U.S. DEPARTMENT OF AGRICULTURE — SOIL CONSERVATION SERVICE

RESERVOIR SEDIMENTATION DATA SUMMARY

Stronach — NAME OF RESERVOIR

22-2 — DATA SHEET NO.

DAM

1. OWNER Consumers Power Co.	2. RIVER Pine R. of the Manistee	3. STATE Michigan
4. SEC. 16 TWP. 21 N RANGE 13 W	5. NEAREST TOWN 3 E Wellston	6. COUNTY Manistee
7. ~~STREAM BED~~ ELEV. Tailwater 695.8	8. TOP OF DAM ELEV.	9. SPILLWAY CREST ELEV. 712.3

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					
b. POWER	712.3	88.0	640	640	1912
c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN
d. IRRIGATION					
e. CONSERVATION					1912
f. INACTIVE					

17. LENGTH OF RESERVOIR 2.0 MILES — AV. WIDTH OF RESERVOIR 0.069 MILES

WATERSHED

18. TOTAL DRAINAGE AREA 291 SQ. MI.	22. MEAN ANNUAL PRECIPITATION 32.79 (17yrs) INCHES
19. NET SEDIMENT CONTRIBUTING AREA 233 SQ. MI.	23. MEAN ANNUAL RUNOFF INCHES
20. LENGTH MILES — AV. WIDTH MILES	24. MEAN ANNUAL RUNOFF 690 A/F./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 1/ AC.-FT. PER SQ. MI.
1912	-	-	-	-	88.0	640	2.2
Jan. 20/21, 1953	41	41	Range (D)	4	16.0	27	0.093

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	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
Jan. 20/21, 1953	613 (716)	14.9 (17.5)	0.064 (0.075)	613 (716)	14.9 (17.5)	0.064 (0.075)

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
Jan. 20/21, 1953	110.4 (3)	154 (180)	154 (180)	2.33	95.8	-	-

1/ C/I ratio 0.0032 in 1912 and 0.00013 in 1953. Trap efficiency estimated at 15% in 1912 and 0% in 1953.

*Assumed

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 LENGH 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 Sediment in Tippy Reservoir (downstream) must also be included to obtain a rate of sediment production from the watershed.

Above-crest deposits were measured only within original reservoir area. Additional above-crest deposits undoubtedly extends far upstream.

Letter of Dec.22,1952 from Consumers Power Co. states that reservoir has had no appreciable capacity for better than 25 years, heavy sediment concentration has caused severe wear on turbine parts, and plant may be retired in next year or two.

Mechanical analysis shows: 3% gravel, 3% very coarse sand, 8% coarse sand, 70% medium sand, 15% fine sand, and 1% very fine sand.

48. AGENCY SUPPLYING DATA SCS, Milwaukee, Wis. 49. DATE Feb. 1, 1953