

U.S. DEPARTMENT OF AGRICULTURE
**RESERVOIR SEDIMENTATION
DATA SUMMARY**

Wildhorse Creek No. 33

SOIL CONSERVATION SERVICE
50-43

NAME OF RESERVOIR
1411.01

DATA SHEET NO.

DAM	1. OWNER			2. RIVER Wildhorse Cr.			3. STATE Oklahoma			
	4. SEC. 34 TWP. 1N RANGE 5W			5. NEAREST TOWN Duncan			6. COUNTY Stephens			
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY GREST ELEV. 100.00			
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	(100.00)	61.22		(586.55)	3-1-50				
	b. POWER									
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN				
	d. IRRIGATION									
	e. CONSERVATION	90.00	23.77			162.74	3-1-50			
	f. INACTIVE									
17. LENGTH OF RESERVOIR 0.63 MILES			AV. WIDTH OF RESERVOIR 0.15 MILES							
WATERSHED	18. TOTAL DRAINAGE AREA 1.77 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 31.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 1.73 SQ. MI.		23. MEAN ANNUAL RUNOFF 3.50 INCHES							
	20. LENGTH 1.70 MILES	AV. WIDTH 1.04 MILES	24. MEAN ANNUAL RUNOFF 186.66 AG.-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 AG.-FT. PER SQ. MI.		
	3-1-50	-	-	Detail Range and Topog	-	23.77 (61.22)	162.74 (586.55)	91.94 (331.38)		
	9-1-60	10.50	10.50		8	23.77 (61.22)	141.77 (565.58)	80.10 (319.54)		
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AG-FT.				
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	d. MEAN ANNUAL	e. TOTAL TO DATE			
	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			
	3-1-50									
	9-1-60	20.97 (20.97)	2.00 (2.00)	1.16 (1.16)	20.97 (20.97)	2.00 (2.00)	1.16 (1.16)			
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. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE			
9-1-60	85.00	2148 (2148)	2148 (2148)	1.23 (0.34)	12.89 (3.58)					
(-) includes both pools.										

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION												
	100-96	96-92	92-90	90-88	88-84	84-80	80-76						
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
9-1-60	0	0	0	0	21	47	32						

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. Original capacity			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
76.0	.76	0						
80.0	5.50	11.04						
84.0	14.88	50.18						
88.0	19.76	119.06						
90.0	23.77	162.74						
92.0	31.75	218.34						
96.0	46.20	372.95						
100.0	61.22	586.55						

47. REMARKS AND REFERENCES
Land Use: Cultivated: 6%
Pasture 83%
Woods 11%
Geology formation: 15% Duncan sandstone; 85% Hennessey shale.

Soil Conservation Service
Stillwater, Okla.

48. AGENCY SUPPLYING DATA

49. DATE March 26, 1962

Continuation

U. S. Department of Agriculture

Soil Conservation Service

50-43

Data Sheet No.

Wildhorse Creek No. 33

46. ELEVATION - AREA - CAPACITY DATA

1960 Capacity

<u>Elevation</u>	<u>Area</u>	<u>Capacity</u>
100.00	61.22	565.58
96.00	46.20	351.98
92.00	31.75	197.37
90.00	23.77	141.77
88.00	19.71	98.13
84.00	12.89	33.57
80.00	2.92	4.38
77.00	.39	0

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-62

Wildhorse Creek Site #33

NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

50-43a

DATA SHEET NO.

DAM	1. OWNER				2. STREAM Washita				3. STATE Oklahoma			
	4. SEC. 31 TWP. 1N RANGE 5W				5. NEAREST TOWN Duncan				6. COUNTY Stephens			
	7. STREAM BED ELEVATION 75.0				8. TOP OF DAM ELEVATION				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. MULTIPLE USE										3-1-50	
	b. FLOOD CONTROL		100.00		61.22		424.38		587.38			
	c. POWER											
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION											
	f. CONSERVATION											
	g. SEDIMENT		90.00		23.77				163.00		3-1-50	
	h. INACTIVE											
WATERSHED	17. LENGTH OF RESERVOIR 0.63 MILES				AV. WIDTH OF RESERVOIR 0.15 MILES							
	18. TOTAL DRAINAGE AREA 1.77 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 31.00 INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA 1.73 SQ. MI.				23. MEAN ANNUAL RUNOFF 3.5 INCHES							
	20. LENGTH 1.70 MILES		AV. WIDTH 1.04 MILES		24. MEAN ANNUAL RUNOFF 330 AC.-F.T.							
	21. MAX. ELEV.		MIN. ELEV. 75.0		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.			
	3-1-50		-	-		8 R	23.77 (61.22) 1/	163.00 (587.38)	92.09 (331.85)			
	9-1-60		10.50	10.50	Detail Range & Contour	2' Con- tour	23.77 (61.22)	141.86 (566.24)	80.15 (319.91)			
	8-10-65		4.95	15.45			23.69 (61.22)	133.12 (548.66)	75.21 (309.98)			
	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 SEDIMENT DEPOSITS 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				
	3-1-50		-	-	-	-	-	-				
9-1-60		21.14 (21.14)	2.01 (2.01)	1.16 (1.16)	21.14 (21.14)	2.01 (2.01)	1.16 (1.16)					
8-10-65		8.74 (17.58)	1.77 (3.55)	1.02 (2.05)	29.88 (38.72)	1.93 (2.51)	1.12 (1.45)					
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. AN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE				
9-1-60		85.0	2,147	2,147	1.23 (0.34)	12.97 (3.60)						
8-10-65		74.0 (3)	1,643 (3304)	1,805 (2337)	1.18 (0.43)	18.33 (6.59)						

