

Bayview
Water & Sewer District


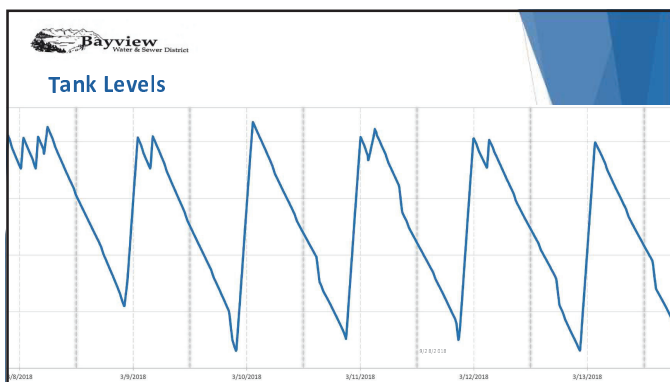
1 Non-Revenue Water

- Excessive amount of water that is not metered (at least 50% of water).
 - Potential Contributors:
 - Leaking transmission lines in Farragut Area.
 - Navy Base is unmetered and use is unknown.
 - Aging meters in Bayview Area are inaccurate (read less than actual use).
 - Known leaks in distribution lines.

Bayview
Water & Sewer District

Pipes

- Leaking pipe joints in the Farragut area.

Bayview
Water & Sewer District


2 Low Water Pressure Complaints/ Inadequate Fire Flow

- Bayview Area – along the top of the lower pressure zone.
- North Side of Bayview.
- Dromore Area – low pressure and reservoir is undersized (only 11K gallons) and does not provide adequate fire flow.

Bayview
Water & Sewer District

Dromore Reservoir

- 11,000 gallons (welded steel).
- Built in 1970s.
- Undersized and without adequate fire flow storage.
- Low elevation contributes to low pressure areas.



Bayview
Water & Sewer District


3 Long-Term Maintenance/Reliability

- Aging infrastructure:
 - Major components installed early 1940s, mid 1970s.
- Auto back-up power needed at Well 7.
- SCADA (controls) is outdated and has some deficiencies.
- No back-up power at Farragut Reservoir.

Bayview
Water & Sewer District

Farragut Reservoir

- 225,000 gallons (concrete).
- Built in 1942 (76 years old).
- Remaining life 25-30 years (with repairs).
- Interior and exterior coatings have failed.
- Numerous cracks are allowing leakage.



Bayview
Water & Sewer District

Farragut Reservoir: Inside the tank



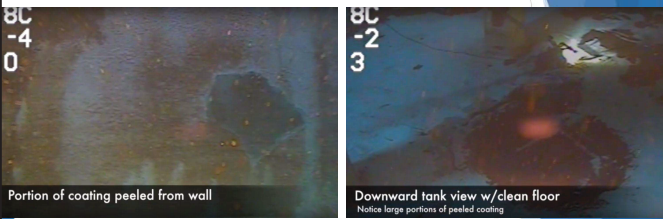
Coating cracked and peeling on pilings

Tank walls

6/20/2018

Bayview
Water & Sewer District

Farragut Reservoir: Inside the tank



Portion of coating peeled from wall

Downward tank view w/clean floor
Notice large portions of peeled coating

6/20/2018

Bayview
Water & Sewer District

Farragut Reservoir: Inside the tank



Large patches or missing floor coating

Ceiling

6/20/2018

Bayview
Water & Sewer District

How Do We Address These Deficiencies?

Today's Goal: Receive public feedback on how the Board should address deficiencies.


6/20/2018

Bayview
Water & Sewer District

System Needs

- ▶ Meter replacement
 - Replace old and inaccurate meters.
 - Add meters to unmetered locations.
- ▶ Minor projects
 - Repair known leaks, SCADA upgrades, generator at Well 7, and PRV rebuilds.
- ▶ Repair or replace the leaky transmission mains in Farragut area.


