

RESERVOIR SEDIMENTATION
DATA SUMMARY

O'Shaughnessy
NAME OF RESERVOIR

19 - 13
DATA SHEET NO.

24

DAM	1. OWNER City of Columbus			2. RIVER Scioto			3. STATE Ohio			
	4. SEC. Liberty and Concord Twp.			5. NEAREST TOWN Columbus			6. COUNTY Delaware			
	7. STREAM BED ELEV. -			8. TOP OF DAM ELEV. -			9. SPILLWAY CREST ELEV. 845			
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					Fall 1925				
	b. POWER									
	c. WATER SUPPLY	845	829 1/	16,673 1/	16,673 1/	16. DATE NORMAL OPER. BEGAN				
	d. IRRIGATION									
	e. CONSERVATION									
	f. INACTIVE					Fall 1925				
17. LENGTH OF RESERVOIR 7.3(1943); 7.8(1925) MILES; AV. WIDTH OF RESERVOIR 0.19 MILES										
WATERSHED	18. TOTAL DRAINAGE AREA 988 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 39 INCHES						
	19. NET SEDIMENT CONTRIBUTING AREA 987 SQ. MI.			23. MEAN ANNUAL RUNOFF INCHES						
	20. LENGTH MILES		AV. WIDTH MILES		24. MEAN ANNUAL RUNOFF 649 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.		
	Fall 1925	-	-	-	-	829	16,673	16.9		
	Sep-Nov 1934	9.0	9.0	Range detailed	65	829	15,604	15.8		
	Sep-Dec 1942	8.0	17.0	"	65	829	14,538	14.7		
	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		
	Sep-Dec 1942		673 per * sq. mi.				673 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			
	Sep-Nov 1934	1,069	119	0.121	1,069	119	0.121			
Sep-Dec 1942	1,066	133	0.135	2,135	126	0.128				
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			
Sep-Nov 1934	65 *	171	171	0.71	6.41		350 *			
Sep-Dec 1942	65 *	191	181	0.76	12.81					

1/ With 3-foot flashboards added in May 1945, the surface area is 945 acres and storage capacity 17,000 acre-feet. All figures, however, are based upon the permanent spillway elevation of 845.

* 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
Eakin, H.M., and C.B. Brown, Silting of Reservoirs, U.S.D.A. Technical Bulletin 524, Washington, D.C., August 1939.								

47. REMARKS AND REFERENCES
 Sanderson, E.E., Sedimentation of Reservoirs in Ohio, Ohio Water Resources Board, Bulletin No. 17, Columbus, Ohio, April 1948.
 Brune, Gunnar M., Rates of sediment production in Midwestern United States, U. S. Soil Conserv. Serv., SCS-TP-65, 40 pp., illus., processed, Milwaukee, Wis. Dec. 1948.
 Brune, Gunnar M., Discussion of "Reservoir Problems," by Thomas Maddock, Jr. Proceedings, Federal Inter-Agency Sedimentation Conference, Denver, Colo. May 1947.
 Edwards, A.M., Silting of the O'Shaughnessy Reservoir, Civil Engin. 6(8):511-512, 1936
 Region 3, Soil Conservation Service
 U. S. Dept of Agriculture
 Milwaukee, Wisconsin

48. AGENCY SUPPLYING DATA
 49. DATE July 22, 1949

RESERVOIR SEDIMENTATION
DATA SUMMARY

O'Shaughnessy
NAME OF RESERVOIR

19-13a
DATA SHEET NO.

DAM	1. OWNER City of Columbus			2. RIVER Scioto			3. STATE Ohio									
	4. SEC. TWP. & RANGE Liberty & Concord TWP			5. NEAREST TOWN Dublin			6. COUNTY Delaware									
	7. STREAM BED ELEV.			8. TOP OF DAM ELEV.			9. SPILLWAY CREST ELEV. 845									
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										Fall 1925					
	b. POWER															
	c. WATER SUPPLY		845		829 1/2		16,673 1/2		16,673 1/2		16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION															
	f. INACTIVE										Fall 1925					
WATERSHED	17. LENGTH OF RESERVOIR 7.3 (1943); 7.8 (1925) MILES						AV. WIDTH OF RESERVOIR 0.19 MILES									
	18. TOTAL DRAINAGE AREA 988 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 39 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 987 SQ. MI.				23. MEAN ANNUAL RUNOFF INCHES											
	20. LENGTH MILES; AV. WIDTH MILES				24. MEAN ANNUAL RUNOFF 649 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.	
	Fall 1925		-		-		-		-		829		16,673		16.9	
	Sept.-Nov. 1934		9.0		9.0		R. Detail		65		829		15,604		15.8	
	Sept.-Dec. 1942		8.0		17.0		"		65		829		14,538		14.7	
	July 1951		9		26		"		38		829		14,162		14.3	
	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		d. MEAN ANNUAL		e. TOTAL TO DATE			
	Sept.-Dec. 1942		-		673* per sq. mi.		-		-		673* 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		d. TOTAL TO DATE		e. AV. ANNUAL		f. PER SQ. MI.-YEAR			
Sept.-Nov. 34		1,069		119		0.121		1,069		119		0.121				
Sept.-Dec. 42		1,066		133		0.135		2,135		126		0.128				
July 51		559#		62.2#		0.063#		2,757#		106#		0.107#				
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		c. AV. ANNUAL		d. TOT. TO DATE		e. PERIOD		f. TOT. TO DATE		
Sept.-Nov 34		65*		171		171		0.71		6.41		-		350*		
Sept.-Dec 42		65*		191		181		0.76		12.81		-		-		
July 1951		44.2		60.5		103		0.62		16.2		-		-		

1/ With 3-ft. flashboards added in May 1945, the surface area is 945 acres and storage capacity 17,000 acre-feet. All figures, however, are based upon the permanent spillway elevation of 845.

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

Hahn, C. L., Sedimentation of Reservoirs in Ohio, Ohio Div. of Water, Bulletin No. 24, Columbus, Ohio, July 1954.

Sanderson, E. E., Sedimentation of Reservoirs in Ohio, Ohio Water Resources Board, Bulletin No. 17, Columbus, Ohio, April 1948.

48. AGENCY SUPPLYING DATA Ohio Division of Water

49. DATE June 24, 1954