

**RESERVOIR SEDIMENT
DATA SUMMARY**

SCS-34 Rev. 6-66

Big Wewoka Site No. 36

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

45-53

DATA SHEET NO.

DAM	1. OWNER Mrs. S. S. Barnes			2. STREAM Big Wewoka			3. STATE Oklahoma						
	4. SEC. 36 TWP. 8N RANGE 8E			5. NEAREST P. O. Holdenville			6. COUNTY Hughes						
	7. LAT. " " " " " " " " " " " "			8. TOP OF DAM ELEVATION 807			9. SPILLWAY CREST ELEV. 803.1						
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		803.1		83.2		479.4		690.3		6-27-60		
	b. MULTIPLE USE												
	c. POWER												
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION												
	f. CONSERVATION												
WATERSHED	g. INACTIVE		794.3		32.2		210.9		210.9		6-27-60		
	17. LENGTH OF RESERVOIR 1.02 MILES				AV. WIDTH OF RESERVOIR .13 MILES								
	18. TOTAL DRAINAGE AREA 2.26 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 38.1 INCHES								
	19. NET SEDIMENT CONTRIBUTING AREA 2.20 SQ. MI.				23. MEAN ANNUAL RUNOFF 6 INCHES								
	20. LENGTH 3.10 MILES		AV. WIDTH .73 MILES		24. MEAN ANNUAL RUNOFF 723 AC.-F.T.								
21. MAX. ELEV. Est. 896			MIN. ELEV. 778			25. ANNUAL TEMP.: MEAN RANGE Subhumid							
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.	
	8-12-69		0	-	Range Contour (D)		13R 2'C.I.	32.2 (83.2)		210.9 (690.3)		.29 (.95)	
	8-12-69		9.10	9.10	Range Contour (D)		13R 2'C.I.	32.1 (83.2)		199.8 (679.0)		.28 (.94)	
	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 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
	8-12-69		-		-		-		-		-		-
	8-12-69		11.10 (11.30)		1.22 (1.24)		0.55 (0.56)		11.10 (11.30)		1.22 (1.24)		0.55 (0.56)
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
8-12-69		-		-		-		-		-		-	-
8-12-69		62 Sed P(3) 87 Det P(3)		743 (762)		743 (762)		.58 (.18) 5.26 (1.64)		-		-	-

NOTE: Figures in parentheses represent sediment and flood control pools.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	803.1-801-99	99-97	97-94.3	94.3-93-91	91-89	89-87	87-85	85-83	83-81	781-79					
	01 PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
8-12-69	0	0	0	1.8	2.7	12.4	15.9	14.2	15.0	15.0	11.5	11.5			
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							
SEE ATTACHED SHEET															
47. REMARKS AND REFERENCES															
<p>Geology: Holdenville Formation, Pennsylvanian Age Land Use: 14% Cultivation, 82% Pasture-Range, 4% Miscellaneous Land Resource Area: Cherokee Prairie</p> <p>1/ Original capacity was made at the same time of 1969 survey.</p>															
48. AGENCY MAKING SURVEY				Oklahoma Watershed Planning Staff											
49. AGENCY SUPPLYING DATA				S.C.S. U.S.D.A.				50. DATE				12-15-69			

ELEVATION-AREA-CAPACITY DATA

Elevation	Area	Capacity	Elevation	Area	Capacity
	Original Survey <u>1/</u>			<u>1969 Survey</u>	
803.1	83.2	690.3	803.1	83.2	679.0
801.1	67.1	532.8	801.0	67.1	521.5
799.0	53.7	412.3	799.0	53.7	400.9
797.0	44.6	314.1	797.0	44.6	302.7
794.3	32.2	210.9	794.3	32.1	199.8
793.0	26.5	172.8	793.0	26.2	162.0
791.0	21.3	125.0	791.0	20.3	115.6
789.0	17.3	86.5	789.0	16.5	78.9
787.0	14.3	55.0	787.0	13.5	49.0
785.0	10.1	30.8	785.0	9.1	26.5
783.0	6.1	14.7	783.0	5.4	12.1
781.0	3.5	5.3	781.0	2.9	4.0
779.0	1.2	0.8	779.0	0.8	0.5

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SOIL CONSERVATION SERVICE

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NAME OF RESERVOIR

45-53a

DATA SHEET NO.

