



AGENDA

IDAHO WATER RESOURCE BOARD

Work Session for Meeting No. 5-16

July 21, 2016

8:00 a.m.

Best Western Edgewater Resort
56 Bridge Street
Sandpoint, Idaho 83864

C.L. "Butch" Otter
Governor

Roger W. Chase
Chairman
Pocatello
District 4

Jeff Raybould
Vice-Chairman
St. Anthony
At Large

Vince Alberdi
Secretary
Kimberly
At Large

Peter Van Der Meulen
Hailey
At Large

Charles "Chuck" Cuddy
Orofino
At Large

Albert Barker
Boise
District 2

John "Bert" Stevenson
Rupert
District 3

Dale Van Stone
Hope
District 1

1. Roll Call
2. Dalton Water Association Loan
3. Priest Lake
 - a. Background
 - b. Water Management Study
4. Priest Lake Tour Field Trip

At 10:00 a.m. the Board will depart for a Field Trip to Priest Lake. Transportation will be provided for Board members, IDWR staff, and invited guests.

Americans with Disabilities

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email jennifer.strange@idwr.idaho.gov or by phone at (208) 287-4800.



MEMO

To: Idaho Water Resource Board
From: Rick Collingwood
Date: July 22, 2016
Subject: Dalton Water Association, Inc. Loan Application

Action Item: \$1,036,900.00 loan

1.0 INTRODUCTION

The Dalton Water Association (DWA) is requesting a \$1,036,900 loan from the Idaho Water Resource Board (Board) at 3.5% interest with a 15-year term to relocate and upgrade an old 8-in asbestos cement (AC) water main line located along a section of Government Way in Coeur d'Alene, Idaho. In 2012, the city initiated the Government Way Widening Project to expand approximately 1 mile of roadway from two lanes to four lanes in a busy commercial area. The roadway widening project requires the relocation of water and sewer lines and the installation of additional services for future commercial businesses along Government Way. Roadway construction is scheduled to begin in the Spring of 2017. Since 2015, utility companies have been relocating facilities within the Phase 2 project area. DWA's facilities are the last facilities scheduled for relocation prior to commencement of the road widening construction.

The DWA water main line relocation and upgrade project will include the replacement of 7,000 feet of existing 8-in AC line with 12" PVC water main line from the intersection of Hanley Road and Government Way to the intersection of Aqua Circle and Government Way. The 12-in PVC water main line will continue east and north in Aqua Circle to the well site on Prairie Avenue. The larger pipe size will increase the supply capacity of the system, and provide an adequate water supply for consumptive use for the 930 residential and 70 commercial customers, and meet the fire protection needs for the expanding commercial district on the east side of Government Way.

Completion of pipeline relocation prior to initiation of the road widening project is critical to prevent potential damages associated with the roadway construction and to avoid interruption of service to the Association's members. There is a high risk of damage to the water main line due to the roadway widening construction activities, such as excavation, earth moving, and the use of vibratory equipment. Damage is also likely to occur during the installation of deep sewer services which will cross beneath the water main line at several locations.

2.0 PROPOSED PROJECT

The DWA, formed in 1945, is located in Kootenai County in the City of Dalton Gardens. The DWA water system is comprised of two (2) wells and two water storage tanks. The water storage tanks provide a total storage capacity of 1.5 million gallons - (See Site Map, pg 4).

The project includes the following water system upgrades and improvements:

- Installation of 7,000 lineal feet of 12-in C-900 water class pipe
- Installation of 49 1-in water service lines and meters to replace existing service lines and meters
- Installation of 16 fire hydrant assemblies and new fire water supply pipelines
- Construction of 4 valve clusters
- Pump house connection fittings
- Miscellaneous roadway surface repairs

The total project cost estimate is \$1,036,900. On June 13, 2016, the DWA Board of Directors approved Resolution No. 01-2016 to proceed with the project.

Construction is scheduled to begin in late 2016, with completion prior to the beginning of the Government Way Widening Project in the Spring of 2017.

DWA proposes to finance the project using funds from a Board loan. The DWA provides domestic water to 1,000 residential and commercial customers. The residential customers pay a current user rate of \$66 per quarter. The commercial customers pay a current user rate of \$111 per quarter.

4.0 BENEFITS

There are a number of anticipated benefits from the project for DWA. This project will replace old, undersized water main lines with larger main lines to provide a reliable and adequate water supply for the residential and commercial customers, and a water system that meets the fire protection requirements for the growing commercial district along Government Way.

5.0 FINANCIAL ANALYSIS

DWA is requesting a loan of \$1,036,900.00 at 3.5% interest for a 15-year term. The following analysis reflects the Board's current interest rate of 3.5% for this type of project. Since quarterly assessments were adjusted in April, 2016, the applicant does not anticipate an increase in the quarterly assessments as a result of the project. However, the DWA Board is currently pursuing/or considering several options for additional means of loan repayment, which include completing contract negotiations for pro-rata and taking compensation from the City of Coeur d'Alene, pay some principle out of reserves, special assessment, and raise overall assessment to all Association members (See Attached letter from DWA dated July 8, 2016).

Payment Analysis

Term (Years)	Estimated Annual Payment-Revolving Account Loan	Current Assessment Cost/Qtr/Year	After Assessment Cost/Qtr/Year
10	\$124,678.27	\$69.15	\$110.71
15	\$90,028.91	\$69.15	\$99.16
20	\$72,957.40	\$69.15	\$93.47
25	\$62,912.91	\$69.15	\$90.12

Note: The current residential assessment is \$66 per quarter. The current commercial assessment is \$111 per quarter. The \$69.15 per quarter assessment indicated in the table is an average quarterly assessment of the 930 residential customers and 70 commercial customers.

Loan History:

During a period from 1976 to 2002, four loans totaling \$526,000 were approved by the Board for the Dalton Water Association. All four loans were paid off on or ahead of schedule. In April, 2008, the Board approved a 10-year term loan for Dalton Water Association for \$419,950.00. The loan was paid in full in May, 2012.

6.0 WATER RIGHTS

Dalton Water Association water rights are as follows:

WATER RIGHT	SOURCE	FLOW (cfs)	WATER USE	BASIS	PRIORITY DATE
95-7008	Ground Water	2.38	Domestic	License	11/22/67
95-7360	Ground Water	2.32	Domestic	License	9/13/73

7.0 SECURITY

The IWRB is authorized to hold DWA's water rights, wells, pumps, pump house, shop building, water storage tanks, and all materials associated with this project as collateral for the loan.

8.0 CONCLUSION AND RECOMMENDATION

This loan will be used to continue the improvement and upgrades to the water main line and appurtenances along Government Way north from Hanley Way to Aqua Circle, from Aqua Circle to the well site, and water main extensions at Canfield Avenue and Wilbur Avenue.

The water system upgrade and improvement project will benefit DWA's members by replacing an old undersized main line in Government Way with a larger main line to provide a reliable water supply for existing and future customers, and meet the fire protection requirements for the growing commercial district on Government Way. Staff recommends approval of the requested loan.

Map of Project Area



DATED this 22th day of July, 2016.

ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary



IDAHO WATER RESOURCE BOARD
 322 East Front Street, Statehouse Mail
 Boise, Idaho 83720
 Tel: (208) 287-4800
 FAX: (208) 287-6700



APPLICATION FOR FINANCIAL ASSISTANCE FOR POTABLE WATER SYSTEM CONSTRUCTION PROJECT

Answer the following questions and provide the requested material as directed. All pertinent information provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested. For larger funding amounts an L.I.D. may be required.

Incomplete documents will be returned and no further action taken will be taken by IWRB staff. All paperwork must be in twenty eight (28) working days prior to the next bi-monthly Board meeting.

Board meeting agendas can be found at: <http://www.idwr.idaho.gov/waterboard/>

I. Prepare and attach a "Loan Application Document".

The Loan Application Document requirements are outlined in the Water Project Loan Program Guidelines. The guidelines can be found at:

<http://www.idwr.idaho.gov/waterboard/Financial%20program/financial.htm>.

You can also obtain a copy by contacting IWRB staff.

II. General Information:

A. Type of organization: (Check box)

- Municipality
- Water and/or Sewer District
- Non-Profit Water Company
- For-Profit Water Company

- Homeowner's Association
- Water Association
- Other

Explain: _____

Dalton Water Association, Inc.

Organization name

6360 N 4th St.

PO Box/Street Address

Dalton Gardens, ID 83815

City, County, State, Zip Code

JoAnne Baune, Office Manager

Name and title of Contact Person

208-772-5639

Contact telephone number

joanne@daltonwaterassociation.com

e-mail address

Project location legal description East side S25, T51N, R4W (Government Way from Hanley Ave to well site)

B. Is your organization registered with the Idaho Secretary of State's office? Yes No

C. Purpose and name of project for this loan application.

- New Project
- Rehabilitation or replacement of existing facility
- DEQ requirement
- Other: _____

D. Briefly describe the existing water supply facilities and describe any existing operational or maintenance problems. Attach map of the service area and a separate sheet if necessary to complete the explanation.

Two wells each supplying 1,100 gal/minute on Prairie Ave. drawing from Spokane Valley-Rathdrum Aquifer. No operational problems.

III. WATER SYSTEM:

A. Source of water:

- Stream
- Groundwater
- Reservoir
- Other

B. Water Right Numbers:

Water Right	Stage	Priority Date	Source	Amount
#95-7008	License	11/22/1967	Spokane Valley-Rathdrum Prairie Aquifer	2.38 cfs
#95-7360	License	9/13/1973	" "	2.32 cfs

Note: Stage refers to how the water right was issued. (License, Decree, or Permit)

C. Hook-ups on the system:

Approximate number of residential hook-ups: 930

Approximate number of commercial hook-ups: 70

Approximate number of industrial hook-ups: 0

D. On average, how much water is provided per day? 411,000 gallons

IV. USER RATES:

A. How does you organization charge user rates

- Per Hook up
 - Other
 - Per Volume Used
- Explain: for 30,000 gallons/qtr then excess at \$0.75/1000

B. Current user rate? \$ 66 per quarter residential & \$111 commercial
(gallons used, monthly, yearly, etc.)

If a graduated or progressive rate structure or different rates for different classes of users are used, attach a separate sheet with explanation.

C. When was the last rate change? April 1, 2016 (month/year)

D. Does your organization measure water use? Yes No

If yes, how?

- Meters at User Hook-ups
 Master Meter
 Other (explain) _____

E. Does your organization have a regular assessment for a reserve fund? Yes No

If yes, explain how it is assessed:

Provide for reserves in quarterly rates

F. Does your organization have an assessment for some future special need? Yes No

If yes, explain for what purpose and how it is assessed:

Being considered for this project

V. PROPOSED METHOD FOR PAYING LOAN PAYMENTS

How will you pay the annual loan payments? Check revenue sources below:

- Tax Levies
 Capital Improvement Reserve Account or Sinking Fund
 User Fees and Tap/ hookup Fees
 Other (explain) _____

Will an increase in assessment be required? Yes No

When will new assessments start and how long will they last?

VI. SECUREMENT OF LOAN

List all land, buildings, waterworks, reserve funds, and equipment with estimated value that will be used as collateral for the loan:

Property	Estimated Value
----------	-----------------

Well site-196 Prairie Ave, including two wells and pumphouse and shop building; land and two storage tanks;

\$1,091,995

Acre on Lot 3, BLock 1, Rude 4th Addition for future well. Reserve funds

\$400,000

Please attach a legal description of the property being offered along with a map referencing the property.

VII. PROOF OF OWNERSHIP

Please provide proof of ownership, easements or agreements that are held or can be acquired for the construction and operation of the project.

VIII. FINANCIAL INFORMATION:

A. Attach a copy of each of the last 3 year's financial statement. **(Copies must be attached)**

B. Reserve fund (current) \$400,000

C. Current cash on hand \$150,000

D. Outstanding indebtedness:

To Whom	Annual Payment	Amt. Outstanding	Years Left
none			

G. Have you done business with the Idaho Water Resource Board before? Yes No

If yes what was the loan for? Upgrade water mains from 4" to 8" on Deerhaven and 15th St.

How much was the loan for? \$380,787

Is the loan paid off? Yes No

If no what is the payment and expected payoff date. _____

I. What other sources of funding have been explored to fund the project? (example: NRCS, USDA Rural Development, Banks, Local Government, etc.)

none

VIII. ORGANIZATION APPROVAL:

Is a vote of the shareholders, members, etc. required for loan acquisition? Yes No

If yes, a record of the vote must be attached.

Amount of funds requested: \$1,036,900

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date:

Tom L. Hixson 6/9/2016

Loan Document for Waterline Upgrade

Sponsored by the
Dalton Water Association, Inc.
In conjunction with the
Idaho Water Resources Board

July 2016

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Appendix A: Master Plan with Articles of Incorporation and updated By-Laws – Updated May 2008, July 2013 – JUB Engineers, Inc.

Appendix B: Technical Memorandum, September 2010 – JUB Engineers, Inc.

Appendix C: Engineers Opinion of Probable Cost, April 11, 2016 – JUB Engineers, Inc.

Appendix D: Financial Statements: 2013-2015

Appendix E: Property Asset List

Introduction (need for project)

The Dalton Water Association (DWA), located in Kootenai County, and formed on April 10, 1945, operates a water system to supply domestic water to both residential and commercial members within its service area boundaries, primarily within the City of Dalton Gardens. The system is served by two wells, each capable of supplying a continuous flow of approximately 1,100 gallons per minute (2.46 cubic feet per second) from the Spokane Valley-Rathdrum Prairie Sole Source Aquifer (SVRP). DWA also maintains two water storage tanks totaling 1.5 million gallons and located on elevated property owned by the Association near the northeast extents of the Association service boundaries. Figure 1 shows the boundaries of the DWA as well as the locations of water mains, wells, and tanks. Water quality test results from the Association system indicate that the delivered water is of excellent quality.

