

RESERVOIR SEDIMENT  
DATA SUMMARY

West Fork Mill Creek Reservoir  
(Winton Lake)  
NAME OF RESERVOIR

19-47  
DATA SHEET NO.

DAM	1. OWNER Corps of Engineers, U.S.A.				2. STREAM West Fork Mill Cr.		3. STATE Ohio									
	4. SEC. 16 TWP. RANGE Rt. 200 N. Long. 84-30 W.				5. NEAREST TOWN Cincinnati		6. COUNTY Hamilton									
	7. STREAM BED ELEVATION 635.5				8. TOP OF DAM ELEVATION 735.5		9. SPILLWAY CREST ELEV. 702.0									
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															
	b. FLOOD CONTROL		702.0		546		10,052		11,466 1/							
	c. POWER										12 Dec 1952					
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION		675.0		190		1,414		1,414							
	g. SEDIMENT															
	h. INACTIVE										21 May 1953					
17. LENGTH OF RESERVOIR 6.3 2/				MILES				AV. WIDTH OF RESERVOIR 0.14				MILES				
WATERSHED	18. TOTAL DRAINAGE AREA 29.5				SQ. MI.				22. MEAN ANNUAL PRECIPITATION (1953-1962) 37.23				INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA 28.6				SQ. MI.				23. MEAN ANNUAL RUNOFF 11.96				INCHES			
	20. LENGTH 10.5		MILES		AV. WIDTH 2.81		MILES		24. MEAN ANNUAL RUNOFF 18,820				AC.-F.T.			
	21. MAX. ELEV. 945				MIN. ELEV. 635.5				25. CLIMATIC CLASSIFICATION Humid							
	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.	
Dec. 1952 3/						Contour 1/		2 feet 1/		546		11,466 1/		388.7		
May 1961		8.42		8.42		Range (D)		35		546		11,207		379.9		
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				
May 1961		37.23		18,820		25,760 (1956)		158,480		18,820		158,480 (Dec. 1952 to May 1961)				
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				
May 1961		259		30.76		1.08		259		30.76		1.08				
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				
May 1961		71.8(4)		1,689		1,689		0.27		2.26		1,880.46		1,880.46		

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
	<u>Range in Elevation</u>			<u>Range in Feet</u>			<u>Percent of Total Sediment</u>					
May 1961	702 - 675			0 - 27			22					
	675 - 635.5			27 - 66.5			78					

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														
May 1961	16.04	14.00	10.45	7.30	9.26	9.61	23.94	6.69	2.16	0.55					
	4/						5/								

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV. ♡	INFLOW AC.-FT.
1953 6/	679.78	674.59	11,450	1958	686.78	674.96	24,780
1954	675.75	674.12	2,280	1959	698.96	674.52	19,620
1955	683.99	674.84	16,440	1960	681.29	674.92	14,960
1956	686.49	675.02	25,760	1961 6/	694.88	675.00	23,870
1957	689.73	674.84	19,320				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES  
 1/ Revised on basis of topographic maps developed for definite Project Report and Sedimentation Range data.  
 2/ Includes lengths of two unnamed tributaries 1.2 and 1.3 miles in length.  
 3/ Deliberate impoundment began 12 Dec 1952.  
 4/ Includes 6.84 percent in unnamed tributary 1.2 miles in length.  
 5/ Includes 8.56 percent in unnamed tributary 1.3 miles in length.  
 6/ Partial water years, Dec. 1952 thru Sept. 1953 and Oct. 1960 thru May 1961.

48. AGENCY MAKING SURVEY  
 49. AGENCY SUPPLYING DATA  
 50. DATE Revised November 1962

RESERVOIR SEDIMENT  
DATA SUMMARY

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS

WEST FORK LAKE  
NAME OF RESERVOIR

19-47a  
DATA SHEET NO.

