



United States
Department of
Agriculture

Soil
Conservation
Service

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JUN 07 1995

Department of Water Resources

Subject: ENG - Chesterfield Reservoir

Date: June 5, 1995

To: Gary Spackman
State of Idaho
Department of Water Resources

File code:

We just received your letter dated June 1, 1995. Enclosed you will find some reservoir contour topography and incremental stage-storage graphs.

We will talk to you soon to get a possible date to get started working with you and your staff on this project.

T. Allen
Civil Engineer

TIM

I HADN'T SEEN THIS
UNTIL NOW. UPON
REVIEWING IT, I FIND
SEVERAL MISTAKES WHICH
REDUCES THE RESV CAPACITY
TO $\approx 20,000$ AC-FT. THIS
IS \approx CAPACITY SONNY & I
CALCULATED PREVIOUSLY
FROM INITIAL SCS DATA.

112196



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United States Department of Agriculture

CHESTERFIELD CAPACITY DATA

ELEVATION (Ft)	AREA (In ²)	SURFACE AREA (Acres)	SURFACE AREA CUMULATIVE (Acres)	VOLUME (Acre-Ft)	VOLUME CUMULATIVE (Acre-Ft)
5350		0	0	0	0
5355	2.07	48	48	0-120	0-120
5360	4.82	111	159	397-397.5	397-517.5
5365	7.20	165	324	690-690	1087-1207.5
5370	9.60	220	544	963-962.5	2050-2170
5375	13.90	319	863	1348-1347.5	3398-3517.5
5380	18.35	421	1284	1847-1850	5245-5367.5
5385	23.50	539	1823	2400-2400	7645-7767.5
5390	31.15	715	2538	3135-3135	10780-10902.5
5395	48.65	1117	3655	4580-4580	15360-15482.5
5398	54.60	1253	4908	5925-3555	21285-19037.5
5400	63.22	1451	6359	6760-2704	28045-21741.5

At 5398.87 (SPILLWAY CREST) - 1339 AC

(1127.5)

20165 AC-FT

Determine capacity (C) of Chesterfield Reservoir at the spillway elevation of 5398.87 Ft. by interpolation.

$$\frac{5400-5398}{28045-21285} = \frac{5398.87-5398}{C-21285}$$

$$\frac{2}{6760} = \frac{.87}{C-21285}$$

$$2C-42570 = 5881.2$$

$$2C = 48451.2$$

$$C = 24225.6 \text{ Acre/Ft. @ } 5398.87 \text{ Ft.}$$

Note: Erve Gilbert called me at home the evening of April 12, 1995 to tell me that a survey was done in 1953 by Hammilton and Boller out of Pocatello. They used a USGS BM, elev. 5453.52 out by the town of Chesterfield to get an elevation of 5398.19 on the spillway of the reservoir.