The most recent Master Plan Update is attached as Appendix A and details the DWA boundaries, operations, assets, and financial approach (JUB Engineers, Inc., 2008 with 2013 updates). Water supply and storage requirements were analyzed according to current IDEQ requirements for public water systems. Where IDEQ requirements are indefinite, DWA utilized State of Washington, Department of Health (WDOH), "Sizing Guidelines for Public Water Supplies".

The 2008 Master Plan indicated a number of project priorities for completion. Most have been completed, including:

1. 2013 MIOX on-site chlorine generation system installed to provide disinfection on an "as needed" basis.
2. 2008 waterline upgrade on Deerhaven Avenue from 4th Street to 15th Street.
3. 2008 waterline upgrade on 15th Street from Dalton to Canfield.
4. 2009 valve upgrades in the intersection of 4th Street and Hanley Avenue.
5. 2012 waterline and meter upgrades on Government Way, between Dalton Avenue and Hanley Avenue.
6. 2015-16 projects that were not prioritized but have been completed include backup power diesel generator installation for pumps at the well site, Well No. 1 pump replacement, and motors rebuilds for both well pumps.

Government Way is a major north/south arterial that also forms the West boundary of the DWA service area. DWA serves the residences and commercial properties east from Government Way. The City of Coeur d'Alene serves the commercial entities on the west side. Coeur d'Alene is leading a multi-agency project to widen the remainder of Government Way to five lanes and add sewer service for the commercial businesses from Hanley Avenue to Prairie Avenue, approximately one mile. This project, along with recent changes to the zoning of the commercial properties on the east side of Government Way by the City of Dalton Gardens requires DWA to abandon its existing 8" asbestos cement (AC) mainline adjacent to the existing roadway and install a larger 12" PVC mainline east of the widened roadway. The pipeline will continue the previously upgraded pipeline from Hanley Avenue to Aqua Circle (north) and then east and north to the DWA well site. The roadway project has been programmed for

construction in the spring of 2017 so utility companies began relocation of their facilities in 2015. DWA facilities are the last ones to be moved. **Figure 1** shows the location of the project.

The project is critically needed to protect the public due to several factors. First, it is likely that the existing 8" AC pipeline would be significantly and repeatedly damaged during the roadway construction work which requires stripping 18-24" of the existing protective earth cover with heavy earth-moving and vibratory equipment in order to rebuild the roadway. The project would also cross under the AC pipeline in numerous locations to install deep sewer services. Deep crossings typically require replacement of the AC pipe at those crossings to avoid catastrophic pipeline failures which could lead to roadway, equipment, and property damage as well as water drinking water contamination. In addition, upsizing of the existing pipeline is required to provide adequate water supply and fire protection to the expanding commercial district on the east side of Government Way (see Appendix B: JUB Engineers, Inc. Technical Memorandum – Results of 2010 Hydraulic Model, 2016.)

Project Sponsor

The DWA is the entity that governs the domestic water distribution in its area of service, primarily the City of Dalton Gardens, and is registered with the State of Idaho. There are currently 930 year-round household hookups and 70 commercial hookups in the serving area. DWA is authorized to do projects and assess fees as voted on by its association members. DWA has the right to discontinue water delivery to residences if they fail to pay their bill. A copy of the incorporation and bylaws are included in Appendix A.

Project Service Area and Facilities

The DWA provides domestic water to 1000 residences and commercial properties in Kootenai County. The DWA borders city of Coeur d'Alene, Idaho on the south and west, the Cities of Hayden, Idaho and Hayden Lake, Idaho on the north, and Kootenai County on the east. A map of the service area is in the back of this report. The Association meters all water produced from the wells and all water consumed.

Hydrology and Water Rights

The source of water that serves the DWA serving area is groundwater wells. The water rights and background information from the Idaho Department of Water Resources is located in Appendix B. Both wells draw from the Spokane Valley-Rathdrum Prairie Sole Source Aquifer. Water Right 95-7008 was licensed with a priority date of November 22, 1967 for 2.38 cubic feet per second (1,722.63 acre-feet per year). Water Right was licensed with a priority date of September 13, 1973 for 2.32 cfs and 602.4 acre-feet per year. The SVRP is a highly reliable source water with exceptional water quality. It is the only Sensitive Resource Aquifer in Idaho with special protections in place to assure its ability to sustain

the Kootenai County communities that rely upon it. The water rights and SVRP provide a highly reliable source for DWA.

Project Description and Alternatives

The purpose of this project is to continue the improvement and upgrade of the waterline along Government way north from Hanley Avenue to Aqua Circle (north) and then east and north to the DWA well site. It will also include easterly extensions at Canfield Avenue, Wilbur Avenue and Aqua Circle (south). The project will provide for increased water usage and fire protection for commercial businesses adjacent to Government Way and increased water flow for residents of the DWA serving area.

Two alternatives were considered:

1. The no action alternative.
2. Continuation of the upgrade that began with the widening of Government Way between Dalton Avenue and Hanley Avenue in 2013.

Alternative 1 was considered unacceptable for several reasons:

- a. The current waterline is asbestos concrete and would likely not survive the stresses of construction during the widening of the roadway or would sustain substantial damage.
- b. In any event, the current waterline capacity would not provide the necessary water flow to meet the needs of the growing commercial sector nor its fire protection.

The selected alternative, Alternative2, meets the requirements for capacity and water flow and would be a continuation of the waterline constructed during the last phase of the Government Way widening/sewer improvement project completed in 2012.

Cost Estimates

JUB Engineers, Inc. (JUB) is DWA's engineer and has prepared an updated "Engineer's Opinion of Probable Cost" based on recently received bids, which is attached as Appendix C.

Implementation Schedule

JUB will be completing the waterline design during the next few months. Construction is contemplated to begin in late 2016 with completion ahead of the roadway project in the spring of 2017.

Permitting

The project will exist almost exclusively in public rights-of-way. Easements required for the waterline are in place for the project wherever the project will not exist within public rights-of-way.

Institutional Considerations

Entities that are, or may be, involved in the design, construction observation/administration, and financing of the project include:

DWA: financing, and project oversight

JUB Engineers, Inc.: design and construction observation/administration

James, Vernon and Weeks: legal and contracts

IWRB: financing

DWA will be the entity that will enter into contracts and agreements for provided services and arrange financing for its project.

Financial Analysis

DWA is applying for financing in the amount of \$1,036,900, which is the amount of probable cost estimated by J-U-B Engineers.

DWA has raised rates sufficiently to repay the loan and currently maintains a \$400,000 reserve to cover any costs that may exceed the estimated costs. In addition, special assessments are being considered by the Board of Directors for commercial property owners that benefit most from this project. If enacted, special assessments would be in proportion to their added benefit, as allowed by DWA By-Laws, but are not essential to repay the loan.

DWA is requesting a 15 year loan from the IWRB.

Credit worthiness: DWA has no existing debt. Table 4 shows the Financial Ratios for the DWA and demonstrates strong ability to repay the project financing. DWA has had two prior loans with IWRB, in both cases, payments were made on time and the loans were paid off ahead of schedule

Collateral: For security of the loan, DWA will pledge its assessment income, water rights and assets.

Social and Physical Impacts

The project will maintain potable water availability to meet the growing needs of the DWA commercial property owners and will provide better overall system looping and necessary fire protection. This will have a positive impact on property values and will balance the water flows throughout the DWA system.

Conclusions

DWA is registered with the State of Idaho. The Board of Directors of DWA have voted to proceed with this project and to apply for financing for construction of this waterline replacement/improvement project.

The project will be almost entirely completed in public rights-of-way and easements are in place for this project wherever they are needed, primarily as the piping approaches the well site.

The project will provide water without risk of shortage of delivery to its residents and provide necessary fire protection for the growing commercial properties.

The total estimated cost of the project is \$1,036,900. DWA is applying for a loan in this amount from IWRB.

This project meets the requirements of the State of Idaho's Water Plan and is necessary to fulfill the water and fire protection needs in the DWA service area.

The project is technically and financially feasible.

PROJECT CONTACTS:

Dalton Water Association, Inc.

6360 N 4th St
Dalton Gardens, ID 83815
Phone (208) 772-5639

Kevin Kirking
President

Dave Nussear
Vice-President

Randy Biddle
Treasurer

Attorney for the Dalton Water Association, Inc.

Susan Weeks
James, Vernon, & Weeks, PA
1626 Lincoln Way
Coeur d'Alene, ID 83814,
Phone: (208) 667-0683
Fax: (208) 664-1684
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Engineering and Technical Support

Paul Klatt, P.E.

J-U-B ENGINEERS, Inc.

7825 Meadowlark Way, Coeur d'Alene, ID 83815
e pklatt@jub.com w www.jub.com
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RESOLUTION NO. 01-2016

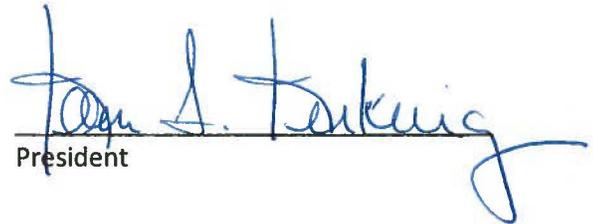
DALTON WATER ASSOCIATION, INC.

At the regular meeting of the Board of Directors of the Dalton Water Association, Inc., on June 13, 2016, the following Resolution was voted upon and passed.

BE IT RESOLVED by the Board of Directors of the Dalton Water Association, Inc. Kootenai County Idaho:

The Board of Directors move to proceed with the construction of a 12" water main on Government Way from Hanley Ave to the well site and apply for a loan with the Department of Water Resources Board for \$1,036,900, which is the estimated cost of the project. This upgrade and relocation is a result of the City of Coeur d'Alene widening Government Way. This project requires the existing asbestos cement to be abandoned as this pipe will be repeatedly damaged during the roadway construction and the main upgraded to a 12" PVC main.

Passed and adopted this 13th day of June, 2016.



President

ATTEST:



Vice-President

July 8, 2016

To: Rick Collingwood

From: Kevin Kirking, President

Dear Rick:

We are in receipt of your July 6 e-mail regarding the ability of Dalton Water to meet the proposed annual loan payment of \$90,028.91.

According to our last three years Statement of Financial Activities reports, our average cash after expense was \$139,883.67, which appears to exceed the estimated loan payment considerably.

The board has the authority and will take action for additional means of loan repayment (or project cost reduction) in the ways listed below from the most likely to the least likely.

1. reduce project costs by completing current negotiations for pro-rata and takings compensation from the City of Coeur d'Alene who is acting as the transportation project lead.
2. pay some principle out of reserves.
3. impose a special assessment for the frontage property owners who most benefit from the project with increased fire flows, pressures, and reliability and
4. raise the overall assessment to all members.

All of these approaches are currently being pursued and/or considered by the Board and provide additional means to insure the proposed annual loan payments.

I hope this answers your concerns and we look forward to a positive result to our request for the loan. Please let me know if you have any other questions.

Kevin Kirking, President
Dalton Water Association, Inc.

DALTON WATER ASSOCIATION, INC.
STATEMENT OF FINANCIAL POSITION
SEPTEMBER 30, 2013

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$	176,721
Certificates of deposit		211,444
Accounts receivable		32,992
Interest receivable		68
Inventory		17,641
Prepaid expenses		<u>3,399</u>
TOTAL CURRENT ASSETS		442,265

PROPERTY AND EQUIPMENT

Property and equipment		3,605,314
Accumulated depreciation		<u>(2,294,876)</u>
NET PROPERTY AND EQUIPMENT		<u>1,310,438</u>

TOTAL ASSETS \$ 1,752,703

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES

Accounts payable	\$	16,924
Accrued payroll and payroll taxes		6,859
Accrued vacation		5,148
Deferred income		<u>3,962</u>
TOTAL CURRENT LIABILITIES		<u>32,893</u>

TOTAL LIABILITIES 32,893

NET ASSETS

Unrestricted, undesignated		1,227,481
Unrestricted, designated for water system additions		<u>492,329</u>
TOTAL NET ASSETS		<u>1,719,810</u>

TOTAL LIABILITIES AND NET ASSETS \$ 1,752,703

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REVIEW REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2013

CHANGES IN UNRESTRICTED NET ASSETS

Revenues and Support:		<u>%</u>
Water charges	\$ 289,173	98.6%
Other	2,040	0.7%
Membership fees	-	0.0%
Interest	996	0.3%
Service charges	<u>1,205</u>	<u>0.4%</u>
TOTAL REVENUES AND SUPPORT	293,414	100.0%
 Expenses:		
Operating:		
Depreciation	139,082	47.4%
Salaries and wages	34,761	11.8%
Utilities	22,244	7.6%
Repairs and maintenance	17,908	6.1%
Interest expense	-	0.0%
Payroll taxes	3,058	1.0%
Pension contribution	3,389	1.2%
Water quality tests	1,145	0.4%
Hook-up charges	<u>-</u>	<u>0.0%</u>
TOTAL OPERATING EXPENSES	221,587	75.5%
 Administrative:		
Salaries and wages	26,168	8.9%
Directors' fees	8,750	3.0%
Professional fees	19,899	6.8%
Office expense	6,767	2.3%
Insurance	6,561	2.2%
Public drinking fee assessment	4,024	1.4%
Pension contribution	3,840	1.3%
Office rent	2,100	0.7%
Telephone	788	0.3%
Payroll taxes	2,915	1.0%
Depreciation	-	0.0%
Dues and education	528	0.2%
Irrigation and property taxes	<u>322</u>	<u>0.1%</u>
TOTAL ADMINISTRATIVE EXPENSES	82,662	28.2%
 TOTAL EXPENSES	 <u>304,249</u>	 <u>103.7%</u>
 DECREASE IN UNRESTRICTED NET ASSETS	 (10,835)	 -3.7%
NET ASSETS, BEGINNING	<u>1,730,645</u>	
NET ASSETS, ENDING	\$ <u>1,719,810</u>	

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REVIEW REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF CASH FLOWS
YEAR ENDED SEPTEMBER 30, 2013

CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from members	\$ 289,845
Cash paid to suppliers and employees	(153,625)
Interest received	962
Interest paid	<u>-</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>137,182</u>
 CASH FLOWS FROM INVESTING ACTIVITIES	
Capital expenditures	<u>(41,467)</u>
NET CASH USED BY INVESTING ACTIVITIES	<u>(41,467)</u>
 CASH FLOWS FROM FINANCING ACTIVITIES	
Principal payments on long-term debt	<u>-</u>
NET CASH USED BY FINANCING ACTIVITIES	<u>-</u>
 NET INCREASE IN CASH	 95,715
CASH AT BEGINNING OF YEAR	<u>292,450</u>
CASH AT END OF YEAR	\$ <u>388,165</u>
 RECONCILIATION OF CHANGE IN NET ASSETS TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
CHANGE IN NET ASSETS	\$ (10,835)
Adjustments:	
Depreciation	139,082
Changes in Assets and Liabilities:	
Receivables	(2,522)
Interest receivable	(34)
Inventories	1,470
Prepaid expenses	(131)
Accounts payable and accrued expenses	10,203
Deferred income	<u>(51)</u>
Total Adjustments	<u>148,017</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ <u>137,182</u>

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REVIEW REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF FINANCIAL POSITION
SEPTEMBER 30, 2014

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$ 298,714
Certificates of deposit	211,634
Accounts receivable	28,541
Inventory	19,557
Prepaid expenses	<u>3,569</u>
TOTAL CURRENT ASSETS	562,015

PROPERTY AND EQUIPMENT

Property and equipment	3,613,257
Accumulated depreciation	<u>(2,421,897)</u>
NET PROPERTY AND EQUIPMENT	<u>1,191,360</u>

TOTAL ASSETS \$ 1,753,375

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES

Accounts payable	\$ 6,812
Accrued payroll and payroll taxes	7,050
Accrued vacation	5,022
Deferred income	<u>5,095</u>
TOTAL CURRENT LIABILITIES	<u>23,979</u>

TOTAL LIABILITIES 23,979

NET ASSETS

Unrestricted, undesignated	1,237,067
Unrestricted, designated for water system additions	<u>492,329</u>
TOTAL NET ASSETS	<u>1,729,396</u>

TOTAL LIABILITIES AND NET ASSETS \$ 1,753,375

SEE ACCOMPANYING NOTES AND AUDITOR'S REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2014

CHANGES IN UNRESTRICTED NET ASSETS

Revenues and Support:		<u>%</u>
Water charges	\$ 282,367	98.0%
Other	1,820	0.6%
Membership fees	1,700	0.6%
Interest	886	0.3%
Service charges	<u>1,252</u>	<u>0.4%</u>
TOTAL REVENUES AND SUPPORT	288,025	100.0%
Expenses:		
Operating:		
Depreciation	126,831	44.0%
Salaries and wages	34,649	12.0%
Utilities	22,660	7.9%
Repairs and maintenance	12,059	4.2%
Interest expense	-	0.0%
Payroll taxes	2,940	1.0%
Pension contribution	3,603	1.3%
Water quality tests	880	0.3%
Hook-up charges	<u>1,790</u>	<u>0.6%</u>
TOTAL OPERATING EXPENSES	205,412	71.3%
Administrative:		
Salaries and wages	26,266	9.1%
Directors' fees	8,875	3.1%
Professional fees	8,543	3.0%
Office expense	7,353	2.6%
Insurance	6,853	2.4%
Public drinking fee assessment	3,968	1.4%
Pension contribution	3,690	1.3%
Office rent	2,100	0.7%
Telephone	1,383	0.5%
Payroll taxes	2,981	1.0%
Depreciation	191	0.1%
Dues and education	458	0.2%
Irrigation and property taxes	<u>366</u>	<u>0.1%</u>
TOTAL ADMINISTRATIVE EXPENSES	<u>73,027</u>	<u>25.4%</u>
TOTAL EXPENSES	<u>278,439</u>	<u>96.7%</u>
INCREASE IN UNRESTRICTED NET ASSETS	9,586	3.3%
NET ASSETS, BEGINNING	<u>1,719,810</u>	
NET ASSETS, ENDING	\$ <u>1,729,396</u>	

SEE ACCOMPANYING NOTES AND AUDITOR'S REPORT

DALTON WATER ASSOCIATION, INC.

**STATEMENT OF CASH FLOWS
YEAR ENDED SEPTEMBER 30, 2014**

CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from members	\$ 292,723
Cash paid to suppliers and employees	(163,550)
Interest received	954
Interest paid	<u>-</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>130,127</u>
CASH FLOWS FROM INVESTING ACTIVITIES	
Capital expenditures	<u>(7,944)</u>
NET CASH USED BY INVESTING ACTIVITIES	<u>(7,944)</u>
CASH FLOWS FROM FINANCING ACTIVITIES	
Principal payments on long-term debt	<u>-</u>
NET CASH USED BY FINANCING ACTIVITIES	<u>-</u>
NET INCREASE IN CASH	122,183
CASH AT BEGINNING OF YEAR	<u>388,165</u>
CASH AT END OF YEAR	\$ <u><u>510,348</u></u>
RECONCILIATION OF CHANGE IN NET ASSETS TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
CHANGE IN NET ASSETS	\$ 9,586
Adjustments:	
Depreciation	127,022
Changes in Assets and Liabilities:	
Receivables	4,451
Interest receivable	68
Inventories	(1,916)
Prepaid expenses	(170)
Accounts payable and accrued expenses	(10,047)
Deferred income	<u>1,133</u>
Total Adjustments	<u>120,541</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ <u><u>130,127</u></u>

SEE ACCOMPANYING NOTES AND AUDITOR'S REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF CASH FLOWS
YEAR ENDED SEPTEMBER 30, 2015

CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from members	\$ 303,732
Cash paid to suppliers and employees	(153,102)
Interest received	1,712
Interest paid	<u>-</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>152,342</u>
CASH FLOWS FROM INVESTING ACTIVITIES	
Capital expenditures	<u>(12,839)</u>
NET CASH USED BY INVESTING ACTIVITIES	<u>(12,839)</u>
CASH FLOWS FROM FINANCING ACTIVITIES	
Principal payments on long-term debt	<u>-</u>
NET CASH USED BY FINANCING ACTIVITIES	<u>-</u>
NET INCREASE IN CASH	139,503
CASH AT BEGINNING OF YEAR	<u>510,348</u>
CASH AT END OF YEAR	\$ <u>649,851</u>
RECONCILIATION OF CHANGE IN NET ASSETS TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
CHANGE IN NET ASSETS	\$ 48,231
Adjustments:	
Depreciation	112,204
Changes in Assets and Liabilities:	
Receivables	(9,120)
Interest receivable	-
Inventories	2,650
Prepaid expenses	(80)
Accounts payable and accrued expenses	(1,952)
Deferred income	<u>409</u>
Total Adjustments	<u>104,111</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ <u>152,342</u>

SEE ACCOMPANYING NOTES AND ACCOUNTANTS' REVIEW REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF FINANCIAL POSITION
SEPTEMBER 30, 2015

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$	311,929
Certificates of deposit		337,922
Accounts receivable		37,661
Inventory		16,907
Prepaid expenses		<u>3,649</u>
TOTAL CURRENT ASSETS		<u>708,068</u>

PROPERTY AND EQUIPMENT

Property and equipment		3,626,096
Accumulated depreciation		<u>(2,534,101)</u>
NET PROPERTY AND EQUIPMENT		<u>1,091,995</u>

TOTAL ASSETS	\$	<u><u>1,800,063</u></u>
--------------	----	-------------------------

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES

Accounts payable	\$	4,351
Accrued payroll and payroll taxes		7,041
Accrued vacation		5,540
Deferred income		<u>5,504</u>
TOTAL CURRENT LIABILITIES		<u>22,436</u>

TOTAL LIABILITIES		<u>22,436</u>
-------------------	--	---------------

NET ASSETS

Unrestricted, undesignated		1,285,298
Unrestricted, designated for water system additions		<u>492,329</u>
TOTAL NET ASSETS		<u>1,777,627</u>

TOTAL LIABILITIES AND NET ASSETS	\$	<u><u>1,800,063</u></u>
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SEE ACCOMPANYING NOTES AND ACCOUNTANTS' REVIEW REPORT

DALTON WATER ASSOCIATION, INC.
STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2015

CHANGES IN UNRESTRICTED NET ASSETS

Revenues and Support:		<u>%</u>
Water charges	\$ 296,059	94.2%
Other	6,735	2.1%
Membership fees	8,500	2.7%
Interest	1,712	0.5%
Service charges	<u>1,149</u>	<u>0.4%</u>
TOTAL REVENUES AND SUPPORT	314,155	100.0%
 Expenses:		
Operating:		
Depreciation	111,899	35.6%
Salaries and wages	32,614	10.4%
Utilities	26,674	8.5%
Repairs and maintenance	11,168	3.6%
Interest expense	-	0.0%
Payroll taxes	2,755	0.9%
Pension contribution	3,439	1.1%
Water quality tests	440	0.1%
Hook-up charges	<u>3,857</u>	<u>1.2%</u>
TOTAL OPERATING EXPENSES	192,846	61.4%
 Administrative:		
Salaries and wages	26,403	8.4%
Directors' fees	8,666	2.8%
Professional fees	8,829	2.8%
Office expense	6,989	2.2%
Insurance	6,751	2.1%
Public drinking fee assessment	3,976	1.3%
Pension contribution	3,606	1.1%
Office rent	2,100	0.7%
Telephone	1,605	0.5%
Payroll taxes	2,859	0.9%
Depreciation	305	0.1%
Dues and education	640	0.2%
Irrigation and property taxes	<u>349</u>	<u>0.1%</u>
TOTAL ADMINISTRATIVE EXPENSES	73,078	23.3%
TOTAL EXPENSES	265,924	84.6%
 INCREASE IN UNRESTRICTED NET ASSETS	 48,231	 15.4%
NET ASSETS, BEGINNING	<u>1,729,396</u>	
NET ASSETS, ENDING	<u>\$ 1,777,627</u>	

SEE ACCOMPANYING NOTES AND ACCOUNTANTS' REVIEW REPORT

APPENDIX C

J-U-B ENGINEERS, Inc.		7825 Meadowlark Way, Coeur d'Alene, ID 83815 (208) 762-8787			
ENGINEERS OPINION OF PROBABLE COST					
					DATE: 4-May-16
PROJECT: DALTON WATER ASSOCIATION 2016 GOVERNMENT WAY WATERLINE REPLACEMENT					
PROJECT DESCRIPTION: Recommended Improvements Cost Summary for Dalton Water Association					
OWNER PROJ. NO.:				J-U-B PROJ. NO.: 20-10-043	
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL EST. COST
RECOMMENDED IMPROVEMENTS - Upsize Government Way 12-inch Diameter - Hanley to Pump House (see Note 1)					
1	12-inch Water Pipe - AWWA C-900 CL 235	7000	LF	\$43.00	\$ 301,000.00
2	Fire Hydrant Assembly (5 hydrants per half mile)	16	EA	\$4,800.00	\$ 76,800.00
3	12" Valve Cluster at Major Intersections	4	EA	\$10,000.00	\$ 40,000.00
4	Pump House Connection Fittings	1	EA	\$15,000.00	\$ 15,000.00
5	Asphalt Surface Repair - Aqua Circle	4000	SF	\$3.50	\$ 14,000.00
6	Permanent Miscellaneous Surface Repair - Aqua Circle to Pump House	530	LF	\$10.00	\$ 5,300.00
7	Temporary Miscellaneous Surface Repair - Aqua Circle to Hanley, Wilbur & Canfield	6000	LF	\$10.00	\$ 60,000.00
8	New 1" Water Service Line and Meter to Replace Existing	49	EA	\$2,200.00	\$ 107,800.00
9	New Fire Lines Stubbed to New ROW (6 per half mile)	16	EA	\$2,000.00	\$ 32,000.00
10	Temporary Construction Traffic Control	1	LS	\$15,000.00	\$ 15,000.00
PROJECT SUBTOTAL					\$ 666,900
CONTRACTOR MOBILIZATION, DEMOBILIZATION, AND BONDING					\$ 53,000
CONSTRUCTION CONTINGENCY					\$ 144,000
SURVEYING, DESIGN, PER, AGENCY SUBMITTALS, AND CONSTRUCTION ADMINISTRATION					\$ 173,000
TOTAL PROJECT COST OPINION					\$ 1,036,900
Note 1 - Final surface repair is for the pipe from Government and Aqua Circle through Aqua Circle and connecting to the pump houses. Asphalt Surface Repair for the Government Way Corridor is not included since it is assumed to be installed with the Government Way Improvements.					

Financial Ratios

Entity Name: Dalton Water Association

Loan amount requested: \$1,036,900

The following information is required for the loan application with the Idaho Water Resource Board. Please fill out as completely as possible in the spaces provided. The sheet will do the calculations based on your input. This sheet will not save so you must print it out and attach it to the Loan Document. If you have any questions please contact the loan staff.

Number of units serviced (acres or residences)

1000

Interest rate

3.5%

(use 6% for residential and 5.5% for agriculture)

Yearly Expenditures, Revenues, and Cash - last 3 years required

Year	Revenue	Expenditures	Cash
2013	\$293,414.00	\$221,587.00	\$137,182.00
2014	\$288,025.00	\$205,412.00	\$130,127.00
2015	\$314,155.00	\$192,846.00	\$152,342.00
Average:	\$298,531.33	\$206,615.00	\$139,883.67

Total Debt

\$0.00

Current Assessment

\$69.15

Assessment Charged by

membership

(How is current assessment charged? By share, acre, residence, etc.)