6/20/2018



System Storage Needs

- ▶ **Construct new tank to serve all BWSD.**
 - Life of 75-100 years.
 - Requires new transmission main.
 - Addresses low water pressure issues.
 - Increases water system efficiency and fire flow.
- ▶ **Rehab Farragut and replace Dromore tanks.**
 - Life of 25-30 years.
 - Requires replacement of existing transmission main.


6/20/2018



Why Make Improvements Now?

- ▶ Aging infrastructure is approaching end of usable life.
 - Major system components were constructed in the 1940s.
- ▶ Current DEQ loan terms are favorable.
 - 1.75% interest over 30-year period.
 - Approx. \$215,000 principal forgiveness.
- ▶ Future users will share the costs of improvements.


6/20/2018



What if We Do Nothing?

- ▶ Continue to waste approximately 50% of pumped water (approx. 50 million gallons per year).
- ▶ Need to establish a repair fund.
- ▶ Would have to address any repairs immediately without the benefit of very favorable financing terms.
- ▶ Current customers would have to pay for system repairs upfront vs. having future users share costs.


6/20/2018



Questions & Answers (approx. 30 minutes)

- Relating to the presentation.
- Ellery Howard – J-U-B
- Katy Baker-Casille – DEQ
- Laura McAloon – Bond Counsel

6/20/2018



Public Comment

- For those who signed up to comment.
- Presentation-related comments.
- Three minutes per person.
- Please state your name and address before commenting.

6/20/2018



6/20/2018



PUBLIC HEARING: COMMENTS - WATER SYSTEM

JUNE 20, 2018, 3 P.M.

Name and Contact Information:

Norma Jean Knowles

208-683-1980

njyesea6@gmail.com

Comments:

I am deeply concerned about the costs that 471 users are going to share ~~about~~ ^{with} the discussed "improvements" that we ^{are} being told has to be done.

I would ~~do~~ prefer that we replace meters as needed instead of mass replacement. I also prefer that we do the necessary repairs as needed instead of incurring massive costs.

Do not want to speak



PUBLIC HEARING: COMMENTS - WATER SYSTEM

JUNE 20, 2018, 3 P.M.

Name and Contact Information: Kate Jones
mkatej@g.com

Comments:

5 public workshops?! how are they communicated? We received an e-mail about this one, but none of the others. We are seasonal residents who have a stake in this, but no vote. We do like to attend the meetings when possible. Please send an e-mail about the next public meeting in July.

Thank-you

P.S. Can you prioritize the projects in terms of need (not money). Like, if you only do 1 thing this should be it... ~~etc~~ and on down the line?



PUBLIC HEARING: COMMENTS - WATER SYSTEM

JUNE 20, 2018, 3 P.M.

Name and Contact Information:

Connie Johnson

360 359-1185

Comments:

Are there any federal funding programs / grants for helping this particular water system problem? (Federal takes on water leaking - what are they?)

Does replacing the Farragut tank take care of the problems of Promare tank?

Would both tanks be replaced (if replacement is the decision)?



Bayview
Water & Sewer District

PUBLIC HEARING: COMMENTS - WATER SYSTEM

JUNE 20, 2018, 3 P.M.

Name and Contact Information:

Deb Deimler

208-691-7087

Comments:

I need to talk to

someone in charge of
Billing - I am often getting
overcharged by Jessie



PUBLIC HEARING: COMMENTS - WATER SYSTEM

JUNE 20, 2018, 3 P.M.

Name and Contact Information:

Tom Fungarner

202 683 0390

Comments:

In my opinion this meet was backwards.

I cannot give you input when you have not given me data upon which I can make a decision of support.

For example. Rehab the existing reservoir vs. new construction. My answer changes if rehab is 80% of new const. or is it 20%.

Don't fail to bring the \$, again.

I did this kind of thing for 25 years. And this was backwards.

Thank you

Hearing 2 – 7/26/2018

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO,
County of Kootenai, } ss.

Gerit Hagler being first duly sworn
upon oath deposes and says:

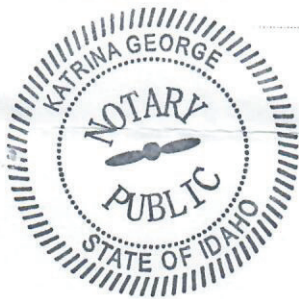
1. I am now and at all times hereinafter mentioned was a citizen of the United States, resident of the State of Idaho, over the age of twenty-one years and not a party of the above entitled action.

