

RESERVOIR SEDIMENT DATA SUMMARY

RENWICK

30-20

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER <u>Pembina Co. Water Board</u>			2. STREAM <u>Tongue River</u>		3. STATE <u>North Dakota</u>		
	4. SEC. <u>10</u> TWP. <u>161 N</u> RANGE <u>55 W</u>			5. NEAREST P.O. <u>Cavalier</u>		6. COUNTY <u>Pembina</u>		
	7. LAT. <u>48° 46' 30"</u> LONG. <u>97° 45' 00"</u>			8. TOP OF DAM ELEVATION <u>989</u>		9. SPILLWAY CREST ELEV. <u>982.8</u>		
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		982.8	421	1114.40	5290.29	12/62	
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY		970	220	727.50	1225.49	16. DATE NORMAL OPER. BEGAN	
	e. IRRIGATION							
	f. CONSERVATION							
g. INACTIVE		957.3	53	123.05	303.19			
WATERSHED	17. LENGTH OF RESERVOIR			2.0 MILES		AV. WIDTH OF RESERVOIR .25 MILES		
	18. TOTAL DRAINAGE AREA			44.6 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 18.8" (84) INCHES		
	19. NET SEDIMENT CONTRIBUTING AREA			44 SQ. MI.		23. MEAN ANNUAL RUNOFF 1.0 INCHES		
	20. LENGTH 25 MILES		AV. WIDTH 9 MILES		24. MEAN ANNUAL RUNOFF 1/2378.5 AC.-FT.			
	21. MAX. ELEV. 1660		MIN. ELEV. 940		25. ANNUAL TEMP.: MEAN 39.1° RANGE -41° to 110°			
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.
	12-62	-	-	-	-	2/421	3/1529.2	-
	8-90	27.67	27.67	Range	7	3/220	3/1432.7	.602
	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	
	8-90	18.8"	15,494	36,272	428,719	15,494	428,719	
	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	
	8-90	96.5	3.49	.079	96.5	3.49	.079	
	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	
8-90	4/68.6	118	118	5/.28	5/7.9	15,452	15,452	

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														
8-90	0			59%						41%					

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

REMARKS AND REFERENCES

1/ Based on contributing drainage area of 44.6 square miles.
 2/ At elevation 982.8
 3/ At elevation 971.2
 4/ Sample R-101, 8-90
 5/ Using normal operating level of 970 feet (el. of orifice)

48. AGENCY MAKING SURVEY SCS
 49. AGENCY SUPPLYING DATA SCS

50. DATE 7/92