



IDAHO DEPARTMENT OF
WATER RESOURCES

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Governor Brad Little

Director Mathew Weaver

January 26, 2024

Travis L. Thompson
Marten Law
PO Box 63
Twin Falls, ID 83303-0063

RE: Bray Lake Water Right & Dam Safety Report Storage Volume Discrepancy

Dear Mr. Thompson:

You wrote a letter to me on July 5, 2022, relating to a discrepancy in storage volume values on IDWR's 2018 and 2022 IDWR dam safety inspection reports and several water rights associated with Bray Lake in Gooding County. Specifically, the IDWR dam safety inspection reports identify a storage volume of 2693 acre-feet and the water rights and SRBA decrees associated with the facility include conditions indicating a "*reservoir storage capacity of 4365 acre-feet.*" The storage volume listed on IDWR's dam safety inspection reports was based on an analysis outlined in an April 20, 2018 dam safety memo. Your letter referenced a letter dated February 12, 2020 from Greg Sullivan detailing why the reservoir storage capacity should be listed as 4365 acre-feet, rather than the 2693 acre-feet listed in IDWR's Dam Safety Inspection Reports. Mr. Sullivan's letter referenced copies of various documents included with the letter to support his opinion.

I met with you and Gary and Helen DeMoss (owners of Bray Lake Dam & Reservoir) on September 27, 2022 to discuss the matter. During this meeting, I indicated that Mr. Sullivan's letter was shared with IDWR's Dam Safety Program Manager, and it was decided not to change the 2693 acre-feet value in the department's dam safety records. During this meeting, we also discussed hypothetical scenarios involving the water rights associated with Bray Lake.

I understand that in late December, you spoke with Shelley Keen, IDWR Deputy Director, concerning this matter. Mr. Keen asked me to further review the matter and report back to you. Recently, Tyler Wallace an Engineer Associate responsible for IDWR's Southern Region dam safety program, and I further reviewed the analysis outlined in the April 20, 2018 dam safety memo and the information provided in the February 12, 2020 letter from Greg Sullivan.

The review of the analysis outlined in the April 20, 2018 dam safety memo revealed essentially the same results. The 2024 analysis utilized newer (2021) aerial imagery than the 2018 analysis. The 2024 analysis yielded a storage capacity volume of 2685 acre-feet and the 2018 analysis yielded a storage capacity volume of 2693 acre-feet. A copy of a January 4, 2024, memo detailing this analysis is enclosed for reference.

An analysis of the information in the February 12, 2020 letter, apparently based on data from a 1957 survey (utilizing 1957 technology), yields results that do not correspond to more modern expected observations. Attachment 7 (figures 1-3) are the results of Mr. Sullivan superimposing the 1958 reservoir

plan with contour elevations onto newer maps &/or aerial images of the reservoir. While the general reservoir plan shape appears to match the reservoir, there are multiple contour lines intersecting the reservoir boundary (same elevation) on figures 1-3. For example, figure 1 superimposes the 1958 reservoir plan on the USGS quadrangle map which shows the reservoir elevation at 3722 MSL, a relatively low (less full) reservoir level. The reservoir area on the USGS quadrangle measures approximately 131.5 acres. Figure 1 shows contour lines from about the "52.0 elevation" through the "58.0 elevation" along the reservoir boundary shown on the USGS quadrangle. We know, however, that the water surface must be flat, so both 52.0 and 58.0 cannot represent the actual elevation. Utilizing the 1957 storage volume/contour table in Attachment 2, the "52.0 elevation" corresponds to a surface area of 133.64 acres (volume of 1344.03 acre-feet) and the "58.0 elevation" corresponds to a surface area of 157.14 acres (volume of 2215.47 acre-feet).

Mr. Wallace of our office attempted the same type of analysis that Mr. Sullivan performed in Attachment 7 (figures 1-3). This analysis compared the 1958 reservoir plan's contour lines with various years of aerial imagery. This produced similar results, with contour elevation discrepancies of around eight feet to ten feet around the reservoir edge. As noted above, because the water surface elevation must be flat, the 1958 reservoir plan cannot be completely accurate.

During our September 27, 2022 meeting, Gary and Helen DeMoss expressed concern about the Bray Lake storage volume listed on IDWR's dam safety reports potentially impacting their water rights. IDWR documenting the storage capacity volume in its dam safety reports does not change DeMoss's water rights. IDWR is simply updating the records in its dam safety program to show a storage volume capacity based on the most accurate information currently available. IDWR must maintain accurate dam safety records for public safety reasons.

