

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Callahan Creek Watershed (C-1)

SCS-34 Rev. 6-66

NAME OF RESERVOIR

31-47

DATA SHEET NO.

DAM	1. OWNER C. E. Carlos			2. STREAM Barclay Branch			3. STATE Missouri				
	4. SEC. 23&26 TWP. 49N RANGE 14W			5. NEAREST P. O. Columbia			6. COUNTY Boone				
7. LAT. 39° 0' 52" LONG 92° 27' 15 "			8. TOP OF DAM ELEVATION 657.0			9. SPILLWAY CREST ELEV. 648.6					
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		648.6		70.6		831.41		1017.07		April 1967
	b. MULTIPLE USE										16. DATE NORMAL OPER. BEGAN
	c. POWER										May 1967
	d. WATER SUPPLY										
	e. IRRIGATION										
	f. CONSERVATION										
	g. INACTIVE		630.0		23.73		185.66		185.66		
WATERSHED	17. LENGTH OF RESERVOIR 1.32 MILES				AV. WIDTH OF RESERVOIR .08 MILES						
	18. TOTAL DRAINAGE AREA 5.625 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 36.96 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 5.515 SQ. MI.				23. MEAN ANNUAL RUNOFF INCHES						
	20. LENGTH 4.54 MILES		AV. WIDTH 1.238 MILES		24. MEAN ANNUAL RUNOFF AC. F. T.						
	21. MAX. ELEV. 830.		MIN. ELEV. 613.0		25. ANNUAL TEMP: MEAN 55 RANGE						
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.			
	Aug. 1967	.25	.25	Range "D"	30	70.6 (23.62)	1010.8 (179.7)				
	Aug. 1969	2	2.25	Range "D"	30	70.6 (22.40)	989.3 (161.8)				
	July 1971	1.9	4.35	Range "D"	30	70.6 (22.15)	974.9 (150.9)				
	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				
	Aug. 1967	33.50									
	Aug. 1969	39.43			*7275.00						
	July 1971	39.34	3824.31	5580.15	7648.62	3824.31	7648.62				
	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				
	Aug. 1967	6.3	25.20	4.57	6.3	25.20	4.57				
	Aug. 1969	21.4	10.70	1.94	27.7	12.31	2.22				
July 1971	14.5	7.63	1.38	42.2	9.70	1.76					
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				
Aug. 1967	41.6	4,144	4,144	2.47	0.61						
Aug. 1969	53.0	2,379	2,575	1.21	2.72						
July 1971	58.2	2,059	2,231	.95	4.14	2231	5145.87				

*Calendar Year for 1969.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	48.6-46	46-42	42-38	38-34	34-32	32-30	30-26	26-22	22-18	18-16	16-14	14-10.5			
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Aug. 1967	0	0	0	0	1.7	3.5	12.1	4.6	37.2	28.4	10.7	1.8			
Aug. 1969	0	.4	.2	3.4	3.3	6.5	22.0	20.1	27.0	12.3	3.9	0.9			
July 1971	0	0	0	5.2	5.7	6.8	18.5	21.1	24.1	14.4	3.4	0.8			
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														
Aug. 1969	71	20	3	1	3	2									
Aug. 1969	34	19	15	19	6	6	0	0	0	1					
July 1971	30	18	21	15	7	9									
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.								
46. 1967 (orig.) ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
648.6	70.6	1017.1	618.0	6.9	11.0	642.0	50.5	577.6							
646.0	62.1	844.6	616.0	1.8	2.3	638.0	40.6	395.6							
642.0	50.5	619.8	614.0	0.3	0.4	634.0	30.2	254.4							
638.0	40.6	437.7	612.0	0.06	0.04	632.0	25.6	198.6							
634.0	31.3	294.3	610.5	0.00	0.00	630.0	22.2	151.0							
632.0	26.8	236.2				626.0	14.8	77.4							
630.0	23.7	185.7		<u>1971</u>		622.0	9.4	29.5							
626.0	17.0	104.3	648.6	70.6	974.9	618.0	2.3	3.2							
622.0	11.5	47.5	646.0	62.1	802.4	616.0	0.5	0.6							
47. REMARKS AND REFERENCES						614.0	0.06	0.02							
						612.0	0.0	0.00							
48. AGENCY MAKING SURVEY				USDA ARS SWC, Columbia, Missouri											
49. AGENCY SUPPLYING DATA				USDA ARS SWC, Columbia, Missouri											
						50. DATE <u>March 2, 1972</u>									

RESERVOIR SEDIMENT
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U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

31-47 a

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	4. SEC. 23-26 TWP. 49N RANGE 14W			5. NEAREST P.O. Columbia			6. COUNTY Boone							
	7. LAT. 39° 0' 52" LONG. 92° 27' 15"			8. TOP OF DAM ELEVATION 657.0			9. SPILLWAY CREST ELEV. 648.6							
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		648.6		70.6		831.41		1017.07		April 1967			
	b. MULTIPLE USE													
	c. POWER													
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN			
	e. IRRIGATION													
	f. CONSERVATION										May 1967			
g. INACTIVE		630.0		23.73		185.66		185.66						
WATERSHED	17. LENGTH OF RESERVOIR				1.32 MILES		AV. WIDTH OF RESERVOIR				.08 MILES			
	18. TOTAL DRAINAGE AREA				5.625 SQ. MI.		22. MEAN ANNUAL PRECIPITATION				38.12 INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA				5.515 SQ. MI.		23. MEAN ANNUAL RUNOFF				INCHES			
	20. LENGTH		4.54 MILES		AV. WIDTH		1.238 MILES		24. MEAN ANNUAL RUNOFF				AC.-FT.	
	21. MAX. ELEV.		830.0		MIN. ELEV.		613.0		25. ANNUAL TEMP: MEAN				54.6 RANGE -10 to 105	
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.			
	June, 1974		2.9	7.05	Range "D"	30	70.6(20.28)		948.7(132.5)					
	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						
	June, 1974		43.89	2830	7350	8207	3235	15,855						
	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						
	June, 1974		26.2	9.03	1.64	68.4	9.70	1.76						
	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					
June, 1974		64.4	2,655	2468	.95	6.72	3807	4452						

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	48.6-46	46-42	42-38	38-34	34-32	32-30	30-26	26-22	22-18	18-16	16-14	14-10.5		
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
June, 1974	0	0	0	6.1	7.1	9.1	20.5	19.8	23.5	10.6	2.7	0.6		
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														
June, 1974	18.5	18.0	21.5	21.5	11.5	9								
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						
1974			632.0	24.1	176.9	614.8	0.0	0.0						
648.6	70.6	948.7	630.0	20.3	132.5									
646.0	62.1	776.2	626.0	13.5	65.2									
642.0	50.5	551.4	622.0	8.7	21.9									
638.0	40.6	669.4	618.0	1.5	1.5									
634.0	29.2	230.1	616.0	0.1	0.08									
47. REMARKS AND REFERENCES														
48. AGENCY MAKING SURVEY USDA-ARS- Watershed Research														
49. AGENCY SUPPLYING DATA USDA-ARS- Watershed Research														
50. DATE 11-10-76														