Is the assessment

3

(use 1 for yearly and 12 for monthly)

Loan Term

Assessment after loan

Estimated Payment

5 years	\$145.70	\$229,654.04
10 years	\$110.71	\$124,678.27
15 years	\$99.16	\$90,028.91
20 years	\$93.47	\$72,957.40
25 years	\$90.12	\$62,912.91
30 years	\$87.94	\$56,377.63

Indicator

5 year

10 year

15 year

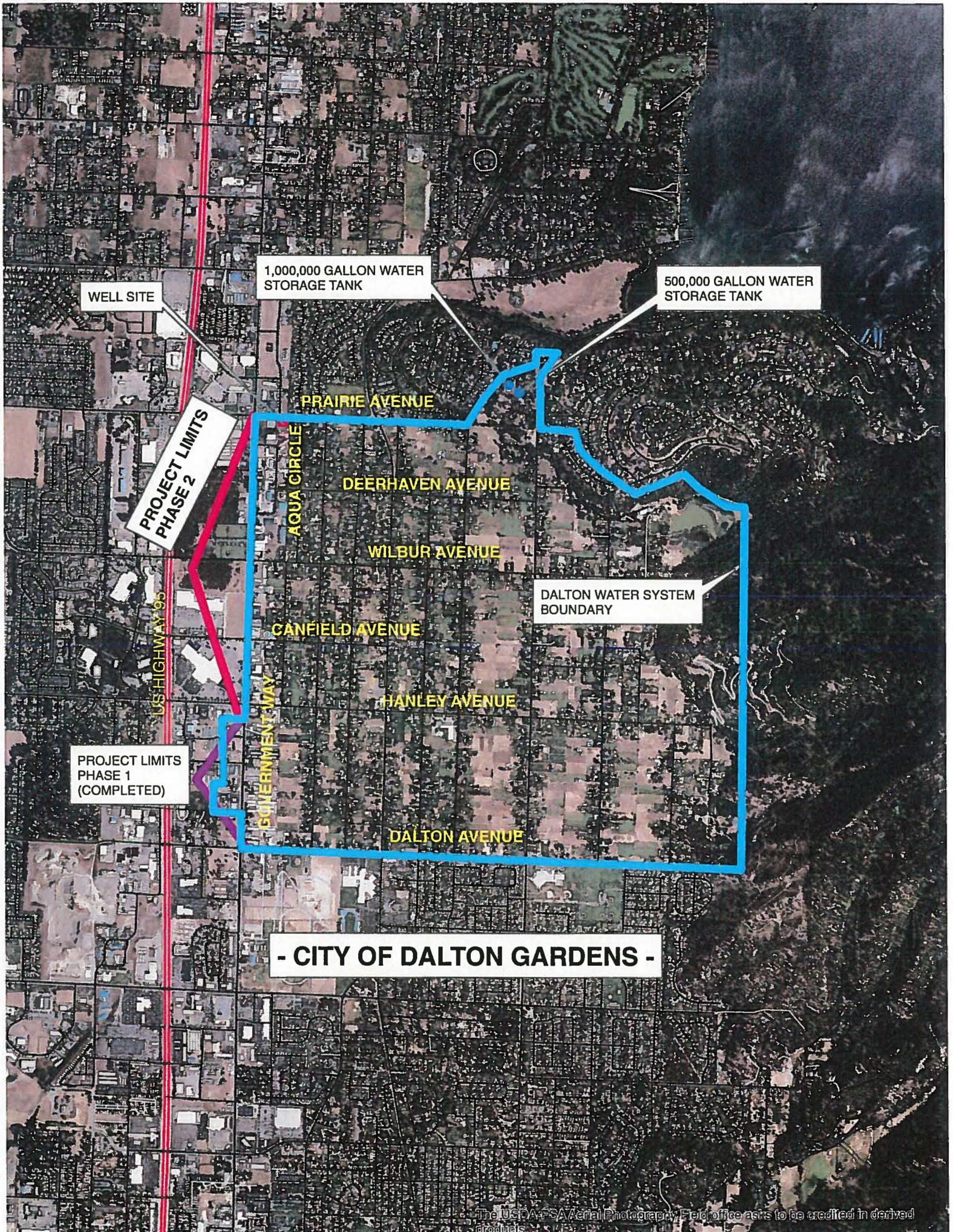
20 year

25 year

30 year

Revenue/Expenses	1.21	1.28	1.31	1.33	1.34	1.35
Debt Service ratio	1.40	1.74	2.02	2.26	2.46	2.63
Cash /Expenses	0.85	0.80	0.78	0.76	0.75	0.75
Debt/Unit	\$229.65	\$124.68	\$90.03	\$72.96	\$62.91	\$56.38

Note: Current assessment is an average of the quarterly residential assessment of \$66.00, and the quarterly commercial assessment of \$111.00.



WELL SITE

1,000,000 GALLON WATER STORAGE TANK

500,000 GALLON WATER STORAGE TANK

PROJECT LIMITS PHASE 2

PRAIRIE AVENUE

DEERHAVEN AVENUE

WILBUR AVENUE

CANFIELD AVENUE

HANLEY AVENUE

DALTON AVENUE

AQUA CIRCLE

GOVERNMENT WAY

DALTON WATER SYSTEM BOUNDARY

PROJECT LIMITS PHASE 1 (COMPLETED)

US HIGHWAY 95

- CITY OF DALTON GARDENS -

IDAHO DEPARTMENT OF WATER RESOURCES
Proof Report

6/24/2016

Verification Log

SubCase:

N/A

Water Supply Bank:

N/A

IDAHO DEPARTMENT OF WATER RESOURCES
Proof Report

6/24/2016

Mitigation Plan: False

Combined Use Limits

<u>Rate</u>	<u>Volume</u>	<u>Acres</u>
2.380	1,722.6	
95-7008 ,95-7360		

Verification Log

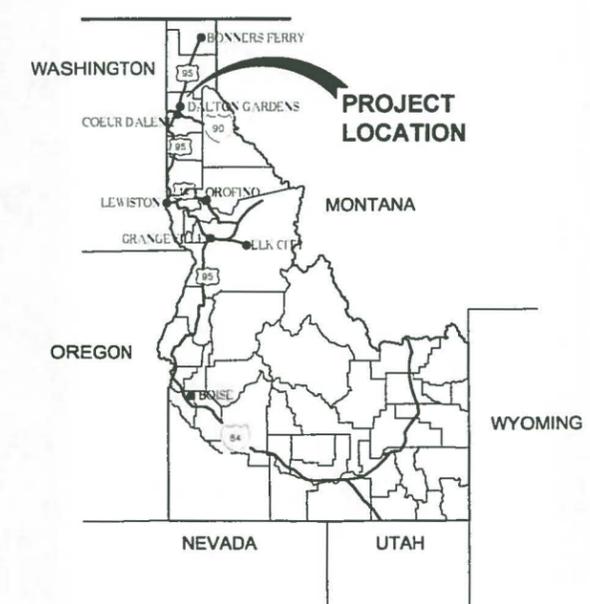
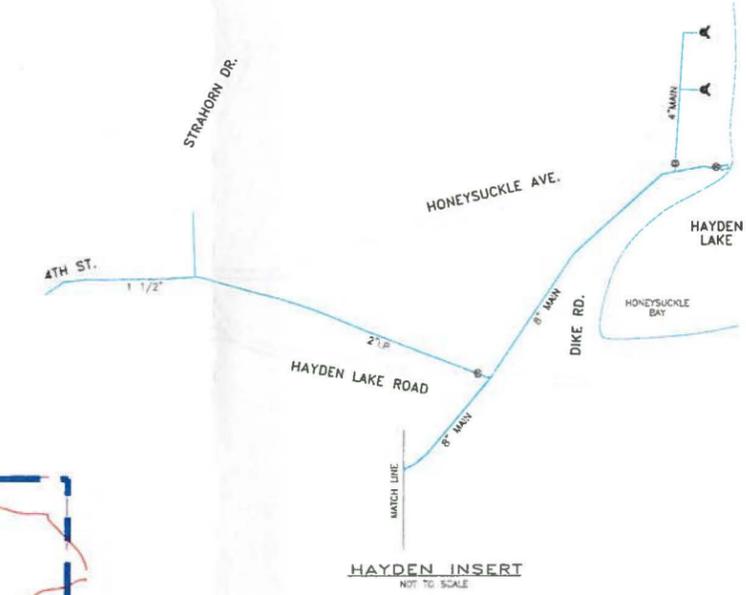
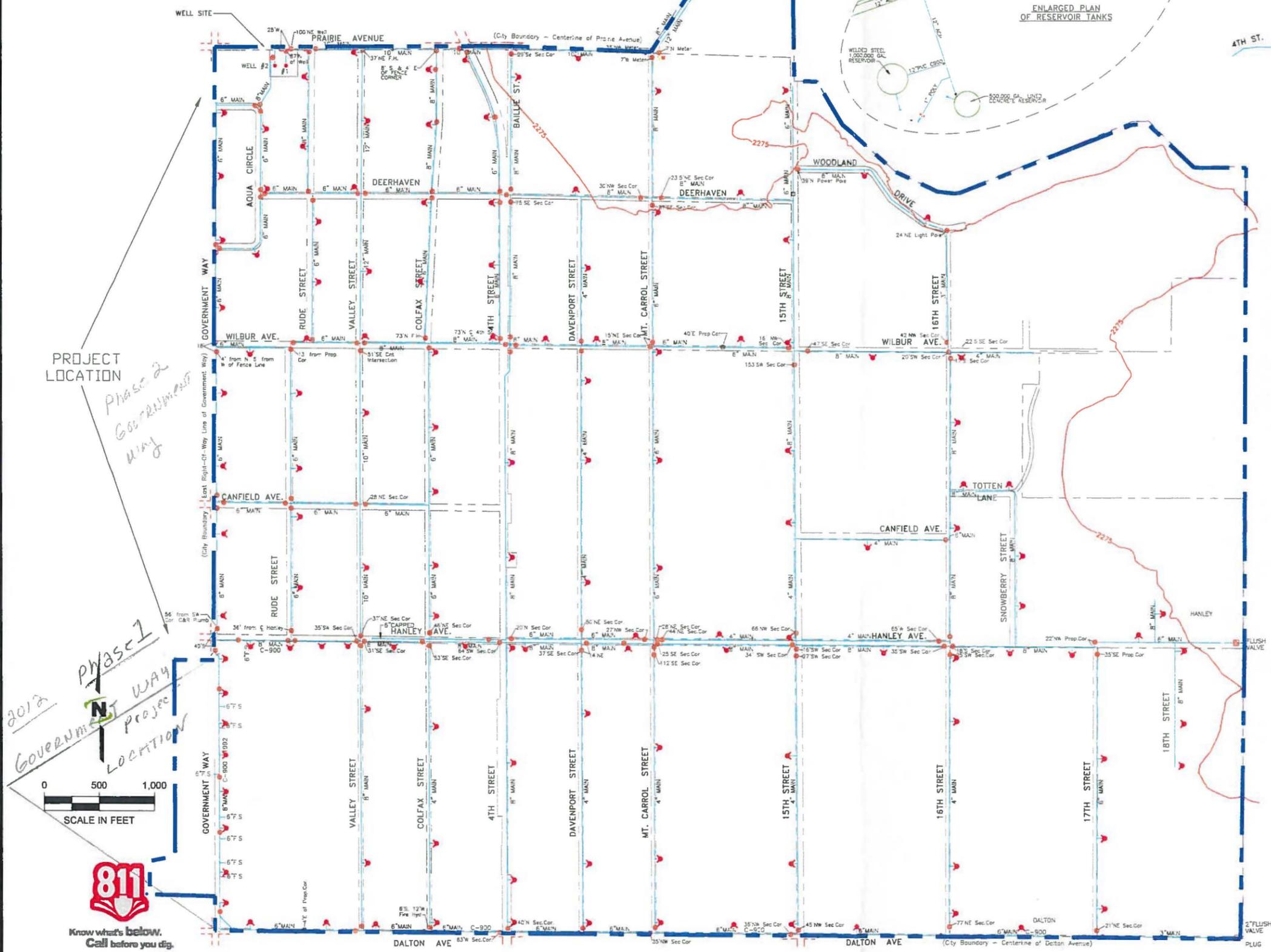
SubCase:

N/A

Water Supply Bank:

N/A

FIGURE 1 DALTON WATER ASSOCIATION 2016 SYSTEM SCHEMATIC



LEGEND

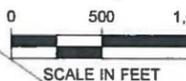
- FLUSH VALVE
- FIRE HYDRANT
- DALTON WATER SYSTEM
- DALTON WATER SYSTEM VALVE
- CITY BOUNDARY
- RIGHT-OF-WAY LINE
- DALTON WATER SYSTEM BOUNDARY
- APPROX. HIGH ZONE SPECIAL SERVICE AREA BOOSTER STATIONS REQUIRED



J-U-B ENGINEERS, INC.
7825 Meadowlark Way, Coeur d'Alene, ID 83815
p | 208 762 8787 f | 208 762 9797 w | www.jub.com

