

RESERVOIR SEDIMENTATION
DATA SUMMARY

Grand Reservoir

22 - 1

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER State of Ohio			2. RIVER St. Marys & Wabash		3. STATE Ohio				
	4. SEC. TWP. 6S RANGE 2,3,4E		5. NEAREST TOWN Celina		6. COUNTY Mercer & Auglaize					
	7. STREAM BED ELEV. -			8. TOP OF DAM ELEV. -		9. SPILLWAY CREST ELEV. 870.73				
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							1844		
	b. POWER									
	c. WATER SUPPLY							16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION									
	e. CONSERVATION		870.73	15,748 1/	130,175 1/	130,175 1/		1844		
	f. INACTIVE									
WATERSHED	17. LENGTH OF RESERVOIR				MILES		AV. WIDTH OF RESERVOIR		MILES	
	18. TOTAL DRAINAGE AREA			118	SQ. MI.	22. MEAN ANNUAL PRECIPITATION			39	INCHES
	19. NET SEDIMENT CONTRIBUTING AREA			93	SQ. MI.	23. MEAN ANNUAL RUNOFF			INCHES	
	20. LENGTH		MILES		AV. WIDTH		MILES		24. MEAN ANNUAL RUNOFF	503 per sq. mi. * 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.		
	1844	-	-	-	-	15,748 1/	130,175 1/	1,103		
	Aug. 1940	96	96	Range recon.	8	15,748	106,605	903		
	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		
	Aug. 1940			503 per * sq. mi.			503 per * sq. mi.			
	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			
	Aug. 1940	23,570	245.5	2.64	23,570	245.5	2.64			
	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 P P M			
		a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE			
Aug. 1940	55 *	3,162	3,162	0.19	18.11	4,600 *	4,600*			

1/ At present spillway elevation (lowered in 1856). In 1844, surface area was 17,603 acres, storage capacity was 220,400, and elevation of top of pool was 876.1 msl.
Estimated

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, 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. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

Sanderson, E. E., Sedimentation of Reservoirs in Ohio, Ohio Water Resources Board, Bulletin 17, Columbus, Ohio, April 1948.

Brune, G. M., Rates of Sediment Production in Midwestern United States, U.S.D.A., SCS-TP-65, 40 pp., illus., processed, Milwaukee, Wis. Dec. 1948.

Drains into both Wabash River and Lake Erie. Originally built as a canal feeder lake. Also known as Lake St. Mary's.

Region 3, Soil Conservation Service
U. S. Dept. of Agriculture
Milwaukee, Wisconsin

48. AGENCY SUPPLYING DATA

49. DATE Sept. 23, 1949