Moving forward, IDWR will continue to list the 2693 acre-feet as the storage volume on the next dam safety report, unless more accurate survey information is provided. This letter, and all correspondence referenced, is included in the department's dam safety file(s) for Bray Lake Dam documenting the discrepancy in the dam safety and water right records.

Meanwhile, even if IDWR had the legal authority to modify the DeMoss's decreed water rights on its own initiative, IDWR has no plans to pursue such a step. While IDWR's dam safety program has concluded that the one-time storage capacity of Bray Lake Reservoir is less than the 4365 acre-feet "storage capacity" listed in the conditions of Water Rights 37-856, 37-857, 37-2778, 37-2780, and 37-7754 (see SRBA decrees and Transfer Nos. 77799 and 85056), overcoming conveyance losses between the point of diversion on Dry Creek and the reservoir may require a greater volume than the reservoir capacity. In addition, there may be opportunity for refilling or "topping off" of Bray Lake Reservoir up to an annual storage volume of 4365 acre-feet.

Refilling a reservoir under a single water right is not allowed unless the water right expressly states so. See, for example, IDAPA 37.03.08.035.03.v:

Impoundment (storage) applications shall show the maximum acre-feet requirement per year which shall not exceed the storage capacity of the impoundment structure unless the application describes a plan of operation for filling the reservoir more than once per year.

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Travis Thompson Bray Lake Letter
January 26, 2024

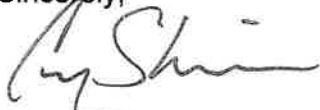
The partial decree for Water Right 37-856, which authorizes the storage of 760 acre-feet, states, "The reservoir may be refilled multiple times in a single year." The partial decrees for the other four Bray Lake Reservoir water rights have no refill provision. The inclusion of a refill provision on only one of the five water rights results in some uncertainty.

With that in mind, a practical interpretation of the storage opportunity under Water Rights 37-856, 37-857, 37-2778, 37-2780, and 37-7754 is that up to 4365 acre-feet may be diverted at the point of diversion each year to fill Bray Lake Reservoir, depending on water supply and priority administration. If the initial reservoir fill requires the diversion of less than 4365 acre-feet (measured at the diversion point on Dry Creek and including conveyance losses), refill or "topping off" of the reservoir may be possible later in the season until the annual maximum of 4365 acre-feet has been diverted for that purpose. Any refilling would be subject to water supply and priority administration.

In water district accounting, amounts diverted to storage will be applied to the most senior water rights first. Water rights 37-856 and 37-857 share the most senior priority date (2/1/1917) among the Bray Lake storage water rights. Once the 760 acre-feet and 190 acre-feet under rights 36-856 and 36-857, respectively, are diverted and stored in Bray Lake, the decreed volume under right 37-856 will have been utilized, and its refill provision will not apply. Any additional diversion to storage, up to the 4365 acre-feet total, will accrue to the more junior rights.

If you have any questions, or want to discuss the matter further, feel free to contact me at your convenience.

Sincerely,



Corey Skinner, PE
IDWR Southern Region Manager

Enclosure

cc: Gary and Helen DeMoss
IDWR Bray Lake Dam File
Water Right Files



TO: Corey Skinner
FROM: Tyler Wallace
PROJECT: Bray Lake Dam
IDWR FILE: 37-2778

CC: John Falk, Shelley Keen
DATE: January 4, 2024
NATDAM: ID00042

Memorandum regarding the re-evaluation of the storage capacity for Bray Lake.

This memorandum is in response to an inquiry by Travis Thompson, on behalf of Gary and Helen DeMoss, regarding a recent change in the IDWR dam safety maximum storage capacity value for Bray Lake Dam. In an interoffice memorandum dated April 20, 2018, Manuel Rauhut conducted an evaluation regarding the maximum reservoir storage capacity value for Bray Lake Dam as recorded in the IDWR dam safety database. Manuel concluded that the reservoir storage capacity be revised to represent observed conditions more accurately.

I was instructed to perform my own evaluation of the storage capacity for comparative purposes. Using aerial imagery, I calculated the surface area to be approximately 203.4 acres (see figure 1). Based on an IDWR survey of Bray Lake dam, which was conducted on 9/21/1992 and resurveyed on 9/6/2000, the hydraulic height (as measured from the outlet invert to the crest of the spillway) was reported to be 33.0 feet. The reservoir storage capacity can then be calculated using the standard storage capacity formula as follows:

$$\text{Reservoir Storage Capacity} = \text{Hydraulic Height} * \text{Reservoir Surface Area} * 0.4 \text{ (correction factor)}$$
$$\text{Reservoir Storage Capacity} = 33 \text{ feet} * 203.4 \text{ acres} * 0.4 = \mathbf{2685 \text{ acre feet}}$$

A comparison of my results opposed to the 2018 memo is shown below.