PROJECT LOCATION
*Phase 2
Government Way*

*2012
Phase 1
Government Way Project
LOCATION*



Know what's below.
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

IDAHO

Water Resource Board



Priest Lake Water Management Study

Presented to the Idaho Water Resource Board

July 21, 2016

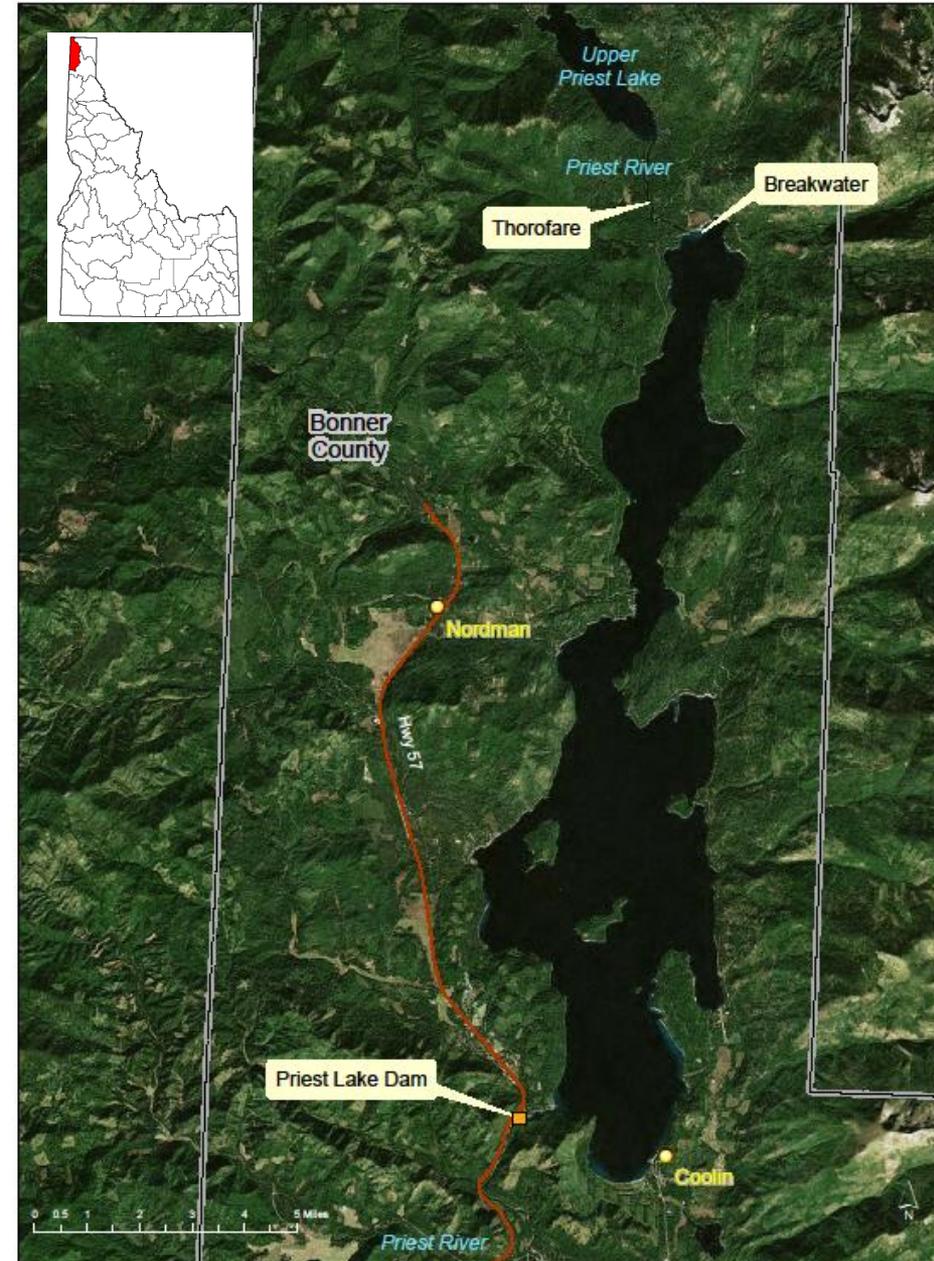
Cynthia Bridge Clark (IDWR)

Steve Klatt (Bonner County)

Presentation

2

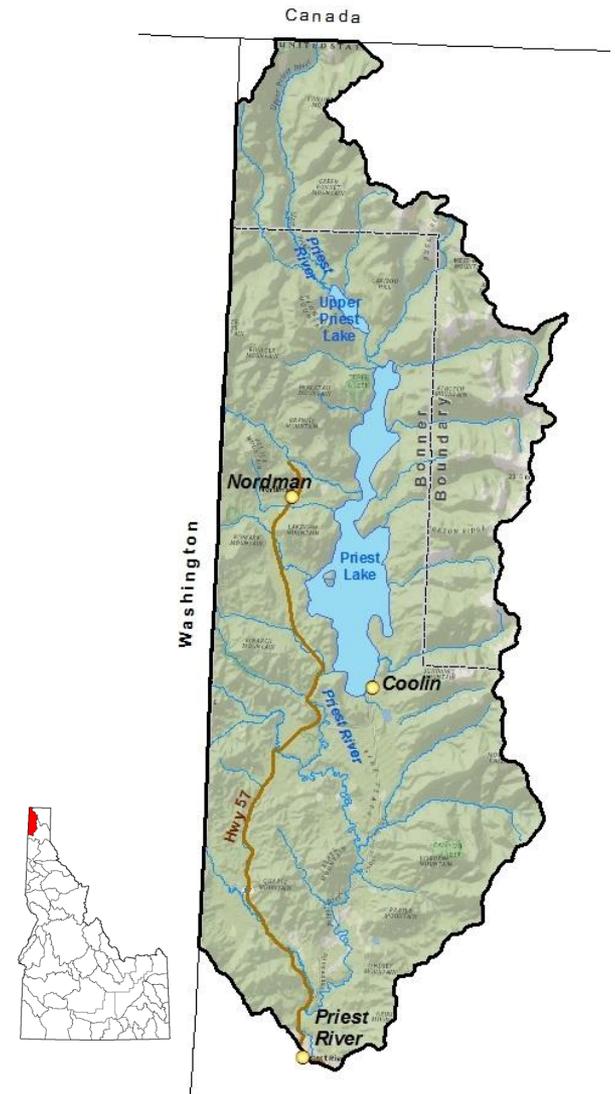
- Priest Lake & River System
- Priest Lake Operations
- Outlet Dam
- Thorofare and Breakwater Structure
- Water Management Study



Priest Lake System

3

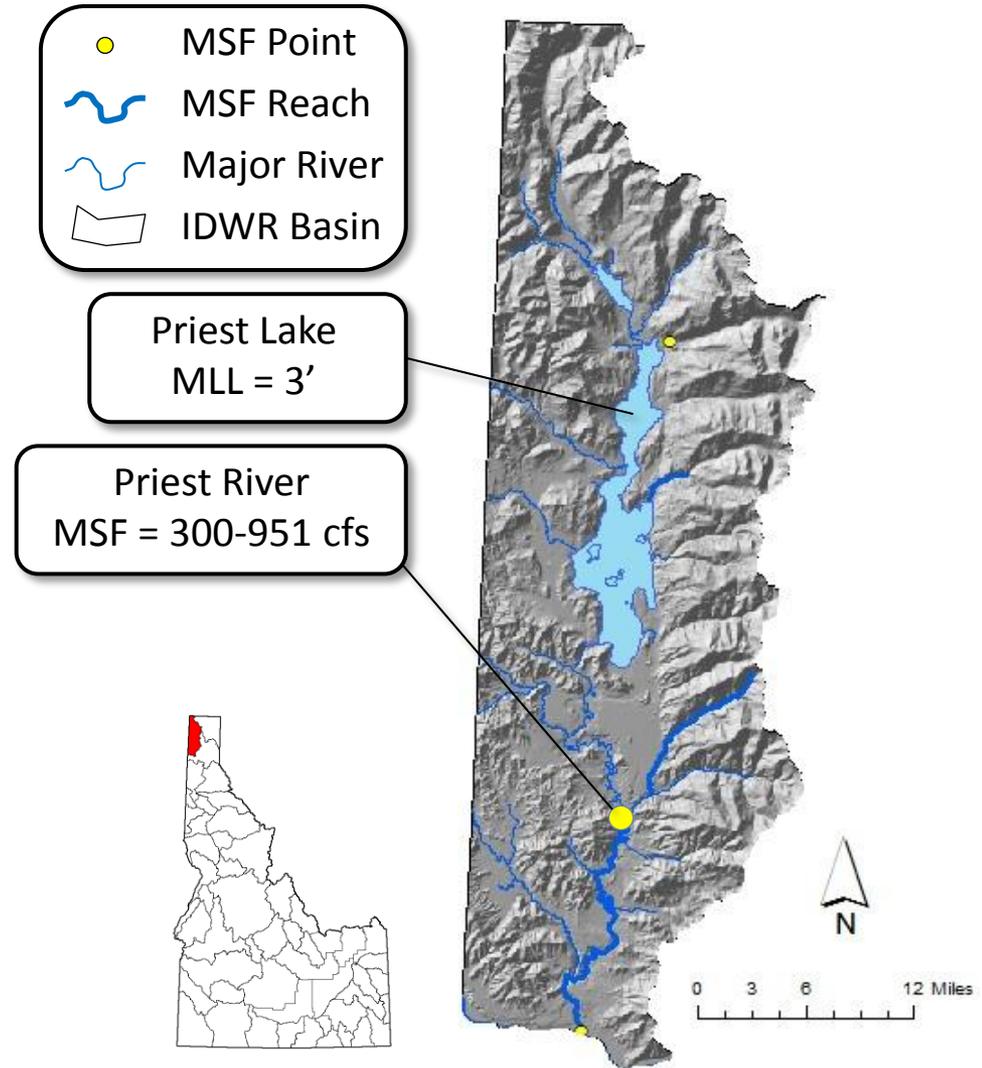
- Priest River Basin
 - ▣ 913 sq miles
 - ▣ Straddles ID, WA, British Columbia
- Upper Priest Lake
 - ▣ 3.3 miles long
 - ▣ 1,352 acre surface area
 - ▣ 48.2 ft mean depth
- Thorofare
 - ▣ Connects upper and lower lakes
 - ▣ 2.7 miles long
- Lower Priest Lake
 - ▣ 19 miles long
 - ▣ 23,800 acre surface area
 - ▣ 94.5 ft mean depth
- Priest River
 - ▣ Flows 45.5 miles from outlet to confluence with Pend Oreille River near City of Priest River



Priest River - MSF

4

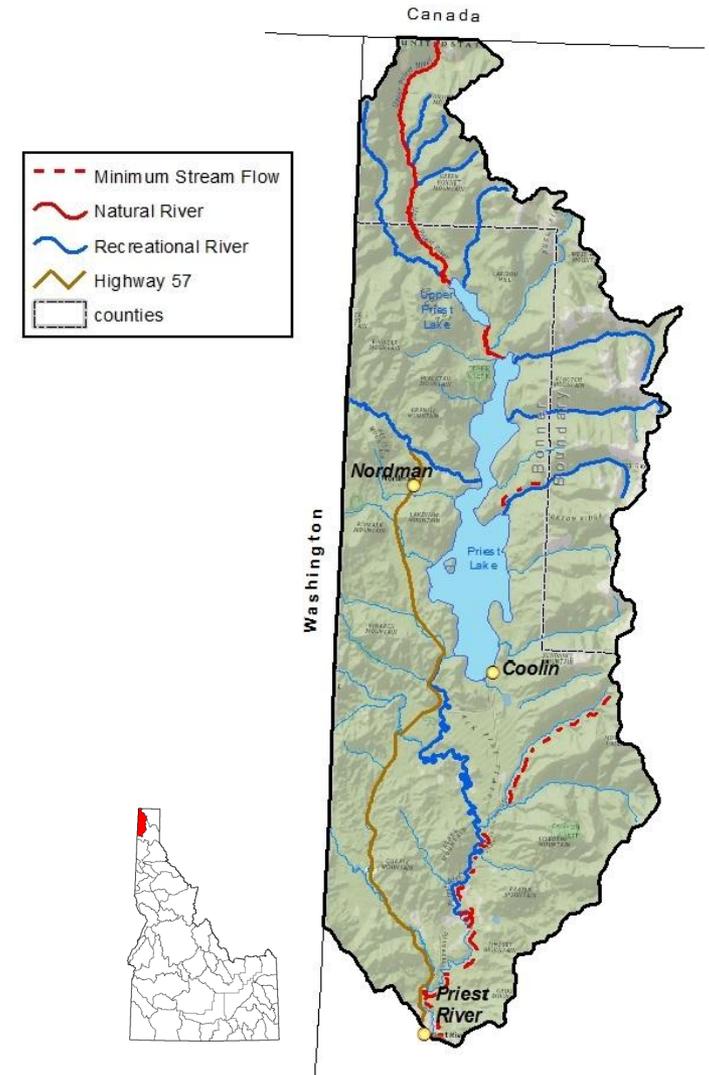
- MSF 97-7380
- Priority Date: 10/22/1997
- Flows:
 - 1,500 cfs (4/01 – 6/30)
 - 951 cfs (7/1- 7/31)
 - 300 cfs (8/01 – 10/31)
 - 700 cfs (11/01 – 3/31)
- Subordinate to statutory Priest Lake level operation requirements (Idaho Code § 70-507, Water right 97-2020)
- Priest River reach between confluence with East River and Pend Oreille River – 21.4 miles



Priest River - Protected Rivers

5

- 12 protected river reaches within Priest River Basin (approx 145 miles, designated in 1990 and 1995)
- Upper Priest River (Canadian Border to Upper Priest Lake):
 - 9.6 mi; Natural River Designation
 - Species of Concern, Spawning, Recreation Use, Scenic Area
- Upper Priest Lake and the Thorofare:
 - 5.9 miles; Natural River Designation
 - Species of Concern, Spawning, Recreation Use, Scenic Area
- Priest River, Priest Lake Outlet Structure to Mcbee Falls:
 - 43.7 miles; Recreational River Designation
 - Wildlife, boating opportunity



Priest River System - Hydrology

7

- Priest River Basin - annual volume entering basin = 1,944,000 af
- Priest River annual avg discharge (Priest River City) = 1,200,000 af
 - (difference = 700kaf lost through evaporation and 20kaf water use consumption; IWRB Priest River Basin Plan)*
- Runoff pattern below Priest Lake:
 - ▣ Spring runoff starts in April
 - ▣ Peak May-early June
 - ▣ Lowest flows usually Aug–Sept
- Natural hydrograph altered by Outlet Dam – decreased river flows during July – Sept, increased river flows in October and November



