

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

RESERVOIR SEDIMENTATION
DATA SUMMARY

Pathfinder

NAME OF RESERVOIR

34-5

DATA SHEET NO.

DAM	1. OWNER Bureau of Reclamation			2. RIVER North Platte			3. STATE Wyoming		
	4. SEC. 23 TWP. 29 N RANGE 84 W			5. NEAREST TOWN Alcova, Wyo.			6. COUNTY Natrona		
RESERVOIR	7. STREAM BED ELEV. 5666			8. TOP OF DAM ELEV. 5858.1			9. SPILLWAY CREST ELEV. 5850.1		
	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					June 1909			
	c. WATER SUPPLY								
	d. IRRIGATION	5850.1	22,600	1,051,300	1,056,300	16. DATE NORMAL OPER. BEGAN			
	e. CONSERVATION								
	f. INACTIVE 2/	5668.1	0	0	0	June 1909			
	17. LENGTH OF RESERVOIR 43 MILES			AV. WIDTH OF RESERVOIR 0.82 MILES					
	WATERSHED	18. TOTAL DRAINAGE AREA 10,700 3/ SQ. MI.			22. MEAN ANNUAL PRECIPITATION 8.2-14.8 INCHES				
19. NET SEDIMENT CONTRIBUTING AREA 10,665 4/ SQ. MI.			23. MEAN ANNUAL RUNOFF 2.38 4/ 0.66 5/ INCHES						
20. LENGTH 274 MILES AV. WIDTH 39 MILES			24. MEAN ANNUAL RUNOFF 1,358,930 4/ 116,005 5/ AC.-FT.						
21. MAX. ELEV. 12,005 MIN. ELEV. 5666			25. CLIMATIC CLASSIFICATION Semi-arid to arid						
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.	
	June 1909			Contour	10-ft. contours	22,600	1,056,300	98.7	
	July 1, 1950	41.1 (29.83 4/ 11.25 5/)	41.1	Range (D)	62	22,011	1,015,876	94.9	
	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		
			1,358,930 4/	2,399,830 (1917)	40,273,330	4/ 1,358,930 4/	50,633,590		
		8.2 - 14.8	913,700	1,279,980	10,360,260	5/ 913,700 5/	41,578,390 1/		
			116,005 6/	(Period 1939 1950 not determined)	1,305,060	6/ 116,005 6/			
	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		
		37,500 4/ 2,900 5/	1257 4/ 257.8 5/	0.118 4/ 0.078 5/	37,500 4/ 2,900 5/	1257 4/ 257.8 5/	0.118 4/ 0.078 5/		
	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	
		80.66 4/ 81.08 5a/	207 4/ 138 5a/	207 4/ 138 5a/	0.12 4/ 0.024 5/	3.82	1204 4/ 2887 5/	1263	

1/ North Platte Arm. 2/ Sweetwater Arm. 3/ Includes 7348 sq.mi. above Seminole Dam.
4/ Period June 1, 1909-April 1, 1939 = 29.83 yrs. 5/ Period April 1, 1939 to July 1, 1950 with Seminole Dam in operation = 11.25 yrs. 5a/ Period June 1, 1909-July 1, 1950.
(continued on reverse side)

25. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
	Correct data not available 12-21-54											

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
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION													
	Not computed													

45.

8/

RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1939	5813.60	5710.73	658,440	1946	5810.32	5726.94	985,540
1940	5764.33	5713.33	552,810	1947	5820.39	5749.91	880,070
1941	5775.61	5717.11	745,890	1948	5834.41	5766.38	1,023,070
1942	5805.18	5721.04	824,420	1949	5844.07	5776.78	1,279,980
1943	5803.44	5720.59	961,840	1950	5851.55	5815.16	1,242,480
1944	5807.65	5717.16	904,900				(928,280 to
1945	5809.12	5724.32	811,640				July 1, 1950)

46.	ELEVATION-AREA-CAPACITY DATA								
	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
	5690	0	0	5770	4632	112,594	5850.1	22011	1,015,876
	5700	37	111	5780	5513	163,138	5855	23839	1,128,178
	5710	123	898	5790	6680	223,538			
	5720	351	2899	5800	8108	296,931			
	5730	818	8261	5810	9938	386,664			
	5740	1573	19786	5820	12465	498,512			
	5750	2621	40909	5830	15528	637,931			
	5760	3599	71912	5840	18835	809,534			

47.	REMARKS AND REFERENCES											
8/	Includes inflow from Seminole Reservoir. Reservoir elevations obtained from North Platte Project reports through 1942, then from USGS Water Supply Papers. Elevations corrected to datum of USGS BM 5848 at Pathfinder Dam. Elevations are based on elevation of 5848.16 ft. at Pathfinder Dam. To convert these elevations to the orig. construction datum, add 1.9 feet to the elevations shown. Example: Spillway elev. of 5850.1 + 1.9 = 5852.0 (orig. constr. datum). "Sedimentation Surveys of Pathfinder and Seminole Reservoirs North Platte River, Wyo." L.M. Seavy & F.K. Illk, Hydrology Branch, RR, Denver, Colo; North Platte River Project Reports of water surface elevations, inflow and outflow of Pathfinder & Seminole Reservoirs, North Platte Project											
48.	AGENCY SUPPLYING DATA Bureau of Reclamation DATE 12-17-54											

- 6/ Runoff from 3315 sq. miles sediment contributing area only.
- 7/ Total inflow to Pathfinder Res. 1909-1939 plus inflow from 3315 miles during 1939-1950. 9/ There is no set ele. for inactive storage. By agreement with the irrig. dist., it was decided to leave an inactive storage pool of 5,000 acre-feet.