

RESERVOIR SEDIMENTATION
DATA SUMMARY

Dawson City Lake
NAME OF RESERVOIR

51-28
DATA SHEET NO.

| | | | | | | | | |
|--|---|---|-------------------------------------|---|--|---|---------------------------------|-----------------------------------|
| DAM | 1. OWNER City of Dawson | | | 2. RIVER Trib. of Richland Cr. | | 3. STATE Texas | | |
| | 4. SEC. TWP. RANGE | | 5. NEAREST TOWN 1 mi. S. Dawson | | | 6. COUNTY Navarro | | |
| | 7. STREAM BED ELEV. 439.4 ^{1/} | | | 8. TOP OF DAM ELEV. 468.0 ^{1/} | | 9. SPILLWAY CREST ELEV. 463.2 ^{1/} | | |
| 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 | | | | | | April 2, 1937 | |
| | b. POWER | | | | | | | |
| | c. WATER SUPPLY | | 463.2 ^{1/} | 61.2 | 610 | 610 | 16. DATE NORMAL OPER. BEGAN | |
| | d. IRRIGATION | | | | | | | |
| | e. CONSERVATION | | | | | | April 2, 1937 | |
| | f. INACTIVE | | | | | | | |
| 17. LENGTH OF RESERVOIR 0.64 ^{2/} MILES | | | | AV. WIDTH OF RESERVOIR .0009 MILES | | | | |
| WATERSHED | 18. TOTAL DRAINAGE AREA 1.16 SQ. MI. | | | 22. MEAN ANNUAL PRECIPITATION 36.91 (78) INCHES | | | | |
| | 19. NET SEDIMENT CONTRIBUTING AREA 1.07 SQ. MI. | | | 23. MEAN ANNUAL RUNOFF 6.7 INCHES | | | | |
| | 20. LENGTH 1.44 MILES | | AV. WIDTH 0.80 MILES | | 24. MEAN ANNUAL RUNOFF 357 Ac. Ft./Sq. Mi. ^{Ac-Ft.} | | | |
| | 21. MAX. ELEV. | | MIN. ELEV. | | 25. CLIMATIC CLASSIFICATION Humid | | | |
| 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. |
| | April 2, 1937 | - | - | - | - | 61.2 | 610 | 526 |
| | Feb. 21, 1956 | 18.8 | 18.8 | Detail | 8 Ranges | 61.2 | 466 | 402 |
| | 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 | d. MEAN ANNUAL | e. TOTAL TO DATE | |
| | | | | | | | | |
| | 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 | d. TOTAL TO DATE | e. AV. ANNUAL | f. PER SQ. MI.- YEAR |
| | Feb. 21, 1956 | 144.0 | | 7.66 | 7.16 | 144.0 | 7.66 | 7.16 |
| | 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 | c. AV. ANNUAL | d. TOT. TO DATE | e. PERIOD | f. TOT. TO DATE | |
| Feb. 21, 1956 | 32.9 (3) | 5,130 | 5,130 | 1.25 | 23.6 | - | - | |

^{1/} Mean sea level.
^{2/} 0.42 mi. Southwest Arm.

| | | | | | | | | | | | | | | |
|-----------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 26. DATE OF SURVEY | 43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION | | | | | | | | | | | | | |
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|-----------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|------|------|------|------|
| 28. 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. 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

Average Land Use for the Period: 62 percent cultivated; 21 percent pasture; 9 percent idle or formerly cultivated; and 8 percent lake area.

C/I ratio average is: 1.47

Estimated Trap Efficiency: 98%

Total Annual Sediment Load, adjusted for trap efficiency: 7.81 Ac. Ft.

48. AGENCY SUPPLYING DATA Soil Conservation Service, Temple, Texas 49. DATE February 29, 1956

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-62

Dawson City Lake

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

51-28a

DATA SHEET NO.