Priest River below Outlet Dam

Priest Lake Operations – Lake Levels

8

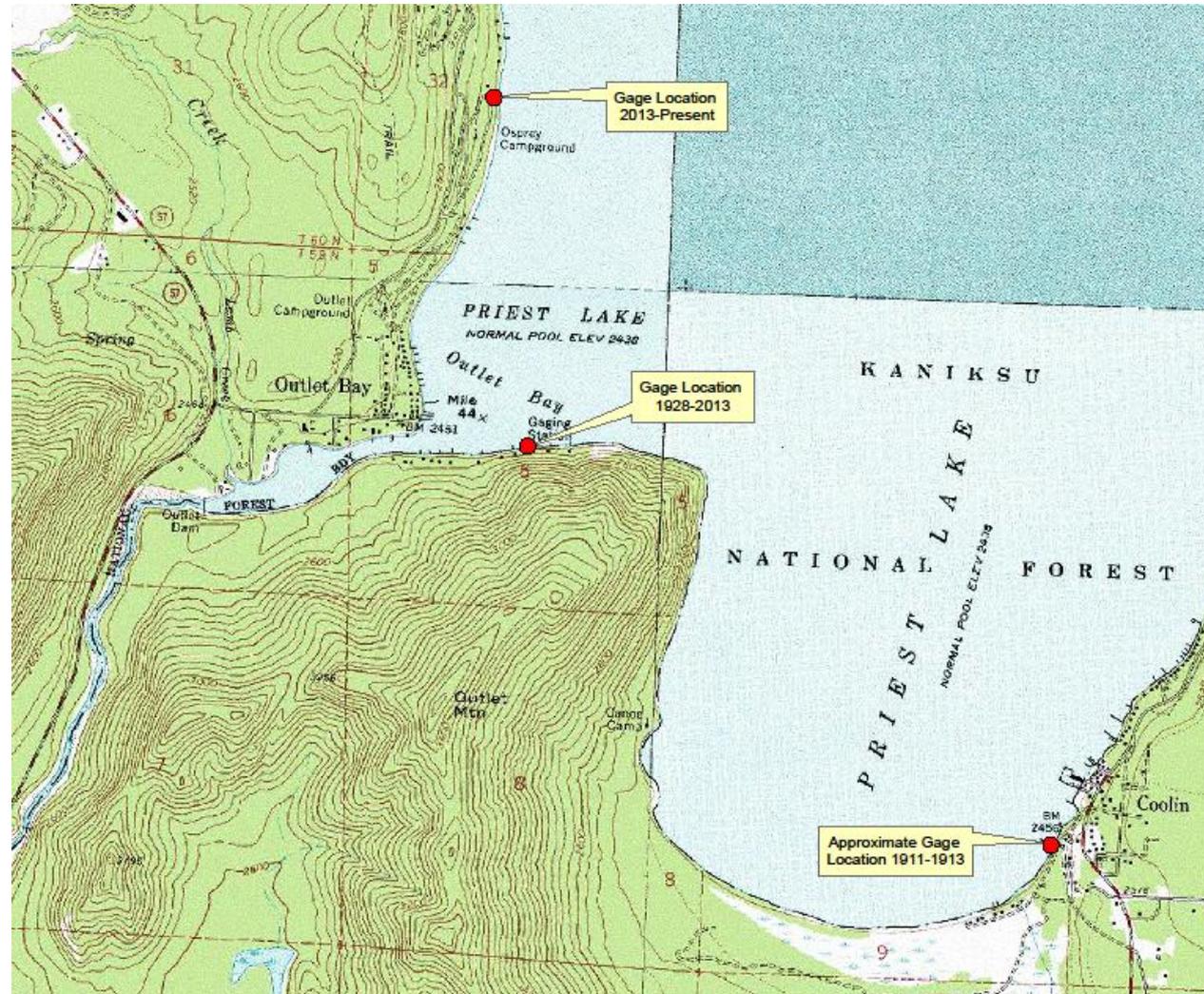
- I.C. §70-507 - Defines requirements for lake level water surface elevations (added to I.C. in 1950)
 - May exceed 3.0 ft (elev 2437.64) on Outlet Gage during spring runoff
 - Must be maintained at 3.0 ft until close of main recreation season
 - Other times of year, maintain between 0.1 and 3.0 ft
- Water Right 97-2020
 - 800 KAF, Recreation Storage
 - Owned by State of Idaho, Office of Governor
 - Priority date: 1/24/1927
- Efforts are made to maintain a minimum of 60 cfs discharge during summer months
- Discharge from lake comprises majority of flow in Priest River for at least 10 miles below dam



Priest Lake Operations - Measurement

9

- USGS gage 12393000: Lake levels measured at Outlet Gage
- USGS gage 12394000: Discharge to Priest River measured approx 4 miles downstream from Outlet Dam near Coolin until 2006 (not replaced)
- USGS gage 12395000: River discharge measured at gage near Priest River City



Priest Lake Outlet Dam - History

10

1928

- City of Sandpoint received a license by Federal Power Commission (FPC) to construct a dam and power plant on Priest River. Plan dropped – not financially feasible.

1939

- Northern Lights proposed to build a dam and power plant. Would have raised lake 22 ft above current elevation – not approved.

1949

- Prior to 1949, logging operations in outlet channel resulted in lake level increases impacting lake front property owners and fish passage.
- 1949, resort owners and residents petitioned Governor to stabilize lake levels.

1950

- Idaho Legislature approved construction of a control structure to maintain lake levels (I.C. 70-507 added). Washington Water Power (WWP) Company constructed outlet dam on behalf of the State of Idaho.

1950

- State of Idaho and WWP enter into 5-year agreement for rights to water releases for power in the fall. Purpose - regulated lake levels during summer months and coordinated release of storage water in the fall for the benefit of hydropower facilities downstream.

Priest Lake Outlet Dam - History

11

1953-1955

- Northern Lights applied to Federal Power Commission to build 2 plants on Priest Lake.
- State of Idaho discouraged FCP from issuing licenses.

1957-2002

- State of Idaho and WWP executed multiple multi-year renewable operating agreements (O&M) – IDWR receives payments.

1964

- Pacific NW Coordination Agreement executed (headwaters storage agreement between USACE, USBOR, BPA, Utilities – state not eligible).

1978

- New dam constructed for IDWR (concrete with 11 radial gates) 100 ft downstream for original dam.

2002

- New O&M agreement between IDWR and Avista (formerly WWP). Avista continues to pay compensation to state for rebuild of Outlet Dam and a negotiated fee.

2011

- Avista terminated Operations and Maintenance Agreement. Priest Lake Dam was removed from agreement.

Priest Lake Outlet Dam

12

Dam features

- Constructed 1950/Rebuilt 1978
- Concrete with 11 radial gates (7 ft high)
- Structural height 12 ft
- Dam Crest Length 194 ft
- Top of Dam Elevation 2441.7 ft
- Full Pool Elevation 2437.64 (3 ft on USGS gage)
- Active lake storage 76.160 af
- Res surface area 23,800 ac



Priest Lake Outlet Dam – Historical Operation

13

- Water lake levels measured at Outlet gage had consistent pattern from 2000-2014
 - ▣ Lake levels begin to rise April and May during spring runoff
 - ▣ Max level of 3-5 ft in early June
 - ▣ Level recedes to about 3.0 ft in July through end recreation season
 - ▣ Storage releases commonly begin mid-Oct, end in November

- Discharge in Priest River below the Outlet Dam varied between 1952-2006 during summer recreation season
 - ▣ High of approx 300 cfs; minimum of 60 cfs maintained

Priest Lake Outlet Dam – 2015 Operation

14

- Northern Idaho experienced one of the most severe droughts on record.
- Concerns about maintaining lake levels into fall - negative impacts to recreation
- Concerns about reducing river flow downstream of Outlet Dam below 60 cfs - impacts to bull trout populations and other aquatic life

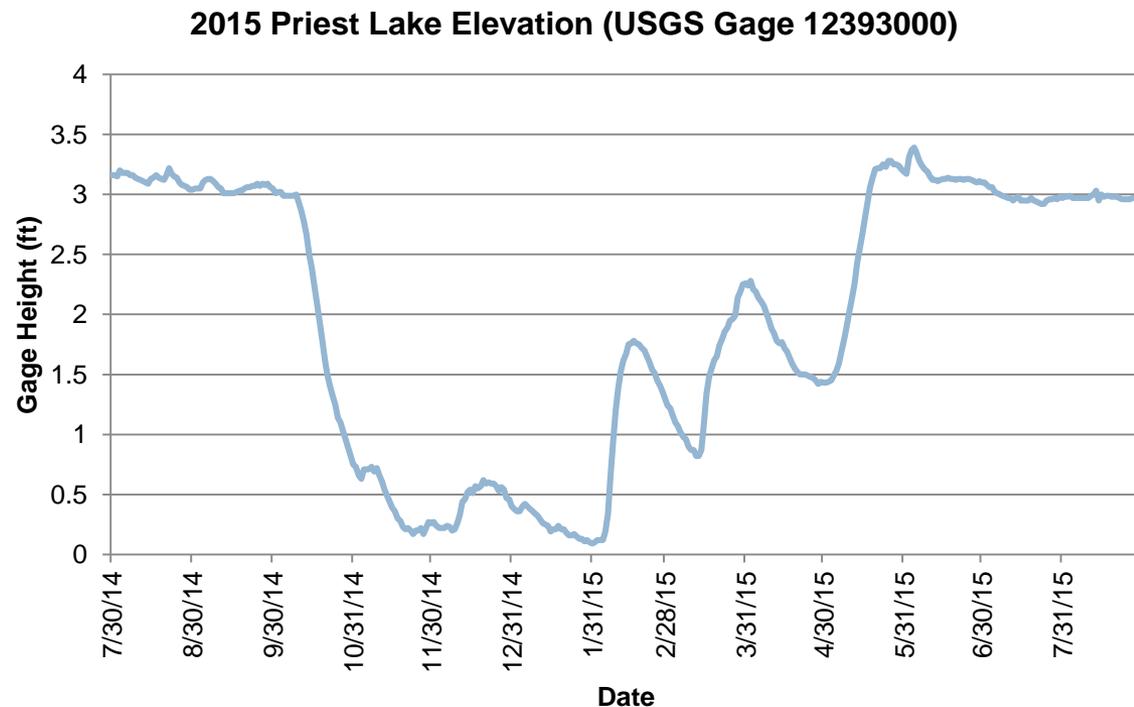


Priest Lake Outlet Dam – 2015 Operation

15

□ Lake level measurements

- Level held at 3.0 ft on Outlet Gage in compliance with IC through August 30, 2015
- USGS measurements determined discharge at dam was reduced to roughly 42.5 cfs on July 28, 2015 to maintain 3.0 ft lake level
- USGS developed rating table lake elevation change vs volume released – 0.42 cfs equivalent to lake decline of 0.11 ft



Thorofare & Breakwater

16



As The Lake Churns
Photo: Sara K. Williams

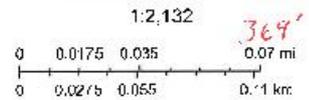
Priest Lake Thorofare Confluence



Banner County geospatial data used with no other GIS to accuracy.