DAM	1. OWNER Mrs. S. S. Barnes		2. STREAM Big Wewoka		3. STATE Oklahoma				
	4. SEC. 36 TWP. 8N RANGE 8E		5. NEAREST P.O. Holdenville		6. COUNTY Hughes				
	7. LAT. 35° 12' 30" LONG. 96° 30' 20"		8. TOP OF DAM ELEVATION 807.0		9. SPILLWAY CREST ELEV. 803.1				
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	803.1	83.2	479.4	690.3	6-27-60			
	b. MULTIPLE USE								
	c. POWER								
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN			
	e. IRRIGATION								
	f. CONSERVATION								
g. INACTIVE 1/	794.3	32.2	210.9	210.9	6-27-60				
WATERSHED	17. LENGTH OF RESERVOIR 1.02 MILES		AV. WIDTH OF RESERVOIR .13 MILES						
	18. TOTAL DRAINAGE AREA 2.26 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 38.1 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 2.13 SQ. MI.		23. MEAN ANNUAL RUNOFF 6.0 INCHES						
	20. LENGTH 3.10 MILES		AV. WIDTH .73 MILES		24. MEAN ANNUAL RUNOFF 723.2 AC. FT.				
	21. MAX. ELEV. Est. 896		MIN. ELEV. 778		25. ANNUAL TEMP: MEAN 62° RANGE -12° to 118°				
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.	
	6-27-60	0	-	Range Contour (D)	13R 2' C.I.	32.2 (83.2)	210.9 (690.3)	.29 (.95)	
	8-12-69	9.10	9.10	Range Contour (D)	13R 2' C.I.	32.2 (83.2)	199.8 (679.0)	.28 (.94)	
	7-15-74	4.92	14.02	Range Contour (D)	13R 2' C.I.	31.8 (83.2)	197.4 (673.0)	.27 (.93)	
	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 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		
	8-12-69	11.10 (11.30)	1.22 (1.24)	0.57 (0.58)	11.10 (11.30)	1.22 (1.24)	0.57 (0.58)		
	7-15-74	2.40 (6.00)	0.49 (1.22)	0.23 (0.57)	13.50 (17.30)	0.96 (1.23)	0.45 (0.58)		
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		
	8-12-69	62 Sed. P(3) 87 Det. P(3)	769 (788)	769 (788)	.58 (.18)	5.26 (1.64)			
	7-15-74	73 Sed. P(3) 87 Det. P(3)	618 (1268)	715 (961)	.46 (.18)	6.40 (2.51)			

1/ Sediment Pool.

Note: Figures in parentheses represent sediment and flood control pools

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	803.1	801-99	99-97	97-94.3	94.3	93-91	91-89	89-87	87-85	85-83	83-81	81-79			
	01 PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
8-12-69	0	0	0	1.8	2.7	12.4	15.9	14.2	15.0	15.0	11.5	11.5			
7-15-74	1.7	8.7	11.6	3.5	8.1	10.3	13.3	11.6	12.1	11.0	6.4	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														
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							
See attached sheet															
47. REMARKS AND REFERENCES															
Geology: Holdenville Formation, Pennsylvanian Age Land Use: Cropland 16.5%, Pasture-Range 78.8%, Miscellaneous 4.7% (1974) Cropland 14.0%, Pasture-Range 82%, Miscellaneous 4% (1969) Land Resource Area: Cherokee Prairie <u>2/</u> Original Capacity was made at the same time of 1969 survey															
48. AGENCY MAKING SURVEY Oklahoma Watershed Planning & River Basin Staff															
49. AGENCY SUPPLYING DATA SCS USDA															
50. DATE 12-12-74															