

**RESERVOIR SEDIMENTATION
 DATA SUMMARY**

Ashland Reservoir 31-38a

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER University of Missouri on a long term lease				2. RIVER Brushy Creek		3. STATE Missouri									
	4. LONG. LAT. RANGE 11W Sec. 18 & 19, T-46N				5. NEAREST TOWN Ashland		6. COUNTY Boone									
	7. STREAM BED ELEV.				8. TOP OF DAM ELEV.		9. SPILLWAY CREST ELEV. 100.0*									
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															
	b. POWER															
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION		100.0		17.84		290.48		280.48							
	f. INACTIVE															
WATERSHED	17. LENGTH OF RESERVOIR 0.67 (3538')				MILES		AV. WIDTH OF RESERVOIR 177				FEET					
	18. TOTAL DRAINAGE AREA 3.78				SQ. MI.		22. MEAN ANNUAL PRECIPITATION 38.35				INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 3.75				SQ. MI.		23. MEAN ANNUAL RUNOFF				INCHES					
	20. LENGTH 5.0		MILES		AV. WIDTH 0.756		MILES		24. MEAN ANNUAL RUNOFF				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 1937										17.84		280.48		74.2	
	Nov. 1949		12.6		12.6		D-R		16 ranges		17.23		212.01		56.2	
	Apr. 1951		1.4		14.0		D-R		16 ranges		17.35		208.14		55.1	
	July 1955		4.3		18.3		D-R		16 ranges		17.25		202.23		53.5	
	June 1962		6.9		25.2		D-R		16 ranges		16.11		196.07		49.2	
	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			
	April 1937		41.51													
	Nov. 1949		42.61													
Apr. 1951		33.98														
July 1955		33.29														
June 1962																
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				
Nov. 1949		68.47		5.43		1.44		68.47		5.434		1.449				
April 1951		3.87		2.76		0.73		72.34		5.167		1.378				
July 1955		5.91		1.37		0.36		78.25		4.278		1.140				
June 1962		16.07		2.33		0.62		94.41		3.746		0.999				
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		
Nov. 1949		69.0		2178		2178		1.93		24.4						
April 1951		68.9		307		2041		1.94		25.8						
July 1955		68.6*		543		1688		1.53		27.9						
June 1962		69.4		1038		1510		1.33		33.6						

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	38-28	28-24	24-20	20-16	16-12	12-8	8-6	6-4	4-2	2-0	
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Nov. 1949	13.82	11.30	11.37	9.84	14.11	18.95	3.50	7.19	5.99	3.93	
Apr. 1951	13.73	11.44	11.84	10.00	13.46	19.57	3.65	6.89	5.76	3.66	
July 1955	12.70	10.27	11.29	10.53	15.08	19.75	4.46	7.02	5.50	3.40	
June 1962	11.23	10.64	12.21	10.85	14.07	18.18	5.23	7.25	5.59	4.75	

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														
Nov. 1949	8.3	12.9	12.6	7.4	7.3	9.0	12.5	14.3	11.5	4.2					
Apr. 1951	10.6	18.7	7.2	6.0	6.5	9.5	12.7	14.3	10.8	3.7					
July 1955	9.7	17.8	7.7	7.4	8.1	10.1	12.0	12.7	11.0	3.5					
June 1962	10.2	20.1	7.2	7.2	8.0	10.3	12.7	12.6	8.8	2.9					

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
100.0	16.11	186.07	84	5.32	29.99			
98.0	14.04	156.23	80	3.59	12.74			
96.0	12.55	129.57	76	1.54	3.21			
94.0	10.51	106.42	74	0.71	1.01			
92.0	9.11	86.87	72	0.25	0.08			
88.0	7.03	54.63						

47. REMARKS AND REFERENCES
 1949 survey by the Sedimentation Research Branch, SCS, Lincoln, Nebraska, in cooperation with the Missouri State Conservation Commission, University of Missouri, and the Soil Conservation Service, Region 3.
 1961 survey by SCS, Flood Control, Kansas City, Missouri.
 1955 & 1962 survey made by Agricultural Research Service, Lincoln, Nebraska, in cooperation with the University of Missouri.

48. AGENCY SUPPLYING DATA USDA, Agricultural Research Service
 Columbia, Missouri

49. DATE August 26, 1965

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

Ashland Reservoir

NAME OF RESERVOIR

31-38 b

DATA SHEET NO.

