

RESERVOIR SEDIMENT
DATA SUMMARY

CS-34 Rev. 6-66

East St. Louis Creek Weir¹
NAME OF RESERVOIR

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

63-20

DATA SHEET NO.

DAM	1. OWNER USDA - F.S.				2. STREAM E. St. Louis Creek		3. STATE Colorado													
	4. SEC. TWP.		RANGE		5. NEAREST P.O. Fraser		6. COUNTY Grand													
	7. LAT. 39° 54'		" LONG. 105° 53'		8. TOP OF DAM ELEVATION		9. SPILLWAY CREST ELEV.													
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																			
	b. MULTIPLE USE																			
	c. POWER																			
	d. WATER SUPPLY									16. DATE NORMAL OPER. BEGAN										
	e. IRRIGATION																			
	f. CONSERVATION																			
	g. INACTIVE		N.A.²		558 Ft²					10-1-64										
WATERSHED	17. LENGTH OF RESERVOIR				MILES		AV. WIDTH OF RESERVOIR				MILES									
	18. TOTAL DRAINAGE AREA				3.10		SQ. MI.		22. MEAN ANNUAL PRECIPITATION (9)				17.58³		INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA				3.10		SQ. MI.		23. MEAN ANNUAL RUNOFF (28)				14.56⁴		INCHES					
	20. LENGTH		3.2		MILES		AV. WIDTH		1		MILES		24. MEAN ANNUAL RUNOFF (28)				2407.25⁴		AC.-FT.	
	21. MAX. ELEV. 12,763 Ft.				MIN. ELEV. 9,500 Ft.				25. ANNUAL TEMP: MEAN 33°F.				RANGE 35°F. ³							
SURVEY DATA	26. DATE OF SURVEY		5	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.						
	10-1-65		1	1	↑ See Remark ⁵ ↓															
	10-1-66		1	2																
	10-1-67		1	3																
	10-1-68		1	4																
	10-1-69		1	5																
	10-1-70		1	6																
	26. DATE OF SURVEY		5	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET				36. WATER INFL. TO DATE, AC.-FT.										
	10-1-64		18.16 ³	1562.74 ⁴																
	10-1-65		26.45	2836.03																
	10-1-66		16.76	1296.58																
	10-1-67		22.35	2057.30																
	10-1-68		18.87	1932.53																
	10-1-69		25.18	2416.31																
	10-1-70		25.69	3035.88																
	26. DATE OF SURVEY			37. PERIOD CAPACITY LOSS, ACRE-FEET			38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET													
	10-1-65						109Ft ³ /MI ²		.002											
	10-1-66						27		.001											
	10-1-67						68		.002											
	10-1-68						84		.002											
10-1-69						58		.001												
10-1-70						85		.002												
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. PPM											
10-1-65			100(Est.)		a. PERIOD		b. TOTAL TO DATE		a. AV. ANN.		b. TOT. TO DATE		a. PERIOD		b. TOT. TO DATE					
10-1-66					5.45		5.45													
10-1-67					1.35		3.40													
10-1-68					3.40		3.40													
10-1-69					4.20		3.60													
10-1-70					2.90		3.46													
10-1-70			4.25		3.59															

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

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

47. REMARKS AND REFERENCES

- 1 Leaf, Charles F. 1970. Sediment yields from central Colorado snow zone. J. Hydraul. Div., Amer. Soc. Civil Eng., 96(HY1): 87-93.
- 2 Entire pond used to collect bedload sediment and debris.
- 3 Records collected at Fraser Experimental Forest Headquarters (El. 9,070 ft.).
- 4 April-Sept. Runoff.
- 5 Pond surveyed every fall by cross-sectioning (Tabulation is in Ft.³/Mi.²).
- 6 Leaf, Charles F. 1971. Closure, Sediment yields from central Colorado snow zone. J. Hydraul. Div., Amer. Soc. Civil Eng., 97(HY2): 350-351.

48. AGENCY MAKING SURVEY Rocky Mt. Forest and Range Exp. Station
 49. AGENCY SUPPLYING DATA Same
 50. DATE 8/1/71

CONTINUATION SHEET 2

26. Date of Survey	39. Av. Dry Wgt., Lbs./Cu.Ft.	40. Sed.Dep., Tons/Sq.Mi.	
		a. Period	b. Total to Date
10-1-61	90.86 ⁶	0.64	9.55
10-1-62		8.96	9.46
10-1-63		0.32	8.32
10-1-64		2.88	7.71
10-1-65		5.76	7.52
10-1-66		2.24	7.04
10-1-67		1.73	6.60
10-1-68		1.50	6.20
10-1-69		1.50	5.87
10-1-70		4.00	5.74

26. Date of Survey	27. Period Years	28. Accl. Years	29. Type of Survey
9/7/71	1	16	
8/30/72	1	17	
8/29/73	1	18	
9/12/74	1	19	
9/18/75	1	20	
9/15/76	1	21	
9/8/77	1	22	
9/28/78	1	23	
9/6/79	1	24	
10/1/80	1	25	

26. Date of Survey	34. Period Annual Precip.	35. Period Water Flow, A/F	
		a. Mean Annual	b. Max. Annual
9/7/71	22.20	2949.	
8/30/72	25.03	2035.	
8/29/73	23.47	2518.	
9/12/74	22.24	2650.	
9/18/75	19.36	2106.	
9/15/76	18.24	1576	
9/8/77	24.50	1326.	
9/28/78	17.60	2406.	
9/6/79	22.90	2120.	
10/1/80	26.33	2213.	

26. Date of Survey	37. Period Capacity Loss		
	a. Period Total	b. Av. Annual	c. Per Sq. Mi.
9/7/71			97.1
8/30/72			32.5
8/29/73			84.6
9/12/74			68.4
9/18/75			50.4
9/15/76			36.7
9/8/77			24.3
9/28/78			94.4
9/6/79			37.8
10/1/80			64.8

26. Date of Survey	39. Av. Dry Wgt., Lbs./Cu. Ft.	40. Sed. Dep., Tons/Sq. Mi.	
		a. Period	b. Total to Date
9/7/71	100 (est.)		4.86
8/30/72	↓		1.62
8/29/73	↓		4.23
9/12/74	↓		3.42
9/18/75	↓		2.52
9/15/76	↓		1.84
9/8/77	↓		1.22
9/28/78	↓		4.72
9/6/79	↓		1.89
10/1/80	↓		3.24