

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Site No. 23, Upper Lake Fork Watershed

SCS-34 Rev. 6-66

NAME OF RESERVOIR

51-35

DATA SHEET NO.

DAM	1. OWNER			2. STREAM <b>Sabine River</b>			3. STATE <b>Texas</b>					
	4. SEC. <b>TWP.</b> RANGE			5. NEAREST P.O. <b>Sulphur Springs</b>			6. COUNTY <b>Hopkins</b>					
	7. LAT. " LONG.			8. TOP OF DAM ELEVATION <b>468.7</b>			9. SPILLWAY CREST ELEV. <b>462.5</b>					
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		462.5 1/		319.0		2962.0		3303.5		4-19-62	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY											
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN	
	f. CONSERVATION		448.1 2/		82.7		101.5		341.5		4-19-62	
g. INACTIVE		446.7 3/		64.0		240.0		240.0				
WATERSHED	17. LENGTH OF RESERVOIR <b>2.41</b> MILES				AV. WIDTH OF RESERVOIR <b>0.24</b> MILES							
	18. TOTAL DRAINAGE AREA <b>9.39</b> SQ. MI.				22. MEAN ANNUAL PRECIPITATION <b>43.57 (37)</b> INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA <b>8.80</b> SQ. MI.				23. MEAN ANNUAL RUNOFF <b>9.5</b> INCHES							
	20. LENGTH <b>17.6</b> MILES		AV. WIDTH <b>0.53</b> MILES		24. MEAN ANNUAL RUNOFF <b>4757</b> AC.-FT.							
	21. MAX. ELEV. MIN. ELEV. <b>432.0</b>				25. ANNUAL TEMP: MEAN <b>64°F</b> RANGE <b>45°F - 82°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.			
	1/ 8-9-62		-	-	Range-Contour	42 R	319.0	3303.5	0.69			
	1/ 10-20-67		5.2	5.2			319.0	3282.9	0.69			
	2/ 8-9-62		-	-			82.7	341.5	-			
	2/ 10-20-67		5.2	5.2			80.1	328.7	-			
	3/ 8-9-62		-	-			(D)	64.0	240.0	-		
	3/ 10-20-67		5.2	5.2		60.7	230.5	-				
	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			
	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				
	1/ 10-20-67		20.6	3.96	0.45	20.6	3.96	0.45				
2/ 10-20-67		12.8	2.46	0.28	12.8	2.46	0.28					
3/ 10-20-67		9.5	1.83	0.21	9.5	1.83	0.21					
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					
3/ 10-20-67		56.4	258	258	0.76	3.96						
2/ 10-20-67		75.4 4/	394	394	0.72	3.75						
1/ 10-20-67		-	652	652	0.12	0.62						

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	1.5
	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
434.0	0.4	0.2	444.0	35.4	102.4	454.0	186.8	1117.3
436.0	2.2	2.7	446.7	60.7	230.5	456.0	217.0	1520.6
438.0	5.6	10.3	448.1	80.1	328.7	458.0	250.2	1987.4
440.0	8.7	24.5	450.0	114.5	512.5	460.0	287.6	2524.9
442.0	17.7	50.3	452.0	152.5	778.6	462.5	319.0	3282.9

47. REMARKS AND REFERENCES

- 1/ Total reservoir below emergency spillway crest (El. 462.5).
- 2/ Principal spillway crest (El. 448.1) including sediment pool.
- 3/ Sediment pool only.
- 4/ Average weight of sediment in reserve and detention pool.

48. AGENCY MAKING SURVEY      Soil Conservation Service  
 49. AGENCY SUPPLYING DATA      Temple, Texas  
 50. DATE      12-68

RESERVOIR SEDIMENT

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

DATA SUMMARY

Site No. 23, Upper Lake Fork Watershed

CS-34 Rev. 6-66

NAME OF RESERVOIR

51 - 35a

DATA SHEET NO.