DAM	1. OWNER University of Missouri		2. STREAM Brushy Creek		3. STATE Missouri			
	4. SEC. 18&19 TWP. 46N RANGE 11W		5. NEAREST P. O. Ashland		6. COUNTY Boone			
	7. LAT. 38° 45' 20" LONG. 92° 12' 20"		8. TOP OF DAM ELEVATION 700		9. SPILLWAY CREST ELEV. 100.0*			
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					1937		
	b. MULTIPLE USE							
	c. POWER					16. DATE NORMAL OPER. BEGAN		
	d. WATER SUPPLY							
	e. IRRIGATION					1937		
	f. CONSERVATION	100.0*	17.84	280.48	280.48			
g. INACTIVE								
WATERSHED	17. LENGTH OF RESERVOIR 3538 ft.		0.67 MILES	AV. WIDTH OF RESERVOIR 177 ft.		.033 MILES		
	18. TOTAL DRAINAGE AREA		3.78 SQ. MI.		22. MEAN ANNUAL PRECIPITATION		38.35 INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA		3.75 SQ. MI.		23. MEAN ANNUAL RUNOFF		INCHES	
	20. LENGTH	5.0 MILES	AV. WIDTH	0.756 MILES	24. MEAN ANNUAL RUNOFF		AC.-FT.	
	21. MAX. ELEV.	889	MIN. ELEV.	660	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.
	July 1968	6.1	31.3	D-R	16 ranges	16.57	171.52	
	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	
	July 1968	32.09						
	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	
	July 1968	14.55	2.35	0.62	108.96	3.48	0.92	
	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
July 1968	64.7	614	1340	1.24	38.8			

*Assumed.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	38-28	28-24	24-20	20-16	16-12	12-8	8-6	6-4	4-2	2-0	0-4				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
July 1968		10.4	11.8	11.6	14.1	15.3	7.6	7.7	6.4	4.0	1.7				
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														
July 1968	9.0	20.5	9.0	6.5	10.5	15.5	11.5	8.0	6.0	3.5					
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							
100.0	16.57	171.52	84.0	4.69	24.27										
98.0	13.45	141.50	80.0	2.75	9.01										
96.0	11.54	116.51	76.0	1.00	1.73										
94.0	10.15	94.92	74.0	0.49	0.24										
92.0	8.75	76.02	72.0	0.0	0.0										
88.0	6.38	46.22													
47. REMARKS AND REFERENCES															
*Assumed spillway elevation.															
48. AGENCY MAKING SURVEY USDA, Agricultural Research Service, Columbia, Missouri.															
49. AGENCY SUPPLYING DATA USDA, ARS, SWC, Columbia, Missouri 50. DATE February 1972															

RESERVOIR SEDIMENT
DATA SUMMARY

Ashland Reservoir

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

31-38 c

DATA SHEET NO.

DAM	1. OWNER University of MO			2. STREAM Brushy Creek			3. STATE Missouri									
	4. SEC. 18 & 19 TWP. 49N RANGE 11W			5. NEAREST P. O. Ashland			6. COUNTY Boone									
	7. LAT. 38° 45' 20" LONG. 92° 12' 20"			8. TOP OF DAM ELEVATION 700			9. SPILLWAY CREST ELEV. 100.0*									
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										1937					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY															
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN					
	f. CONSERVATION		100.0*		17.84		280.48		280.48		1937					
	g. INACTIVE															
17. LENGTH OF RESERVOIR 3538 ft.			0.67 MILES			AV. WIDTH OF RESERVOIR 177 ft.			.033 MILES							
18. TOTAL DRAINAGE AREA				3.78 SQ. MI.				22. MEAN ANNUAL PRECIPITATION				38.35 INCHES				
19. NET SEDIMENT CONTRIBUTING AREA				3.75 SQ. MI.				23. MEAN ANNUAL RUNOFF				INCHES				
20. LENGTH		5.0 MILES		AV. WIDTH		0.756 MILES		24. MEAN ANNUAL RUNOFF		AC.-FT.						
21. MAX. ELEV.		889		MIN. ELEV.		660		25. ANNUAL TEMP: MEAN 55 RANGE								
WATERSHED	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.	
	July 1971		3.0		34.3		D-R		16 ranges		16.11		153.24			
	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			
	July 1971		41.0													
SURVEY DATA	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			
	July 1971		18.28		6.09		1.63		127.64		3.72		0.99			
	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				
July 1971		62.8		1870		1354		1.32 45.4								

*assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	38-28	28-24	24-20	20-16	16-12	12-8	8-6	6-4	4-2	2-0	0-4+				
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
July 1971	8.0	10.2	12.6	12.7	14.1	15.1	7.5	7.6	6.3	4.2	1.7				
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														
July 1971	12.0	21.0	8.5	7.5	10.0	11.5	10.8	9.2	7.0	2.5					
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							
100.0	16.11	153.24	84.0	4.02	15.85										
98.0	12.92	124.20	80.0	1.81	4.28										
96.0	10.94	100.34	76.0	0.43	0.09										
94.0	9.49	79.98	74.0	0.0	0.0										
92.0	8.00	62.49													
88.0	5.64	35.22													
47. REMARKS AND REFERENCES															
48. AGENCY MAKING SURVEY USDA-ARS Watershed Research, Columbia, MO															
49. AGENCY SUPPLYING DATA USDA-ARS Watershed Research, Columbia, MO, 50. DATE 12-15-76															