Memo	Reservoir Surface Area	Hydraulic Height	Reservoir Storage Capacity (Calculated)
2018	204 acres	33 feet	2,693 acre-feet
2024	203.4 acres	33 feet	2,685 acre-feet

The storage of water in Bray Lake is authorized under five decreed water rights with a condition limiting the combined storage capacity of all five water rights to 4,365 acre-feet. A similarly worded condition exists on the partial decree for each of the five water rights. These conditions indicate a "reservoir storage capacity of 4,365 acre-feet". The (irrigation) storage volume component for each water right is as follows:

- 37-0856 - 760 acre-feet
- 37-0857 - 190 acre-feet
- 37-2778 - 1,210 acre-feet
- 37-2780 - 905 acre-feet
- 37-7754 - 1,565 acre-feet

Conclusions and Recommendations

The reservoir storage capacity value I calculated in my analysis is nearly the same as what was calculated in the previous 2018 memo. Therefore, I recommend that the reservoir storage capacity, as recorded in the dam safety database, remains at 2,693 acre-feet as recommended in the 2018 memo.

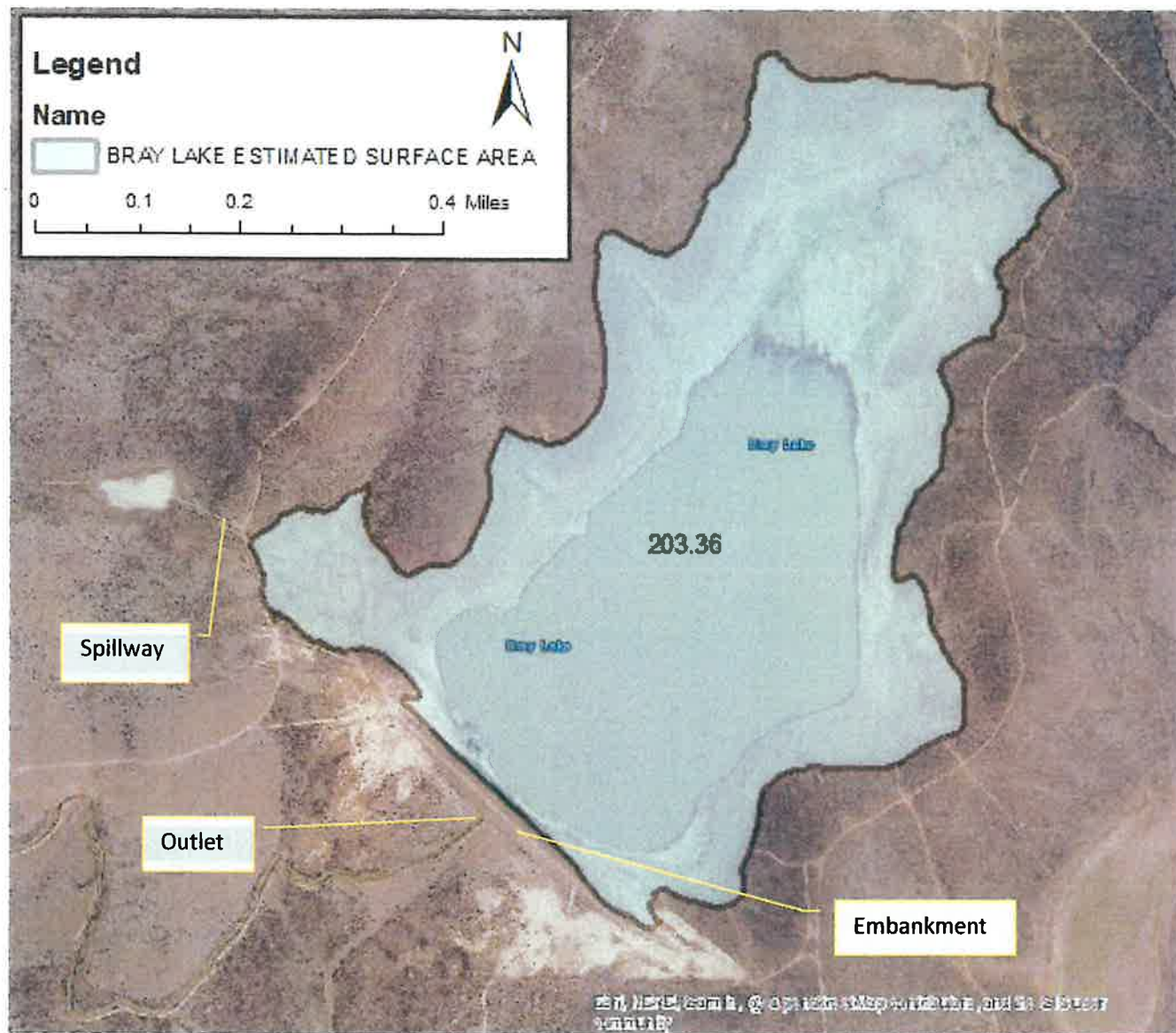


Figure 1. Aerial view of Bray Lake Dam with appurtenant features. The approximate surface area for the reservoir at or near full capacity was calculated using ArcMap and is shown in the above figure.



Barker Rosholt
& Simpson LLP

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July 5, 2022

VIA EMAIL & U.S. MAIL

Mr. Corey Skinner, Regional Manager
Idaho Dept. of Water Resources
Southern Regional Office
650 Addison Ave. West, Suite 500
Twin Falls, Idaho 83301-5858

**Re: Bray Lake Water Right Nos. 37-856 et al. / June 2, 2022 Dam and Reservoir
Certificate of Approval & Dam Safety Inspection Report**

Dear Corey:

This firm represents Gary & Helen DeMoss, owners of the following storage water rights to Bray Lake in Gooding County: 37-856, 37-857, 37-2778, 37-2780, and 37-7754. Combined, the water rights authorize the diversion and storage of up to 4,630 acre-feet from Dry Creek into Bray Lake. The water rights were all decreed in the Snake River Basin Adjudication on June 9, 2010.

IDWR issued a Dam and Reservoir Certificate of Approval and accompanying dam safety inspection report on June 2, 2022. The report lists a reservoir storage of "2,693 acre-feet." We are unclear as to the basis of this listed storage.