Trib of.

| | | | | | | | | | | | | | | | |
|--|-------------------------------|--|---------------------------|------------------------------------|---------------------------------|--|---------------------------------|--|-----------------------------|------------------------|-----------------------------|------------------------|--|-----------------------------------|--|
| DAM | 1. OWNER City of Dawson | | | 2. STREAM Richland Creek | | | 3. STATE Texas | | | | | | | | |
| | 4. SEC. TWP. RANGE | | | 5. NEAREST TOWN 1 mi S Dawson | | | 6. COUNTY Navarro | | | | | | | | |
| | 7. STREAM BED ELEVATION 439.4 | | | 8. TOP OF DAM ELEVATION 468.0 | | | 9. SPILLWAY CREST ELEV. 463.2 | | | | | | | | |
| 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. MULTIPLE USE | | | | | | | | | | 4-2-37 | | | | |
| | b. FLOOD CONTROL | | | | | | | | | | | | | | |
| | c. POWER | | | | | | | | | | | | | | |
| | d. WATER SUPPLY | | 463.2 | | 61.2 | | 610 | | 610 | | 16. DATE NORMAL OPER. BEGAN | | | | |
| | e. IRRIGATION | | | | | | | | | | | | | | |
| | f. CONSERVATION | | | | | | | | | | | | | | |
| | g. SEDIMENT | | | | | | | | | | 4-2-37 | | | | |
| h. INACTIVE | | | | | | | | | | | | | | | |
| 17. LENGTH OF RESERVOIR 0.64 ^{1/} | | | | MILES | | | | AV. WIDTH OF RESERVOIR 109 | | | | MILES | | | |
| 18. TOTAL DRAINAGE AREA 1.16 | | | | SQ. MI. | | | | 22. MEAN ANNUAL PRECIPITATION 36.91 (78) | | | | INCHES | | | |
| 19. NET SEDIMENT CONTRIBUTING AREA 1.07 | | | | SQ. MI. | | | | 23. MEAN ANNUAL RUNOFF 6.7 | | | | INCHES | | | |
| 20. LENGTH 1.44 | | MILES | | AV. WIDTH 0.08 | | MILES | | 24. MEAN ANNUAL RUNOFF 414 | | AC.-F.T. | | | | | |
| 21. MAX. ELEV. | | | | MIN. ELEV. 439.4 | | | | 25. CLIMATIC CLASSIFICATION Subhumid | | | | | | | |
| 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. | |
| 4-2-37 | | - | | - | | - | | - | | 61.2 | | 610 | | 526 | |
| 2-21-56 | | 18.8 | | 18.8 | | Range (D) | | 8 Ranges | | 61.2 | | 466 | | 402 | |
| 9-10-63 | | 7.5 | | 26.3 | | Contour (D) | | 2' Cont. Int. | | 60.3 | | 390.1 | | 336 | |
| 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 | | | |
| | | | | | | | | | | | | | | | |
| 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 | | | |
| 2-21-56 | | 144.0 | | 7.66 | | 7.16 | | 144.0 | | 7.66 | | 7.16 | | | |
| 9-10-63 | | 75.9 | | 10.12 | | 9.46 | | 219.9 | | 8.36 | | 7.81 | | | |
| 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. AN. | | b. TOT. TO DATE | | a. PERIOD | | b. TOT. TO DATE | |
| 2-21-56 | | 32.9(3) | | 5,130 | | 5,130 | | 1.25 | | 23.60 | | | | | |
| 9-10-63 | | 31.0(3) | | 6,387 | | 5,273 | | 1.37 | | 36.05 | | | | | |

^{1/} 0.42 mile southwest arm.

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|--------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|
| 26. DATE OF SURVEY | 43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION | | | | | | | | | | | | |
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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 | -125 |
| | PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| 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 |
| 451 | 6.1 | 4.1 | | | | | | |
| 453 | 16.5 | 25.8 | | | | | | |
| 455 | 23.5 | 65.6 | | | | | | |
| 457 | 31.0 | 120.0 | | | | | | |
| 459 | 39.7 | 190.6 | | | | | | |
| 461 | 49.9 | 280.0 | | | | | | |
| 463 | 60.3 | 390.1 | | | | | | |

47. REMARKS AND REFERENCES
 Physiographic Area: Black Prairie
 Land Use: Cultivated 3%; Pasture 54%; Formerly cultivated 35%; Lake area 8%.
 C/I Ratio: 0.94
 Estimated Trap Efficiency: 97%.
 Total Annual Sediment Load Adjusted for Trap Efficiency: 8.05 Ac.Ft./Sq.Mi.