DAM	1. OWNER Corps of Engineers, USA			2. STREAM West Fork Mill Ck.		3. STATE Ohio		
	4. SEC. TWP. RANGE			5. NEAREST P O Cincinnati		6. COUNTY Hamilton		
	7. LAT 39° 15' 37" LONG 84° 29' 22"			8. TOP OF DAM ELEVATION 735.5		9. SPILLWAY CREST ELEV. 702.0		
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		702.0	546	9,845	11,376	12 Dec 52	
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY						16. DATE NOR-MAL OPER. BEGAN	
	e. IRRIGATION							
	f. CONSERVATION		675.0	190	1,531	1,531	21 May 53	
g. INACTIVE								
WATERSHED	17. LENGTH OF RESERVOIR 6.3 MILES			18. AV. WIDTH OF RESERVOIR 0.14 MILES				
	18. TOTAL DRAINAGE AREA 29.5 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 39.64 (57) 1/ INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 28.6 SQ. MI.			23. MEAN ANNUAL RUNOFF 12.75 (21) 2/ INCHES				
	20. LENGTH 10.5 MILES		AV. WIDTH 2.81 MILES		24. MEAN ANNUAL RUNOFF 20,062 (21) 2/ AC.-FT.			
	21. MAX. ELEV. 945		MIN. ELEV. 635.5		25. ANNUAL TEMP MEAN 54.6 RANGE -17 to 109 (57) 1/			
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.
	Dec 52			Contour 3/	2 Feet 3/	557	11,376	
	May 61	8.42	8.42	Range (D)	35	557	11,117	0.591
	Jul 75	14.17	22.59	Range (D)	25	557	10,777	0.545
	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		
	Dec 52							
	May 61	37.23 (1953-1961)	18,820	25,760 (1956)	158,480	18,820	158,480 (12/52-5/61)	
	Jul 75	39.82 (1962-1974)	21,452	33,630 (1973)	303,987	20,472	462,467 (6/61-7/75)	
	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		
Dec 52								
May 61	259	30.8	1.08	259	30.8	1.08		
Jul 75	340	24.0	0.84	599	26.5	0.93		
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		
Dec 52								
May 61	71.8	1689	1689	0.27	2.26	1880		
Jul 75	71.6	1313	1453	0.23	5.27	1283		

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	55-60	50-55	45-50	40-45	35-40	30-35	25-30	20-25	15-20	10-15	5-10	CREST-5
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
Dec 52												
Jul 75 4/	1	3	8	13	23	37	7	2	2	1	1	2
May 61 5/			RANGE IN ELEVATION 702-675 675-635			DEPTH 0-27 27-67			% OF TOTAL SEDIMENT 22 78			

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														
Dec 52															
May 61	16	14	10	7	9	10	24	7	2	1					
Jul 75	6/12	24	6	13	12	18	9	4	1	1					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1953	679.78	674.59	11,450	1965	683.45	674.90	20,384
1954	675.75	674.12	2,280	1966	681.22	671.22	16,461
1955	683.99	674.84	16,440	1967	682.51	672.00	16,333
1956	686.49	675.02	25,760	1968	694.48	672.03	23,085
1957	689.73	674.84	19,320	1969	682.84	671.96	18,262
1958	686.78	674.96	24,780	1970	686.86	672.00	23,020
1959	698.96	674.52	19,620	1971	686.67	671.57	21,670
1960	681.29	674.92	14,960	1972	681.79	671.98	18,198
1961	694.88	674.88	26,171	1973	685.07	671.87	33,630
1962	688.09	672.17	20,898	1974	682.18	671.55	28,615
1963	692.28	674.89	17,040				
1964	697.23	670.00	19,870				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
ORIGINAL AREA-CAPACITY								
702	557	11,376	655	11	68	685	319	3,493
700	527	10,297	650	5	27	680	250	2,073
695	449	7,865	645	2	9	675	188	986
690	378	5,797	640	1	2	670	74	379
685	317	4,065	635	0	0	665	25	133
680	255	2,628	1975	AREA-CAPACITY		660	9	25
675	183	1,531	702	557	10,777	655	2	12
670	114	794	700	527	9,699	650	1	7
665	62	363	695	449	7,280	645	0	0
660	25	146	690	379	5,220	640	0	0

47. REMARKS AND REFERENCES
- 1/ Weather Station - Cincinnati - OBS.
  - 2/ Water Resources Data for Ohio (USGS).
  - 3/ Based on Topographic Maps developed for Definite Project Report and Sedimentation Range Data.
  - 4/ Distribution of total sediment from December 1952 to July 1975.
  - 5/ Sediment distribution for the period December 1952 to May 1961 was present at two elevations only.
  - 6/ Includes 6.84 percent in unnamed tributary 1.2 miles in length.
  - 7/ Includes 8.56 percent in unnamed tributary 1.3 miles in length.

48. AGENCY MAKING SURVEY Louisville District  
 49. AGENCY SUPPLYING DATA Corps of Engineers, U.S. Army  
 50. DATE March 1976