April 27, 2016 *2013 Photo*

- Access
- Structure
- Access Line

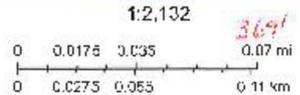


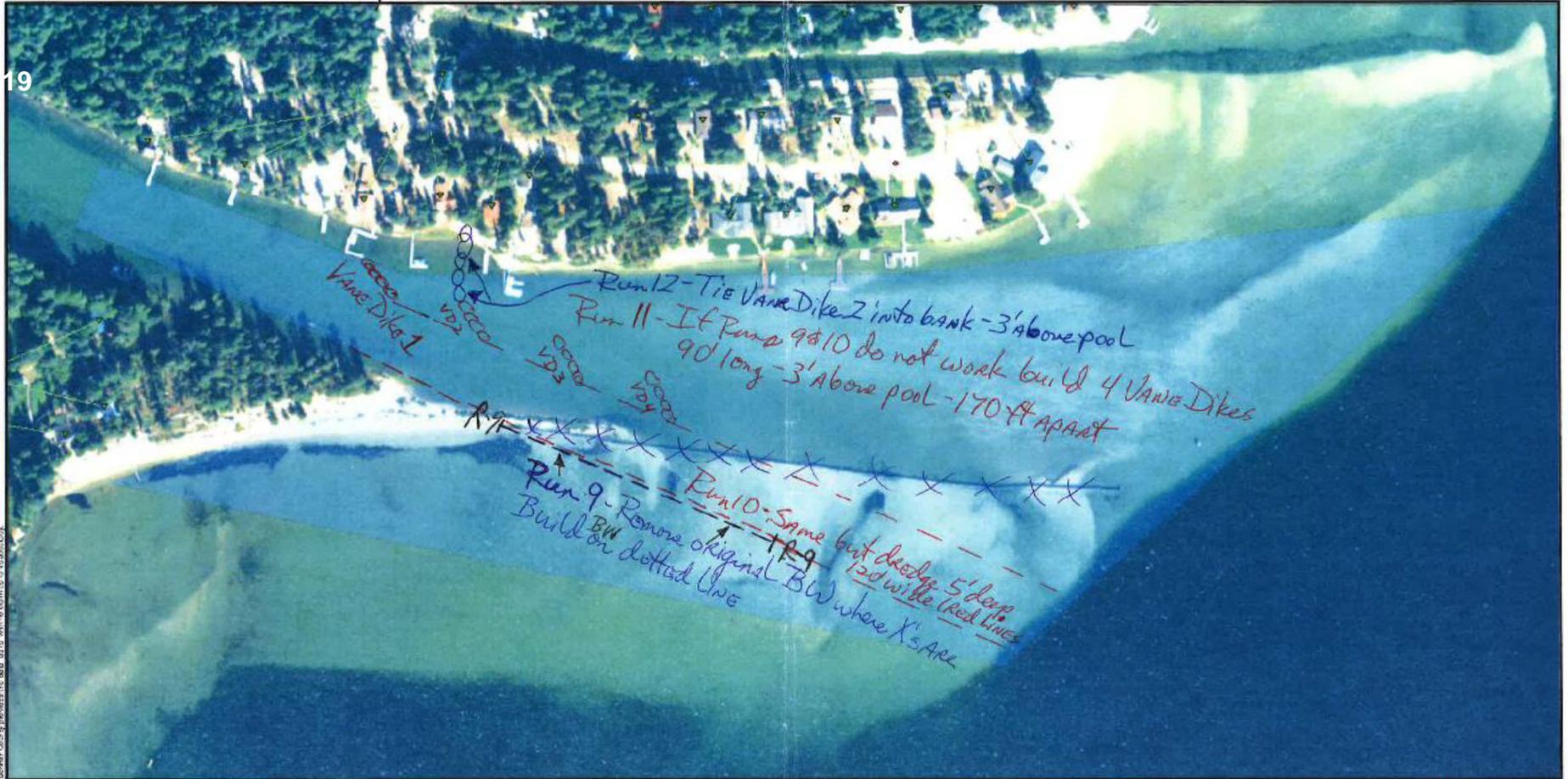
Priest Lake Thorofare Confluence



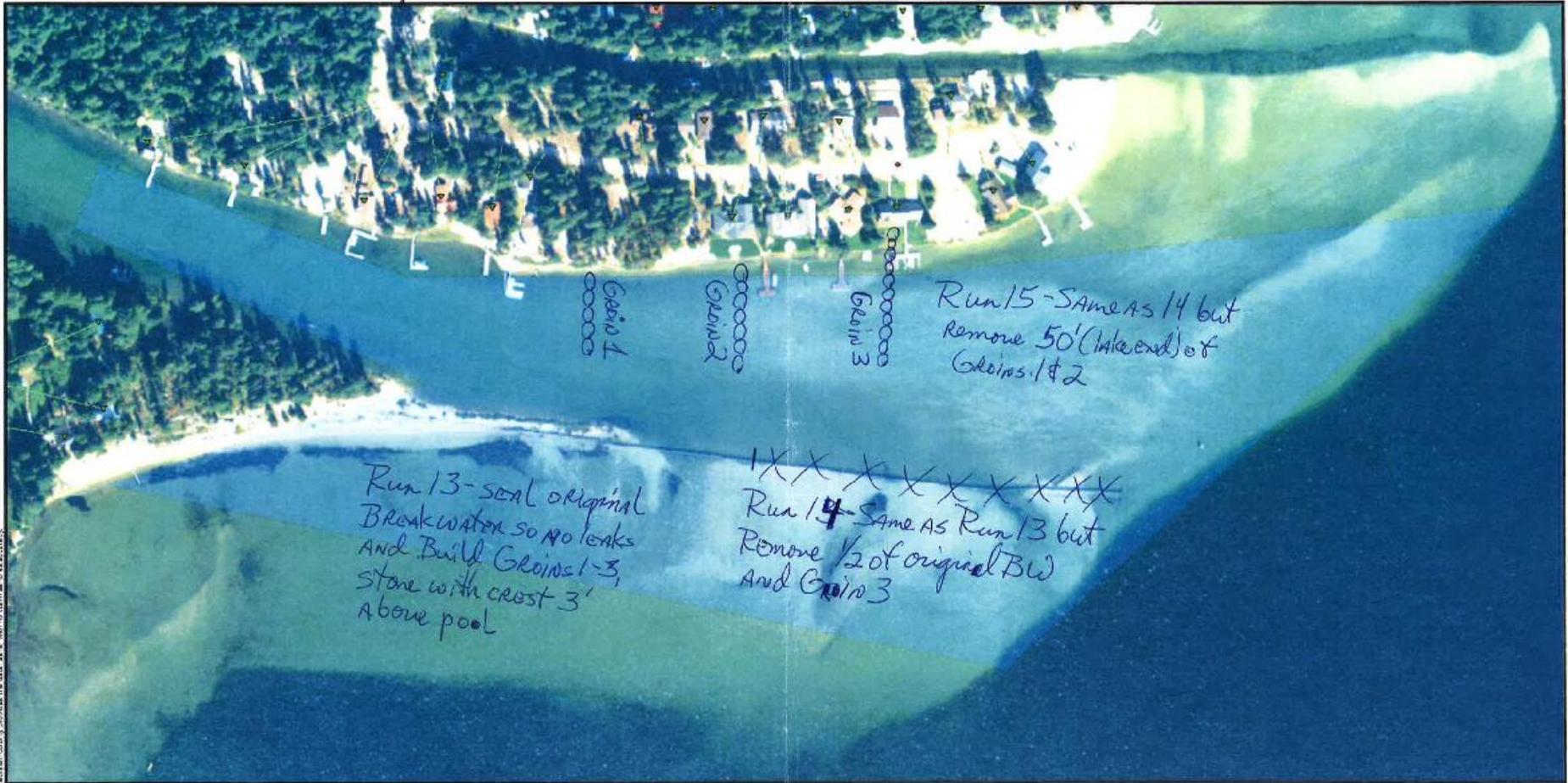
April 27, 2016

- Access
- Structure
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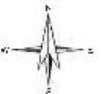
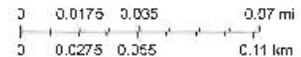
Bozeman County provided the data for this map with no warranty or liability.



April 27, 2016

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- Structure
- Access Line

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Priest Lake Water Management Study

21

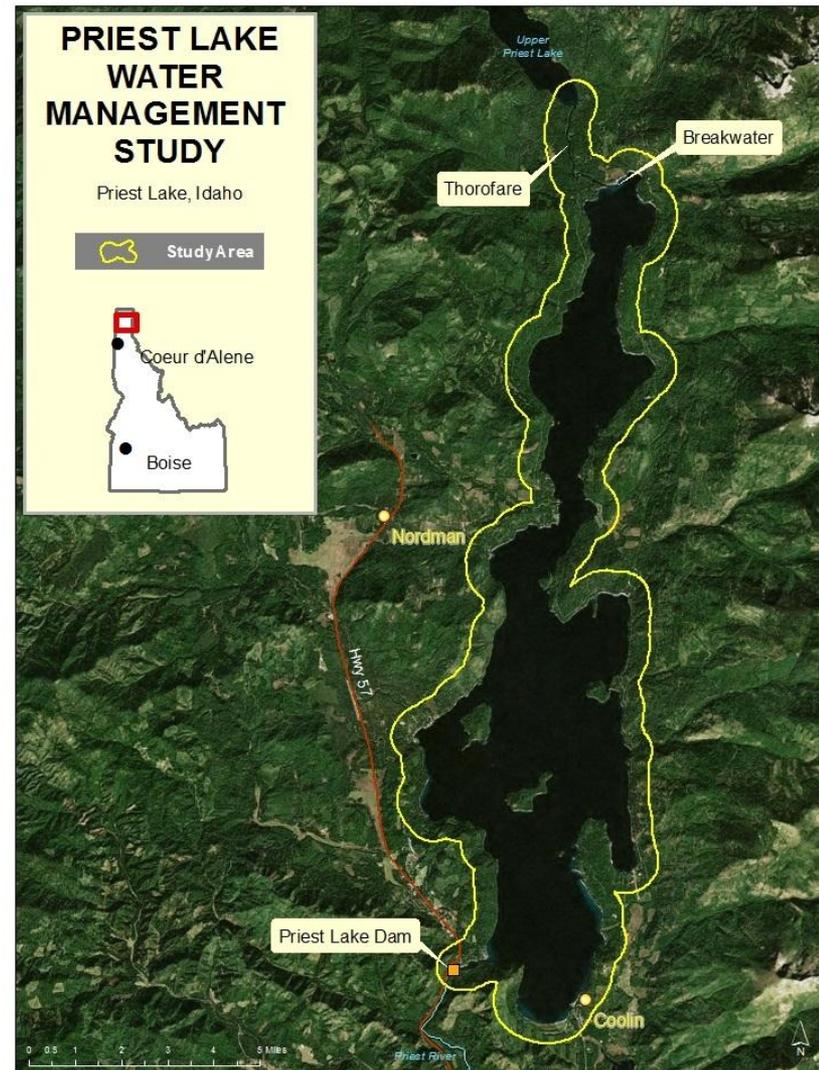
- Problem:
 - ▣ 2015 dry-year conditions resulted in difficulty maintaining required summer lake levels and downstream flows.
 - ▣ The Breakwater Structure is in serious need of rehabilitation and the Thorofare is at times inaccessible due to sedimentation
- Objectives:
 - ▣ Identify management, operational, and structural options to maintain lake levels and downstream river flow under a range of water supply conditions (operating plan) and to improve the condition of the Thorofare
 - ▣ Evaluate improvements to the Breakwater structure and the Outlet Dam to achieve these objectives.
- IWRB authorized expenditure of up to \$300,000 to initiate the water management study

Priest Lake Water Management Study

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Elements of the Study:

- Analysis of hydrologic conditions
- Identification of necessary improvements for water supply forecasting and monitoring
- Evaluation of the potential to store additional water to maintain lake levels and reasonable river flows through the summer recreational season
- Identification of potential impacts or benefits to shoreline property owners, water quality, fish and wildlife
- Engineering analysis of potential improvements to the Priest Lake Outlet Structure
- Engineering analysis of potential improvements to the breakwater structure to promote sustainability of the Thorofare channel



Priest Lake Water Management Study

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Status/Tentative Milestones:

- Ongoing – Coordination of internal technical study team including Bonner County and Lakes Commission
- Ongoing - Informal engagement with local stakeholders (steering committee)
- July – September: Request for Proposals – solicitation and consultant selection
- Fall 2016-Spring 2017: Coordination with consultant, key stakeholders and study team
- Spring/summer 2017: Public outreach and ongoing analysis
- Official study schedule to be determined with selected consultant





Questions and/or Discussion?

Memorandum

To: Idaho Water Resource Board
From: Cynthia Bridge Clark
Date: July 11, 2016
Re: Priest Lake Water Management Study



Background:

Priest Lake is located on the Priest River in the Idaho Panhandle north of Coeur d' Alene. It is a significant draw for tourism and recreation in the area and is known for the pristine variety of wildlife. Priest Lake is approximately 18 miles long with a maximum depth greater than 300 feet and active storage space of approximately 76,000 acre-feet. It is connected to Upper Priest Lake by a 2.5-mile-long channel, known as the "Thorofare", which is actively used by the public for recreation and access to the upper lake.

A 1,400-foot-long Breakwater structure at the north end of Priest Lake is intended to manage sediment transported from Upper Priest Lake and to provide protection to landowners at the north end of the lower lake. The Breakwater is in serious need of replacement, a project that has been considered for some time by Bonner County, the State of Idaho, and lake users.

At the mouth of the lower lake, Priest Lake Dam was constructed (1951) as an outlet control structure to manage lake levels and downstream flows in the Priest River. The dam is owned by the Idaho Department of Water Resources (IDWR). In accordance with Idaho Code § 70-507, it is operated to maintain lake levels at 3 feet on the USGS outlet gage after spring run-off for recreation purposes. Efforts are also made to maintain a minimum of 60 cubic feet per second in the Priest River downstream of the dam. The dam is approximately twelve feet high with eleven radial gates to regulate discharge and does not have an emergency spillway. The dam is operated by a contractor on behalf of IDWR, does not have automation, and has some maintenance needs.

In 2015, limited water supply and drought conditions in Northern Idaho resulted in difficulty maintaining required summer lake levels and downstream flows. On March 18, 2016, the Idaho Water Resource Board (IWRB) passed a resolution authorizing expenditure of up to \$300,000 to evaluate options for management of the system and necessary improvements to the Priest Lake outlet dam and breakwater structure at the Thorofare.

Project Status:

IDWR/IWRB staff has been coordinating with representatives from Bonner County and Lake Pend Oreille, Pend Oreille River, Priest Lake and Priest River Commission (Lakes Commission) to identify and prioritize the study objectives, and to move forward with a solicitation process to hire a consultant to complete the study.

A small group of stakeholders convened on April 26, 2016 to provide initial comments on the project scope prior to issuing a solicitation. The group included representatives from residential and commercial interests, as well as various agencies. Additional and more detailed input will be sought

from the public and a broader set of stakeholders once the study has been initiated. The project scope of work and contract solicitation is currently being finalized. The study is expected to identify of long-term management objectives and evaluate how the lake and river system can be operated to achieve those objectives under a range of water supply conditions (e.g. wet to dry-year conditions). General elements of the study include the following:

- Analysis are of hydrologic conditions;
- Identification of necessary improvements for water supply forecasting and monitoring (gaging);
- Identification of potential impacts or benefits to shoreline property owners, water quality, and fish and wildlife;
- Engineering analysis of potential improvements to the Priest Lake outlet structure; and
- Engineering analysis of potential improvements to the breakwater structure to promote sustainability of the Thorofare channel.

A Request for Proposal is scheduled to be advertised in July with selection of a consultant by the end of September. Efforts will be made to involve key representatives from the public at the beginning of the study process. A more defined schedule and strategy for public involvement, data collection and analysis will be provided once a consultant has been obtained.

The July IWRB meeting will be held in Sandpoint, Idaho. IDWR staff and representatives from Bonner County will provide an update on the Water Management Study and discuss the history of the Priest Lake Dam and the breakwater structure at the IWRB work session. The IWRB will then tour the Priest Lake area. Additional materials and information will be provided prior to the tour.

REQUIRED ACTIONS: Action is not required by the IWRB at this time.

