILES | | AV. WIDTH OF RESERVOIR 0.3 MILES | | | | | |
| | 18. TOTAL DRAINAGE AREA 20.02 SQ. MI. | | 22. MEAN ANNUAL PRECIPITATION 12.77 INCHES | | | | | |
| | 19. NET SEDIMENT CONTRIBUTING AREA 19.69 SQ. MI. | | 23. MEAN ANNUAL RUNOFF 1.0 INCHES | | | | | |
| | 20. LENGTH 9.0 MILES | AV. WIDTH 3.5 MILES | 24. MEAN ANNUAL RUNOFF 1067 AC.-FT. | | | | | |
| | 21. MAX. ELEV. 2600 | | MIN. ELEV. 2040 | | 25. ANNUAL TEMP.: MEAN 40°F RANGE 117° to -58°F | | | |
| 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 1/ | 33. C/I. RATIO, AC.-FT. PER AC.-FT. |
| | Jan., 1965 | -- | -- | -- | -- | 211 | 4700 | 4.4 |
| | March, 1980 | 15.25 | 15.25 | Range | 14 | 211 | 4502 | 4.2 |
| | 26. DATE OF SURVEY | 34. PERIOD ANNUAL PRECIPITATION | 35. PERIOD WATER INFLOW, ACRE-FEET | | 36. WATER INFL. TO DATE, AC. | | | |
| | March, 1980 | 14.0 | a. MEAN ANNUAL | b. MAX. ANNUAL | c. PERIOD TOTAL | a. MEAN ANNUAL | b. TOTAL TO DATE | |
| | March, 1980 | 14.0 | 1067 | | | | | |
| | 26. DATE OF SURVEY | 37. PERIOD CAPACITY LOSS, ACRE-FEET | | | 38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET | | | |
| | March, 1980 | a. PERIOD TOTAL | b. AV. ANNUAL | c. PER SQ. MI.-YEAR | a. TOTAL TO DATE | b. AV. ANNUAL | c. PER SQ. MI.-YEAR | |
| | March, 1980 | 198 | 13.0 | 0.66 | 198 | 13.0 | 0.66 | |
| | 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 | | | |
| March, 1980 | a. PERIOD | b. TOTAL TO DATE | a. AV. ANN. | b. TOT. TO DATE | a. PERIOD | b. TOT. TO DATE | | |
| March, 1980 | 55 2/3 | 789.9 | 789.9 | .28 | 4.2 | | | |

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

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|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------|--|
| March, 1980 | | | | | | | | | | | | | | No Sediment Above Crest | |
|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------|--|

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

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| March, 1980 | 20.1 | 20.3 | 14.6 | 23.0 | 11.6 | 10.4 | 0 | 0 | 0 | 0 | 0 | | | | |
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| 45. RANGE IN RESERVOIR OPERATION | | | | | | | |
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| WATER YEAR | MAX. ELEV. | MIN. ELEV. | INFLOW, AC.-FT. | WATER YEAR | MAX. ELEV. | MIN. ELEV. | INFLOW, AC.-FT. |
|------------|------------|------------|-----------------|------------|------------|------------|-----------------|
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| 46. ELEVATION-AREA-CAPACITY DATA | | | | | | | | |
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| ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY |
|-----------|------|----------|-----------|------|----------|-----------|------|----------|
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47. REMARKS AND REFERENCES

*Hydrology from watershed work plan 1962

1/ Total 4,700
 Retarding 3,675
 Recreation 700
 Sediment 325

2/ Assumed based on other samples on other reservoirs in the area

48. AGENCY MAKING SURVEY Soil Conservation Service
 AGENCY SUPPLYING DATA Soil Conservation Service

50. DATE March 1981