

RESERVOIR SEDIMENTATION  
DATA SUMMARY

DORENA

74-17

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER Dept. of Army, C of E			2. RIVER Row		3. STATE Oregon		
	4. SEC. 32 TWP. 20 S RANGE 2 W			5. NEAREST TOWN Cottage Grove		6. COUNTY Lane		
	7. STREAM BED ELEV. 732			8. TOP OF DAM ELEV. 865.7		9. SPILLWAY CREST ELEV. 835		
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	835	1835	70,500	77,500	10/23/49		
	b. POWER	-	-	-	-	16. DATE NORMAL OPER. BEGAN		
	c. WATER SUPPLY	-	-	-	-	11/27/49		
	d. IRRIGATION	-	-	-	-			
	e. CONSERVATION	832	1770	64,900	71,900			
	f. INACTIVE	770.5	500	7,000	7,000			
WATERSHED	17. LENGTH OF RESERVOIR 4.7 MILES			AV. WIDTH OF RESERVOIR 0.61 MILES				
	18. TOTAL DRAINAGE AREA 265 SQ. MI.		22. MEAN ANNUAL PRECIPITATION (45 yrs) 54 INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 262 SQ. MI.		23. MEAN ANNUAL RUNOFF (16 yrs) 38 INCHES					
	20. LENGTH 24 MILES		AV. WIDTH 11 MILES		24. MEAN ANNUAL RUNOFF (16 yrs) 542,300 AC.-FT.			
	21. MAX. ELEV. 5953		MIN. ELEV. 732		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.
	23 Oct. 1949					1835	77,500	292
	22-26 Sep. 1958	8.9	8.9	Range	16	1835	77,150	291
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE-Feet			36. WATER INFL. TO DATE AC.-FT.		
	22-26 Sep. 1958	61	a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE	
			645,000	890,000	5,740,000	645,000	5,740,000	
	26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE-Feet			38. TOTAL SED. DEPOSITS TO DATE ACRE-Feet			
	22-26 Sep. 1958	a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YR.	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YR.	
		350	39.3	0.150	350	39.3	0.150	
	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	
22-26 Sep. 1958	--	a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TO DATE	a. PERIOD	b. TO DATE	
		--	--	0.051	0.452	--	--	

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION												
	-15	15-35	35-55	55-75	75-95								
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
22-26 Sept. 1958	6	13	26	35	20								

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															
22-26 Sept. 1958	10	15	19	16	17	13	8	2	0	0					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1950	832.3	769.9	584,700	1956	838.41	770.11	904,700
1951	832.69	770.05	731,400	1957	831.89	770.40	535,000
1952	834.03 <sup>2/</sup>	770.11	670,920	1958	834.69 <sup>2/</sup>	749.0 <sup>3/</sup>	553,600
1953	834.34 <sup>2/</sup>	770.26	603,100				
1954	830.58	770.30	642,600				
1955	834.09 <sup>2/</sup>	770.14	466,200				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
732	0	0	820	1,440	52,300	Max. Conservation Pool Full Pool (Spillway Crest)		
760	290	2,800	830	1,720	68,300			
(M.P.) 770.5	500	6,730	832	1,770	71,900			
780	630	12,390	835	1,835	77,500			
790	800	19,450	840	2,010	87,300			
800	1,000	28,400	850	2,190	108,300			
810	1,190	39,300	860	2,325	131,000	Maximum Pool		

47. REMARKS AND REFERENCES  
 Ref: Report on Dorena Reservoir Sediment Ranges Established Oct-Dec. 1952 (Pub.)  
 Report on Silting in Dorena Reservoir, Row River, Oregon. 1949-1958 (Unpublished)  
 Sediment consists of buff to grey-colored material comprised principally of silt with some clay and fine to coarse sand.

1/ Based on long term normal.  
 2/ Pool raised above maximum conservation pool for debris removal.  
 3/ Pool lowered below minimum conservation pool to facilitate poisoning of trash fish.

48. AGENCY SUPPLYING DATA Department of the Army, CE, Portland District, Hydrology & Meteorology Section

49. DATE 23 October 1958