DAM	1. OWNER			2. STREAM Sabine River			3. STATE Texas					
	4. SEC. TWP. RANGE			5. NEAREST P.O. Sulphur Springs			6. COUNTY Hopkins					
	7. LAT. 33° 00' 08" LONG. 95° 46' 10"			8. TOP OF DAM ELEVATION 468.7			9. SPILLWAY CREST ELEV. 462.5					
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		1/ 462.5		319.0		2962.0		3303.5		4-19-62	
	b. MULTIPLE USE											
	c. POWER											
	d. WATER SUPPLY											
	e. IRRIGATION										16. DATE NORMAL OPER. BEGAN	
	f. CONSERVATION		2/ 448.1		82.7		101.5		341.5			
	g. INACTIVE		3/ 446.7		64.0		240.0		240.0			
17. LENGTH OF RESERVOIR					2.41 MILES		AV. WIDTH OF RESERVOIR 0.24 MILES					
WATERSHED	18. TOTAL DRAINAGE AREA				9.39 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 43.57 (42) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA				8.89 SQ. MI.		23. MEAN ANNUAL RUNOFF 9.5 INCHES					
	20. LENGTH 17.6 MILES		AV. WIDTH 0.53 MILES		24. MEAN ANNUAL RUNOFF 4757 AC.-FT.							
	21. MAX. ELEV. 630		MIN. ELEV. 435		25. ANNUAL TEMP: MEAN 64° F RANGE 45° - 82° F							
	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.			
1 1 1 2 2 2	8- 9-62	-	-	Range-Contour (D)	42 R	319.0	3303.5	0.69				
	10-20-67	5.2	5.2		2' CI	319.0	3282.9	0.69				
	8- 9-77	9.8	15.0			319.0	3256.2	0.68				
	8- 9-62	-	-			82.7	341.5					
	10-20-67	5.2	5.2			80.1	328.7					
	8- 9-77	9.8	15.0			80.0	307.2					
26. DATE OF SURVEY		<del>30. PERIOD ANNUAL</del>	<del>31. MEAN ANNUAL</del>	<del>32. MEAN ANNUAL</del>	<del>33. PERIOD TOTAL</del>	<del>34. AV. ANNUAL</del>	<del>35. PER SQ. MI.-YEAR</del>	<del>36. TOTAL TO DATE</del>	<del>37. AV. ANNUAL</del>	<del>38. PER SQ. MI.-YEAR</del>	<del>39. TOTAL TO DATE</del>	<del>40. AV. ANNUAL</del>
3 3 3	8- 9-62	-	-			64.0	240.0					
	10-20-67	5.2	5.2			60.7	230.5					
	8- 9-77	9.8	15.0			59.8	209.8					
	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					
1 2 3	8- 9-77	26.7	2.72	0.31	47.3	3.15	0.35					
	8- 9-77	21.5	2.19	0.25	34.3	2.29	0.26					
	8- 9-77	20.7	2.11	0.24	30.2	2.01	0.23					
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- 9-77	63 Sed	P. 342.6	3/ 315.6	0.84	9.60							
8- 9-77	4/ 77	119.9	5/ 201.2	0.10	1.43							
8- 9-77	-	462.5	1/ 516.8									

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. 1977 ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
436.0	1.5	1.0	448.1	80.0	307.2	460.0	287.2	2499.1
438.0	4.2	6.5	450.0	114.4	490.8	462.5	319.0	3256.2
440.0	7.4	17.9	452.0	152.1	756.2			
442.0	14.4	39.3	454.0	186.5	1093.8			
444.0	33.4	85.7	456.0	217.0	1496.6			
446.7	59.8	209.8	458.0	250.1	1962.8			

47. REMARKS AND REFERENCES

- 1/ Total reservoir below emergency spillway crest (El. 462.5).
- 2/ Principal spillway crest (El. 448.1), including sediment pool.
- 3/ Sediment pool only.
- 4/ Average weight of sediment in reserve and detention pools.
- 5/ Pool between 462.5 and 446.7.

Land Resource Area: Texas Claypan Area.  
 Geology: Wills Point Formation of Lower Tertiary Age.

48. AGENCY MAKING SURVEY SCS, Temple, Texas  
 49. AGENCY SUPPLYING DATA SCS, Temple, Texas  
 50. DATE 1-78