1/ Figures in parenthesis include both pools.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION													
								6.100	92.96	90.92	88-90	84-88	80-84	76-80
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
8-10-65								0	15	5	3	16	41	20

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. Original Capacity 1950			ELEVATION-AREA-CAPACITY DATA					
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
100.0	61.22	587.38	76.00	0.76	0.25	88.0	19.72	89.75
96.0	46.20	373.31	75.00	-	-	86.0	15.52	54.58
92.0	31.75	218.35	1965 Capacity			84.0	12.36	26.75
90.0	23.77	163.00	100.0	61.22	548.66	82.0	4.81	10.18
88.0	19.76	119.51	96.0	46.20	334.59	80.0	2.27	3.25
84.0	14.88	50.49	92.0	28.94	185.69	78.0	0.72	0.32
80.0	5.50	11.26	90.0	23.69	133.12	77.0	0.11	0.04

47. REMARKS AND REFERENCES
 Land Use cultivated 6%, Pasture 83.0%, Woods 11%
 Geology Formation - 15% Duncan Sandstone, 85% Hennessey Shale
 () Includes both sediment and flood pools

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Wildhorse Creek No. 33

SCS-34 Rev. 6-66

NAME OF RESERVOIR

50-43b

DATA SHEET NO.

DAM	1. OWNER				2. STREAM Trib. of Wildhorse				3. STATE Oklahoma							
	4. SEC. 34 TWP. 1N RANGE 5W				5. NEAREST P.O. Duncan				6. COUNTY Stephens							
	7. LAT. 34° 31' 50" LONG. 97° 41' 20"				8. TOP OF DAM ELEVATION 105.0				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		100.0*		61.22		423.81		586.55		3-1-50					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
g. INACTIVE 1/		90.0		23.77		162.74		162.74		3-1-50						
17. LENGTH OF RESERVOIR				0.63 MILES				AV. WIDTH OF RESERVOIR				0.15 MILES				
WATERSHED	18. TOTAL DRAINAGE AREA				1.77 SQ. MI.				22. MEAN ANNUAL PRECIPITATION				31.00 INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA				1.67 SQ. MI.				23. MEAN ANNUAL RUNOFF				3.50 INCHES			
	20. LENGTH		1.70 MILES		AV. WIDTH		1.04 MILES		24. MEAN ANNUAL RUNOFF				330 AC.-FT.			
	21. MAX. ELEV.				225.0				MIN. ELEV.				76.0			
25. ANNUAL TEMP.: MEAN 62° RANGE -9° to 106°																
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.	
	3-1-50		-		-		Detail Topo		8 Ranges		23.77 (61.22)		162.7 (586.6)		.49 (1.78)	
	9-1-60		10.50		10.50		Detail Topo		8 Ranges		23.77 (61.22)		141.8 (565.6)		.43 (1.71)	
	8-10-65		4.95		15.45		Range		Contour (D) 8R 2'C.I.		23.69 (61.22)		133.7 (548.7)		.41 (1.66)	
	9-2-71		5.06		20.51		Range		Contour (D) 8R 2'C.I.		22.63 (60.28)		128.0 (520.5)		.39 (1.58)	
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				
9-1-60		20.97		2.00		1.19		20.97		2.00		1.19				
		(20.97)		(2.00)		(1.19)		(20.97)		(2.00)		(1.19)				
8-10-65		8.07		1.63		0.98		29.04		1.88		1.12				
		(16.91)		(3.42)		(2.04)		(37.88)		(2.45)		(1.46)				
9-2-71		5.70		1.13		0.67		34.70		1.69		1.01				
		(28.20)		(5.57)		(3.33)		(66.10)		(3.22)		(1.92)				
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				
9-1-60		85		2203		2203		1.23		12.89						
				(2203)		(2203)		(0.34)		(3.58)						
8-10-65		74		966		1805		1.16		17.84						
				(2690)		(2360)		(0.42)		(6.46)						
9-2-71		66 Sed.P. (3)		364		1452		1.04		21.32						
		89 Det.P. (3)		(5881)		(3216)		(0.55)		(11.27)						

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	100-96	96-92	92-90	90-88	88-84	84-80	80-76								
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
9-1-60	0	0	0	0	21	47	32								
8-10-65	0	16	7	1	15	41	20								
9-2-71	13	26	8	4	14	22	13								
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. ^{2/} ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
<u>Original</u>	<u>Capacity</u>		<u>1971 Survey</u>			94.0	33.61	239.91							
76.0	.76	0	78.6	0	0	96.0	42.15	315.67							
80.0	5.50	11.04	80.0	2.34	1.64	98.0	51.21	409.03							
84.0	14.88	50.18	82.0	5.95	9.93	100.0	60.28	520.52							
88.0	19.76	119.06	84.0	10.78	26.66										
90.0	23.77	162.74	86.0	15.28	52.72										
92.0	31.75	218.34	88.0	18.67	86.67										
96.0	46.20	372.95	90.0	22.63	127.97										
100.0	61.22	586.55	92.0	27.85	178.45										
47. REMARKS AND REFERENCES															
1/ Sediment Pool															
2/ See attached sheet for 1960, 1965 Elevation-Area-Capacity Data															
Land Use: 42% Grassland; 56% Woodland; 2% Miscellaneous - 1971															
6% Cropland; 81% Grassland; 11% Woodland; 2% Miscellaneous - 1960															
Geology: 85% Hennessey Shale, 15% Duncan Sandstone Permian Age															
Land Resource Area: Cross Timbers															
(): Figures in parenthesis include sediment and flood pools.															
48. AGENCY MAKING SURVEY Oklahoma Watershed Planning Staff															
49. AGENCY SUPPLYING DATA S.C.S. U.S.D.A.															
50. DATE March 9, 1972															