

RESERVOIR SEDIMENT

U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

DATA SUMMARY

Fool Creek Debris Basin  
NAME OF RESERVOIR

CS-34 Rev. 6-66

63-17  
63-17

DATA SHEET NO.

Watershed Logged in 1954-56<sup>1</sup>

DAM	1. OWNER <b>USDA - F.S.</b>			2. STREAM <b>Fool Creek</b>		3. STATE <b>Colorado</b>			
	4. SEC. <b>TWP.</b>		RANGE		5. NEAREST P.O. <b>Fraser, Colo.</b>		6. COUNTY <b>Grand</b>		
	7. LAT. <b>3° 54'</b>		" LONG <b>105° 53'</b>		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		<b>N.A.<sup>2</sup></b>			<b>0.25</b>	<b>10-1-51</b>		
WATERSHED	17. LENGTH OF RESERVOIR			MILES	AV. WIDTH OF RESERVOIR		MILES		
	18. TOTAL DRAINAGE AREA			<b>1.11</b>	SQ. MI.	22. MEAN ANNUAL PRECIPITATION (9)		<b>17.58<sup>3</sup></b> INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA			<b>1.11</b>	SQ. MI.	23. MEAN ANNUAL RUNOFF ('43-'55)		<b>9.75; (56-70) 12.1</b>	
	20. LENGTH		<b>2.2</b>	MILES	AV. WIDTH	<b>0.5</b>	MILES	24. MEAN ANNUAL RUNOFF ('43-'55)	<b>80.12; (56-70) 719.95</b> AC.-FT.
	21. MAX. ELEV.		<b>11,500</b>	MIN. ELEV.	<b>9,600</b>	25. ANNUAL TEMP: MEAN		<b>33°F.</b> RANGE	<b>35°F.</b>
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.	
	10-1-52 <sup>5</sup>	1	1	↑ See Remark <sup>5</sup> ↓					
	10-1-53	1	2						
	10-1-54	1	3						
	10-1-55	1	4						
	10-1-56	1	5						
	10-1-57	1	6						
	(continued on next page)								
	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
	10-1-56 <sup>5</sup>	<b>24.75<sup>3</sup></b>		<b>829.01<sup>6</sup></b>					
	10-1-57	<b>32.78</b>		<b>1235.23</b>					
	10-1-64	<b>18.16</b>		<b>533.78</b>					
	10-1-65	<b>26.45</b>		<b>925.09</b>					
	10-1-66	<b>16.76</b>		<b>406.50</b>					
(continued on next page)									
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			
10-1-52			<b>1408<sup>7</sup>/MI<sup>2</sup></b>	<b>.032</b>					
10-1-53			<b>708</b>	<b>.016</b>					
10-1-54			<b>--8,9</b>						
10-1-55			<b>--8,9</b>						
10-1-56			<b>1150<sup>9</sup></b>	<b>.026</b>					
(continued on next page)									
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		
10-1-52		<b>65.28<sup>7</sup></b>	<b>65.28</b>						
10-1-53		<b>32.64</b>	<b>48.96</b>						
10-1-54		<b>0 8,9</b>	<b>32.64</b>						
10-1-55		<b>0 8,9</b>	<b>24.48</b>						
10-1-56		<b>53.12<sup>9</sup></b>	<b>30.21</b>						
(continued on next page)									

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: ('43-'55 is before harvest cutting); ('56-'70 is after harvest cutting).
- 5 Pond surveyed every fall by cross-sectioning (Tabulation is in Ft.<sup>3</sup>/MI.<sup>2</sup>).
- 6 April-Sept. Runoff.
- 7 Road construction on Fool Creek.
- 8 Negligible accumulation.
- 9 Timber harvest on Fool Creek.
- 10 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
10-1-57	92.72 <sup>10</sup>	101.76	42.13
10-1-58		62.08	44.98
10-1-59		12.48	40.92
10-1-60		20.16	38.61
10-1-61		8.96	35.65
10-1-62		23.68	34.56
10-1-63		0 <sup>8</sup>	31.68
10-1-64		0 <sup>8</sup>	29.24
10-1-65		36.16	29.74
10-1-66		8.00	28.29
10-1-67		10.32 <sup>*</sup>	27.16
10-1-68		17.96	26.62
10-1-69		22.45	26.39
10-1-70		24.66	26.30
*Estimated			

CONTINUATION SHEET 1

26. Date of Survey	27. Period Years	28. Accl. Years	29. Type of Survey
10-1-61	1	7	
10-1-62	1	8	
10-1-63	1	9	
10-1-64	1	10	
10-1-65	1	11	
10-1-66	1	12	
10-1-67	1	13	
10-1-68	1	14	
10-1-69	1	15	
10-1-70	1	16	

26. Date of Survey	34. Period Annual Precip.	35. Period Water Flow, A/F	
		a. Mean Annual	b. Max. Annual
10-1-67	22.35	560.83	
10-1-68	18.87	519.50	
10-1-69	25.18	678.52	
10-1-70	25.69	897.65	

26. Date of Survey	37. Period Capacity Loss		
	a. Period Total	b. Av. Annual	c. Per Sq. Mi
10-1-60			157
10-1-61			32
10-1-62			403
10-1-63			29
10-1-64			47
10-1-65			223
10-1-66			23
10-1-67			16
10-1-68			35
10-1-69			67
10-1-70			207

HC 12-75

## CONTINUATION SHEET 2

26. Date of Survey	39. Av. Dry Wgt., Lbs./Cu.Ft.	40. Sed.Dep., Tons/Sq.Mf.	
		a. Period	b. Total to Date
10-1-60	103.5 <sup>6</sup>	7.68	14.56
10-1-61		1.60	12.71
10-1-62		19.84	13.60
10-1-63		1.28	12.23
10-1-64		2.24	11.23
10-1-65		11.20	11.23
10-1-66		1.28	10.40
10-1-67		0.83	9.66
10-1-68		1.81	9.10
10-1-69		3.46	8.73
10-1-70		10.71	9.44