

RESERVOIR SEDIMENT
DATA SUMMARY
SCS-34 Rev. 6-62

Liberty Reservoir
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

4-16

DATA SHEET NO.

DAM	1. OWNER City of Baltimore		2. STREAM Patapsco		3. STATE Maryland				
	4. 39° 22' N 76° 50' W		5. NEAREST TOWN Wards Chapel		6. COUNTY Carroll-Baltimore				
	7. STREAM BED ELEVATION 260.0		8. TOP OF DAM ELEVATION 420		9. SPILLWAY CREST ELEV. 420.0				
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					22 July 1954			
	b. FLOOD CONTROL								
	c. POWER								
	d. WATER SUPPLY	420.0	3123	138,762.4	138,762.4	16. DATE NORMAL OPER. BEGAN			
	e. IRRIGATION					6 Feb. 1956			
	f. CONSERVATION								
	g. SEDIMENT								
	h. INACTIVE								
17. LENGTH OF RESERVOIR		8.5	MILES	AV. WIDTH OF RESERVOIR		0.57 MILES			
WATERSHED	18. TOTAL DRAINAGE AREA		164	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		42.6 INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA		159.1	SQ. MI.	23. MEAN ANNUAL RUNOFF		14.0 INCHES		
	20. LENGTH	18.5	MILES	AV. WIDTH	8.9	MILES	24. MEAN ANNUAL RUNOFF	122,446 AC.-FT.	
	21. MAX. ELEV.		900	MIN. ELEV.		260	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.	
22 Jul 54	-	-	-	-	3123	138,762.4	846.1		
16 Jun 62	7.9	7.9	Range(D)	62	3123	138,227.0	842.8		
SURVEY DATA	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		
16 Jun 62	535.4	67.77	.426	535.4	67.77	.426			
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		
	16 Jun 62	60*	557	557	.05	.39			

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.
1957	420.58	410.48					
1958	420.87	413.97					
1959	414.46	398.98					
1960	409.27	399.80					
1961	420.38	402.35					
1962	417.56	403.08					

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

47. REMARKS AND REFERENCES

*Assumed

48. AGENCY MAKING SURVEY Md. Watershed Planning Party, SCS, USDA

49. AGENCY SUPPLYING DATA SCS, USDA

50. DATE Aug. 15, 1962

RESERVOIR SEDIMENT
DATA SUMMARY

SCS-34 Rev. 6-66

LIBERTY RESERVOIR
NAME OF RESERVOIR

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Gregory Coleman

DATA SHEET NO.

DAM	1. OWNER City of Baltimore			2. STREAM Patapsco			3. STATE Maryland									
	4. SEC. TWP. RANGE			5. NEAREST P.O. Wards Chapel			6. COUNTY Carroll-Baltimore									
	7. LAT. 39° 22' " LONG. 76° 50' "			8. TOP OF DAM ELEVATION 420.0'			9. SPILLWAY CREST ELEV. 420.0'									
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										July 22, 1954					
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY		420.0				138,762.4		138,762.4		16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION										Feb. 6, 1956					
	f. CONSERVATION															
	g. INACTIVE															
WATERSHED	17. LENGTH OF RESERVOIR 8.5 MILES				AV. WIDTH OF RESERVOIR 0.57 MILES											
	18. TOTAL DRAINAGE AREA 164. SQ. MI.				22. MEAN ANNUAL PRECIPITATION 42.6 INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA 159.1 SQ. MI.				23. MEAN ANNUAL RUNOFF 14.5 INCHES											
	20. LENGTH 9.4 MILES		AV. WIDTH 3.0 MILES		24. MEAN ANNUAL RUNOFF 126,818.74 AC.-FT.											
	21. MAX. ELEV. 900' MSL		MIN. ELEV. 260 MSL		25. ANNUAL TEMP.: MEAN 51.8 RANGE 93- 0											
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.	
	Feb. 6, 1956		-		-		-		-		3123		138,762.4		1.094	
	June 11 - 22, 1962		7.9		7.9		Detailed Range		62		3123		138,227.0		1.090	
	August, 1973		11.2		19.1		"		46		3123		131,577.5		1.038	
	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			
	August 1973		64.25		-		-		-		-		-			
	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			
	Feb. 6, 1956		-		-		-		-		-		-			
June 11, 1962		535.40		67.60		.425		535.40		67.60		.425				
August, 1973		6649.5		593.71		3.23		7184.87		376.7		2.364				
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		
June 11, 1962		60 *		555.4		555.4		.049%		.386%		-		-		
Aug. 1973		75		6193.78		3861.59		.271		5.178		-		-		

*Not based on representative sample - Normal sediment wt. factor used to convert sediment volume to weight.