

RESERVOIR SEDIMENT DATA SUMMARY

Daniels

NAME OF RESERVOIR

65 - 4

DATA SHEET NO.

DAM	1. OWNER St. Johns Irrigation Co		2. STREAM Little Malad River		3. STATE Idaho			
	4. SEC. SE 1/4 26 TWP. 12S RANGE 34E		5. NEAREST P.O. Malad City 14NW		6. COUNTY Oneida			
	7. LAT. 42° 16' 51" LONG 121° 26' 42"		8. TOP OF DAM ELEVATION 5172		9. SPILLWAY CREST ELEV. 5162.5			
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					10/67		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION	5162.5	375	7788	8788	4/68		
	f. CONSERVATION							
g. INACTIVE 1/	5125.0	78	1000	1000				
WATERSHED	17. LENGTH OF RESERVOIR 1.75 MILES		AV. WIDTH OF RESERVOIR 0.33 MILES					
	18. TOTAL DRAINAGE AREA 114.4 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 14.3 (Malad) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 13.8 SQ. MI.		23. MEAN ANNUAL RUNOFF 1.0 INCHES					
	20. LENGTH 15.4 MILES		AV. WIDTH 7.4 MILES		24. MEAN ANNUAL RUNOFF 6101 AC.-FT.			
	21. MAX. ELEV. 8801		MIN. ELEV. 5082		25. ANNUAL TEMP: MEAN 46.7 RANGE 10°-90°F			
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.
	Oct. 1967	--	--	--	--	375 ^{3/}	8788 ^{3/}	1.44
	Oct. 1980	13.0	13.0	Range (R)	14R ^{2/}	78 ^{1/} 370 ^{3/} 54 ^{1/}	1000 ^{1/} 7095 ^{3/} 568 ^{1/}	1.16
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET			36. WATER INFL. TO DATE, AC.	
	Oct. 1980	14.3		a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE
					No Inf.			
	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	
	Oct. 1980	1693	130.2	1.14	1693	130.2	1.14	
	26. DATE OF SURVEY	39. AV. DRY WGT., LBS. PER CU. FT.	40. SED. DEP., TONS PERSQ. 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	
Oct. 1980	70	1744	1744	1.5	19.3			

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
Oct. 1980	7	4	9	21	30	10	12	3	4						
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
Oct. 1980	2	9	10	16	21	16	10	5	13	3					
45. RANGE IN RESERVOIR OPERATION															
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.								
No Information															
ELEVATION-AREA-CAPACITY DATA															
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY							
<u>1962 Survey</u>						30	575	200							
10	60	0	60	3190	2680	40	1150	480							
20	125	60	70	5000	4700	50	2075	1070							
			80	7000	7650										
30	600	250	82.5	7500	8788	60	3170	2140							
<u>1980 Survey</u>						70	4985	4520							
40	1175	625	10	20	0	80	6990	7425							
50	2100	1400	20	30	40	82.5	7500	8754							
47. REMARKS AND REFERENCES															
<p>1/ Fish and Sediment Pool 2/ Includes six ranges above 5162.5 3/ Total reservoir below 5162.5 Land Use in Watershed: 2% woodland, 60% range, 38% cropland Geology: 44% loess over Paleozoics, 38% Upper Paleozoic marine sediments, 10% Pliocene pyroclastics, 6% Lower Paleozoic carbonates and clastics, 1% tertiary intrusives, and 1% Pleistocene volcanics.</p>															
48. AGENCY MAKING SURVEY				Soil Conservation Service				50. DATE	June, 2, 1981						
AGENCY SUPPLYING DATA				Soil Conservation Service											

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DAM	1. OWNER St. Johns Irrig. Co.		2. STREAM Little Malad River		3. STATE Idaho			
	4. SEC. SE 26 TWP. 12 S RANGE 34 E		5. NEAREST P.O. Malad City 14NW		6. COUNTY Oneida			
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	a. FLOOD CONTROL					10/67		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION	5162.5	375	8788	8788	16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION							
	g. INACTIVE 1/	5125.0	78	1000	1000			
17. LENGTH OF RESERVOIR	1.75	MILES	AV. WIDTH OF RESERVOIR		0.33	MILES		
18. TOTAL DRAINAGE AREA	114.4	SQ. MI.	22. MEAN ANNUAL PRECIPITATION		14.3	INCHES		
19. NET SEDIMENT CONTRIBUTING AREA	113.8	SQ. MI.	23. MEAN ANNUAL RUNOFF		1.0	INCHES		
20. LENGTH	15.4	MILES	AV. WIDTH	7.4	MILES	24. MEAN ANNUAL RUNOFF	6101	AC.-FT.
21. MAX. ELEV.	8801	MIN. ELEV.	5082	25. ANNUAL TEMP.: MEAN		46.7	RANGE	10-90 F
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.
	Oct. 1967	--	--	--	--	375 ^{3/}	8788 ^{3/}	1.44
	Oct. 1980	13	13	Range (R)	14 ^{2/}	370 ^{3/}	7095 ^{3/}	1.16
	Oct. 1992	12	25	Range (R)	8 ^{4/}	370 ^{3/}	7846 ^{3/}	1.28
	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		
	Oct. 1980	14.3 Malad		No Information				
	Oct. 1992	14.3 Malad		No Information				
	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	
Oct. 1980	1693	130.2	1.14	1693	130.2	1.14		
Oct. 1992	-751	-62.6	-0.55	942	37.7	0.33		
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	
Oct. 1980	70	1736	1736	1.5	19.3			
Oct. 1992	30	5/	577	0.4	10.7			

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, 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
1962			1980			1992		
10	60	0	10	20	0	10	40	0
20	125	60	20	30	40	20	70	50
30	600	250	30	575	200	30	585	220
40	1175	625	40	1150	480	40	1160	545
50	2100	1400	50	2075	1070	50	2085	1215
60	3190	2680	60	3170	2140	60	3180	2380
70	5000	4700	70	4985	4520	70	4990	4600
80	7000	7650	80	6990	7425	80	6995	7525
82.5	7500	8788	82.5	7500	8754	82.5	7500	8770

REMARKS AND REFERENCES

1/ Fish and Sediment Pool
 2/ Includes six ranges above 5162.5
 3/ Total reservoir below 5162.5
 4/ 8 Original ranges from 1980 survey, below 5162.5
 5/ Period sediment not calculated due to "MINUS" situation

Land use in watershed: 2% woodland, 60% range, 38% cropland
 Geology: 44% loess over Paleozoics, 38% Upper Paleozoic marine sediments,
 10% Pliocene pyroclastics, 6% Lower Paleozoic carbonates and clastics,
 1% Tertiary intrusives and 1% Pleistocene volcanics