2. I am now and at all times hereinafter mentioned was the printer (principal clerk) of the "Coeur d'Alene Press," a newspaper printed and published daily except Sunday in Coeur d'Alene, Kootenai County, Idaho, and having a general circulation in said county.

3. The legal notice

of which the annexed is a printed copy, was published in the regular Thursday issue of said newspaper for 2 consecutive weeks commencing on the 12 day of July, 2018, and ending on the 19 day of July, 2018, and such publication was made as often during said period as said daily newspaper was regularly issued.

4. That said newspaper has been continuously and uninterruptedly published in said Kootenai County, during a period of more than seventy-eight consecutive weeks immediately prior to the first publication of said notice Gerit Hagler. On this 19 day of July in the year of 2018, before me, a Notary Public, personally appeared Gerit Hagler, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.



Katrina George

Notary Public for the State of Idaho,
residing at Coeur d'Alene, Idaho.

MY COMMISSION EXPIRES 8/29/23

Notice of Public Hearing of the Bayview Water & Sewer District For Needed System Improvements & Repairs

The Board of Directors of the Bayview Water & Sewer District have set a public hearing and will receive citizen input and discuss the proposed water system improvements to be funded by a State Revolving Fund (SRF) loan. Discussion will include the need for the project, alternatives evaluated, the rationale for the selected alternative and the environmental and financial impacts of the selected alternatives. Comments from the general public will be received at this time. The hearing will be on Thursday, July 26, 2018 at 6:00 PM at the Bayview Community Center. Interested residents of the District are encouraged to attend.
CDA LEGAL 9811
AD#208183
JULY 12, 19, 2018



14
12
11
43

PUBLIC HEARING: ATTENDANCE SIGN-IN
JULY 26, 2018, 6 P.M.

Attendees (some did not sign in)

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)	Do you wish to give public comment?
12 Jill Danna	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33556 N. Macdonalds Bayview ID 83803	nomadkem@aol.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Bruce + Judy Robinson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16057 E 4th St Bayview ID 83803	208-683-3588	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Robert + Wilda Simpson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17587 E. Bonnock Dr. Bayview, ID 83803	208-561-5155	<input type="checkbox"/> Written <input checked="" type="checkbox"/> Spoken <input type="checkbox"/> No
Randy + Mary Ann Henderson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33679 N. Fir 83803	margannrandy@hotmail.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Ken Billing	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	11 Capetown Dr Bayview, ID 83803	kbilling@twc.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Harold Bishop	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unsure	34160 N. Spruce, Bayview, ID 83803	h.bishop12@gmail.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Robert Prince	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34175 N. Pend Oreille Pines 83807		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
James Jones	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34416 N Raven Place 83803	5jz8jpi@g.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Jim Wilkerson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	154 OSPICEY View Ct	208-683-3625	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No




PUBLIC HEARING: ATTENDANCE SIGN-IN
JULY 26, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)	Do you wish to give public comment?
Maureen + Bill Carl	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33707 N. Fir Ave, Bayview ID 83803	mandbcarl@cloud.com	<input type="checkbox"/> Written <input checked="" type="checkbox"/> Spoken <input type="checkbox"/> No
Don Thraill	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34239 N. Hollyhock		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
Marva Jensen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
Dorothy Johnson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34230 N. Bardell St Bayview ID 83803		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
John + DeAnn Kessler	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	388 Cape Horn Dr.		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Alyssa McWilliams	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16032 E. Schaefer St Bayview ID 83803		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Bob Fisher	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17156 Cape Horn		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Rory Kerslake	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33793 Stubs St.		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
Sally Newcombe	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33793 Stubs St Bayview ID		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
Bruce Pauson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33474 Chevochee		<input type="checkbox"/> Written <input checked="" type="checkbox"/> Spoken <input type="checkbox"/> No
GREG HANSEN	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
Jim + Kate Jones	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34416 N Raven Pl	MKATEJ@Q.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Dale Wilson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17455 Anapoko		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
GARY Macdonald	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17813 E. Auden Bay Rd, Bayview		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No



PUBLIC HEARING: ATTENDANCE SIGN-IN
JULY 26, 2018, 6 P.M.


Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)	Do you wish to give public comment?
Sheryl Puckett	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16023 E. Schaeffer	Sherylpp@gmail.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
Curtis Gulespie	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unsure	16646 CAPE HORN RD	CURTISGULESPIE@MSN.COM	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Bern Gulespie	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unsure	16646 CAPE HORN RD	CANOE-CG@YAHOO.COM	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Ken & Marilyn Saunders	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17838 E. Chopunnish Dr	Saundersk@earthlink.net	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Karen Renner	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34084 E Scenic Bay		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Bird O'Connor	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33770 Spruce		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Hea Fisher	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17156 E Cape Horn Rd	twofishys@hotmail.com	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Kellen Dahlsoe	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17532 E. Banvoek Dr.	missionvulydoe@gmail.com	<input type="checkbox"/> Written <input checked="" type="checkbox"/> Spoken <input type="checkbox"/> No
Devery Gallop	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16304 E 4th St		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
Jim Squire	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	456 CAPE HORN DR		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
PAT Flynn	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	A-14 SCENIC BAY RESORT		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
SAM SILVA	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17425 ARAPAHO RD.	SAMUESILVA@MSN.COM	<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
POWELL STEWART	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17008 J.D.'S "E" DOCK		<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input checked="" type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure			<input type="checkbox"/> Written <input type="checkbox"/> Spoken <input type="checkbox"/> No

 **Bayview**
Water & Sewer District

PUBLIC HEARING:

Water System Facility Plan

Thursday, July 26, 2018

 **Bayview**
Water & Sewer District

Agenda


- ▶ **Presentation**
- ▶ **Questions & Answers**
- ▶ **Pass out Handouts**
- ▶ **Public Comments**
 - Written Comment

Today's Goal: Present estimated costs for various projects and answer any questions.

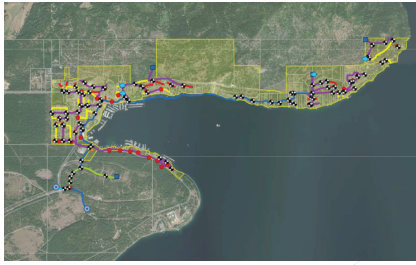
 **Bayview**
Water & Sewer District


Timeline

- ▶ **April 4, 10, 24, May 2, June 12, and July 16, 2018**
Public workshops to discuss water system planning.
- ▶ **May 17** – Public Open House 1
- ▶ **June 20** – Public Hearing 1
 - ▶ Present System Deficiencies
- ▶ **Today - July 26** – Public Hearing 2
 - ▶ Present Estimated Project Costs
- ▶ **August 16** – Open House 2
- ▶ **November 6, 2018** – Potential revenue bond election to approve financing of water system improvements.

 **Bayview**
Water & Sewer District


Water System Analysis



 **Bayview**
Water & Sewer District

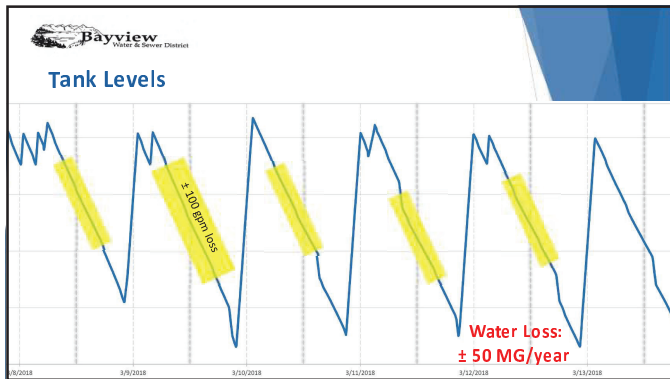
Existing System Deficiencies

- 1 Non-Revenue Water**
- 2 Low Water Pressure Complaints/ Inadequate Fire Flow**
- 3 Long-Term Maintenance/Reliability**

 **Bayview**
Water & Sewer District

1 Non-Revenue Water

- Excessive amount of water that is not metered (at least 50% of water).
 - Potential Contributors:
 - Leaking transmission lines in Farragut Area.
 - Navy Base is unmetered and use is unknown.
 - Aging meters in Bayview Area are inaccurate (read less than actual use).
 - Known leaks in distribution lines.