Greg Sullivan, on behalf of the DeMoss's, sent a letter to you dated February 12, 2020 describing the storage capacity of Bray Lake and why the capacity should not be revised downward as apparently recommended by a 2018 IDWR Memo (*Dam Safety Record of Inspection* (dated April 13, 2018)). There was no formal response to Mr. Sullivan's letter and analysis and the DeMoss's were under the impression that IDWR would address the letter and prior memo through an in person meeting this year. Again, that did not happen. Instead, the dam inspection report shows a "2,693 acre-feet" reservoir storage capacity, and it is my understanding that you informed Mr. DeMoss that the IDWR State Office rejected the proposal to restore the storage rights back to their decreed capacity.

Mr. Corey Skinner (IDWR)
July 5, 2022
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There may be some misunderstanding on the dam safety inspections and the interaction with the DeMoss's decreed storage water rights. As you know, a water right in Idaho is a real property right interest. *See* I.C. § 55-101; *Clear Springs Foods, Inc. v. Spackman*, 150 Idaho 790, 797 (2011). Water rights cannot be taken without due process of law. *See* 150 Idaho at 814. To that end, a stated storage capacity on a dam safety inspection report cannot legally impact or impair a decreed water right.

Moreover, IDWR has no legal authority to change a decreed water right through a dam safety inspection report. If it is IDWR's intent to impair or reduce the DeMoss's legal right to store up to 4,630 acre-feet in Bray Lake, we would like to first discuss that in person, including with the Director if necessary. If that is not the intent, please advise as to the purpose of the reduced storage capacity listed in the most recent report.

Finally, the DeMoss's would appreciate a formal response to Mr. Sullivan's letter and technical analysis concerning the storage capacity at Bray Lake. The DeMoss's have waited over two (2) years for such a response. If IDWR disagrees with Mr. Sullivan's analysis we would appreciate a copy of IDWR's data and analysis that the agency is relying upon in support of that position.

In sum, the DeMoss's would like to meet with IDWR regarding the above matter and clarify any questions regarding the dam safety inspections and their decreed water rights. Please call me with any questions and provide some available dates and times for the requested meeting.

Sincerely,

BARKER ROSHOLT & SIMPSON LLP



Travis L. Thompson

cc: Gary & Helen DeMoss



Barker Rosholt
& Simpson LLP