Idaho Water Resource Board

Priest Lake Area Tour Itinerary

July 21, 2016

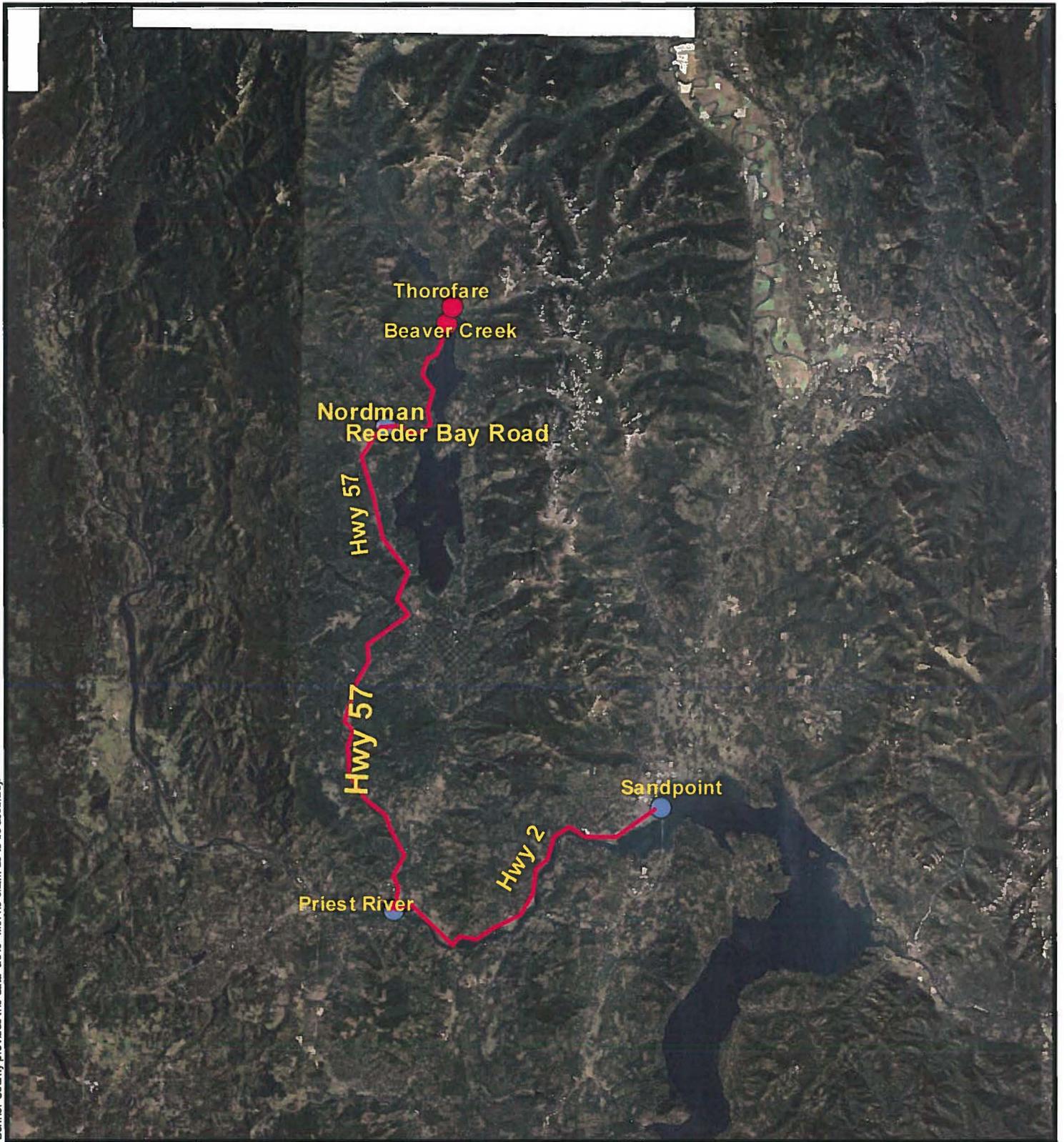


<u>Estimated Time</u>	<u>Activity</u>
8:30–10:00 am	Priest Lake Background Presentations: <ul style="list-style-type: none">• Priest Lake Outlet Dam and Breakwater history and status• Priest Lake Water Management Study briefing
10:00-10:30am	Break & load up for Tour
10:30-12:00pm	Travel from Sandpoint to Beaver Creek Day Park (Restrooms available)
12:00-3:30pm	Boat Tour of Breakwater Structure and Thorofare (Restrooms available and lunch served at stop along Thorofare)
3:30-4:30pm	Travel from Beaver Creek Day Park to Priest Lake Outlet Dam
4:30-5:30pm	Priest Lake Dam
5:30-6:30pm	Return to Sandpoint

Attachments:

- Tour Map
- Northern Priest Lake Map
- Water Resource Board Shore Stop Map
- Priest Lake Outlet Dam Fact Sheet
- Priest Lake Water Management Study Fact Sheet

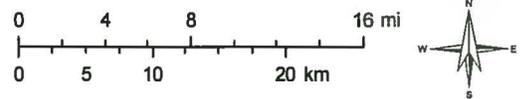
Water Resource Board Tour



Banner County provides the data "as is" with no claim as to its accuracy.

July 15, 2016

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Created by: sk

Northern Priest Lake



Bonner County provides the data 'as is' with no claim as to its accuracy

July 15, 2016

Major Roads

- U.S. Hwy
- State Hwy
- Arterial

Local Roads

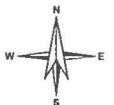
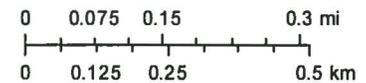
- Collector
- Local Access
- Seasonal Road

Ramp/Connector

2017 Parcels

Tax Roll Parcels

1:13,237



Created by: sk

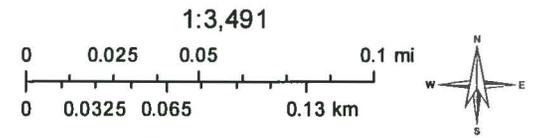
Water Resource Board Shore Stop



Bonner County provides the data "as is" with no claim as to its accuracy

July 15, 2016

-  2017 Parcels
-  Tax Roll Parcels



1:3,491

Created by: klatt



Priest Lake Water Management Study

Background: Priest Lake is located on the Priest River in the Idaho Panhandle north of Coeur d' Alene. It is a significant draw for tourism and recreation in the area and is known for the pristine variety of wildlife. Priest Lake is approximately 18 miles long with a maximum depth greater than 300 feet and active storage space of approximately 76,000 acre-feet. It is connected to Upper Priest Lake by a 2.5-mile-long channel, known as the "Thorofare", which is actively used by the public for recreation and provides access to the upper lake.

A 1,400-foot-long Breakwater structure at the north end of Priest Lake is intended to manage sediment transported from Upper Priest Lake, provide protection to landowners at the north end of the lower lake, and maintain channel access through the mouth of the Thorofare. The Breakwater is in serious need of replacement, a project that has been considered for some time by Bonner County, the State of Idaho, and lake users.

At the south end of the lower lake, Priest Lake Dam was originally constructed (1951) as an outlet control structure to manage lake levels and downstream flows in the Priest River. The dam is owned by the Idaho Department of Water Resources (IDWR). In accordance with Idaho Code § 70-507, it is operated to maintain lake levels at 3 feet on the USGS outlet gage after spring run-off for recreation purposes. Efforts are also made to maintain a minimum of 60 cubic feet per second in the Priest River downstream of the dam. The dam is approximately twelve feet high with eleven radial gates to regulate discharge. The dam is operated by a contractor on behalf of IDWR, does not have automation, and has some maintenance needs.

In 2015, limited water supply and drought conditions in Northern Idaho resulted in difficulty maintaining required summer lake levels and downstream flow in the Priest River. Concerns about the need to operate the system more effectively during dry water years to avoid adverse impacts to recreation, residential and commercial interests, fisheries, wildlife and habitat prompted the Idaho Water Resource Board (IWRB), Bonner County, the "Lakes Commission" and Idaho Legislators to support initiation of efforts to evaluate potential solutions.

Project Description: The IWRB will fund a study to identify long-term management strategies and evaluate how the lake and river system can be operated to achieve those objectives under a range of water supply conditions (e.g. wet to dry-year conditions). General elements of the study include:

- Analysis of hydrologic conditions and identification of improvements for water supply forecasting and monitoring (gaging);
- Evaluation of the potential to store additional water to maintain lake levels and reasonable river flows through the summer recreational season;
- Identification of potential impacts or benefits to shoreline property owners, water quality, and fish and wildlife;
- Engineering analysis of potential improvements to the Priest Lake outlet structure; and
- Engineering analysis of potential improvements to the breakwater structure to promote sustainability of the Thorofare channel.

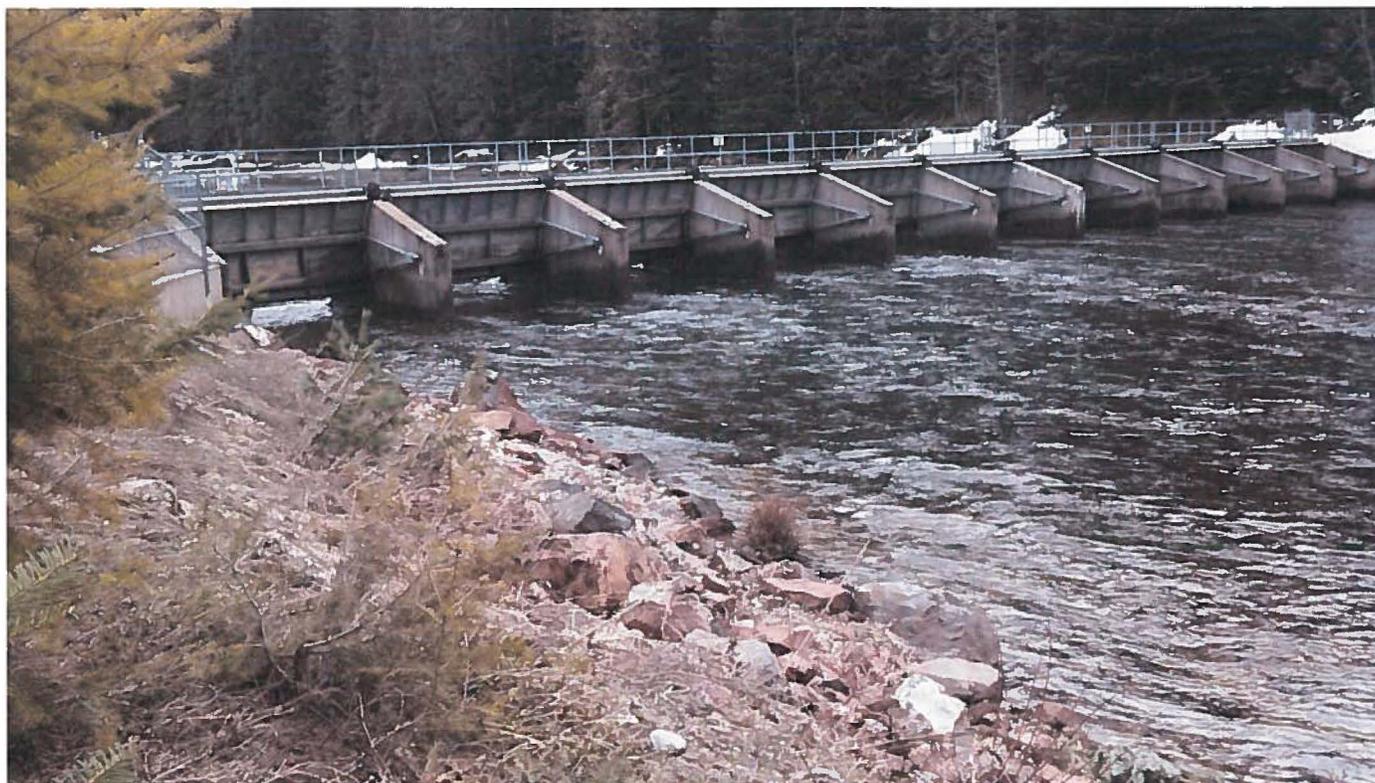
Study Status: The IWRB will issue a Request for Proposal for consultant services to initiate the study in the fall of 2016. Efforts will be made to involve key representatives from the public at the beginning of the study process. A more defined schedule and strategy for public involvement, data collection and analysis will be provided once a consultant has been obtained.



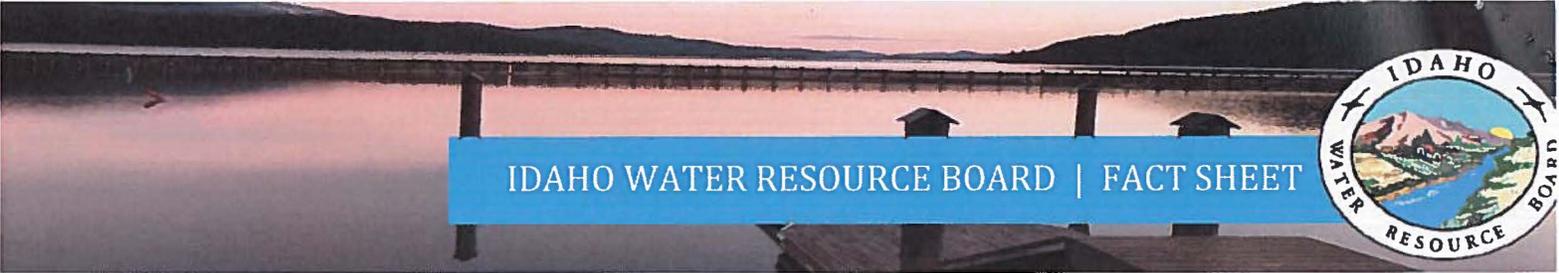
Priest Lake Outlet Dam

Priest Lake Dam Information:

Dam Construction Date:	1950 (Wood structure with stop logs – Washington Water & Power)
Dam Reconstruction Date:	1978 (Concrete structure with radial gates – Washington Water & Power)
Dam Ownership:	IDWR
Top of Dam Elevation:	~ 2441.7 feet
Dam Structural Height:	12 feet
Dam Hydraulic Height:	8 feet
Dam Crest Length:	194 feet
Static Freeboard:	~ 4 feet (Top of concrete pier to top of radial gate)
Full Pool Elevation:	2437.64 (3.0' USGS Gage Reading)
Active Lake Storage:	76,160 af
Reservoir Surface Area:	23,800 acres



Priest Lake Dam looking upstream, April 4, 2013



Priest Lake Dam Operations:

Dam Operator:	Washington Water & Power/Avista Corp. 1950 – 2010 IDWR 2010 – Present (Karl Duncan)
Dam Operations:	Manual (Portable Electric Drill or Hand Crank)
Operational Spillway:	11 Radial Gates (7-feet high)
Emergency Spillway:	None
Low Level Outlet:	None
Discharge Measurement:	USGS Staff Gage No. 12393000



Priest Lake Dam U.S.G.S. Staff Gage, August 11, 2014