Bayview
Water & Sewer District

2 Low Water Pressure Complaints/ Inadequate Fire Flow

- Bayview Area – along the top of the lower pressure zone.
- North Side of Bayview.
- Dromore Area – low pressure and reservoir is undersized (only 11K gallons) and does not provide adequate fire flow.

Bayview
Water & Sewer District

Dromore Reservoir

- 11,000 gallons (welded steel).
- Built in 1970s.
- Undersized and without adequate fire flow storage.
- Low elevation contributes to low pressure areas.

Bayview
Water & Sewer District

3 Long-Term Maintenance/Reliability

- Aging infrastructure:
 - Major components installed early 1940s, mid 1970s.
- Auto back-up power needed at Well 7.
- SCADA (controls) is outdated and has some deficiencies.
- No back-up power at Farragut Reservoir.

Bayview
Water & Sewer District

Farragut Reservoir

- 225,000 gallons (concrete).
- Built in 1942 (76 years old).
- Remaining life 25-30 years (with repairs).
- Interior and exterior coatings have failed.
- Numerous cracks are allowing leakage.

Bayview
Water & Sewer District

How much will it cost to address these deficiencies?

Today's Goal: Present estimated costs for various projects and answer any questions.



Balancing Critical System Needs vs. Affordability

- ▶ Aging storage facilities
 - Repair or replace storage reservoirs in Bayview area.
- ▶ Significant leakage in aging transmission mains
 - Repair or replace mains in Farragut area.
- ▶ Consider other needs as maintenance or separate projects.
 - Meter replacement.



System Storage Needs

- ▶ **Construct new tank to serve all BWSD.**
 - Life of 75-100 years.
 - Requires new transmission main.
 - Addresses low water pressure issues.
 - Increases water system efficiency and fire flow.
- ▶ **Rehab Farragut and replace Dromore tanks.**
 - Life of 25-30 years (rehab).
 - Requires replacement of existing transmission main.



Estimated Costs for Potential Project Packages



Projects Summary

[Comparison Matrix](#)

Potential Rate Increase Implementation

- soonest would be 1-2 years
- could be phased in over several years



Questions & Answers

- Ellery Howard – J-U-B
- Katy Baker-Casile – DEQ
- Laura McAloon – Bond Counsel (unavailable, will be here August 16)
- Written comment sheets are available at this time.
- Additional comments will be taken at the Open House on August 16, 2018.
- Don't forget to get a copy of the handout (will also be available on the BWSD Website).



Recommended Project A (New Tank)

- 1) **New Storage Reservoir - North side of Bayview**
 - Description: New large reservoir to serve all of BWSD, replace Farragut Reservoir and small Dromore tank and booster to increase pressure. Consolidates storage and eliminates a booster station.
Expected Life - 100 years.
 - Need: undersized Dromore tank (11K gal) and booster, better fire flow, address pressure complaints.
 - Cost: \$1,000,000
- 2) **New Transmission Main**
 - Description: Abandon portions of aging/leaky line in Farragut Area and install new line from Well 7 to BWSD (2,800 LF).
 - Need: Replace leaking and aging piping in the Farragut Area.
 - Cost: \$300,000
- 3) **New Distribution/Transmission Mains**
 - Description: Connect wells (south side of town) to new reservoir on north side of town (6,300 LF).
 - Need: Improve low pressure and flow problems, increase fire flow capabilities.
 - Cost: \$700,000
- 4) **System Maintenance and Reliability Projects**
 - Description: SCADA upgrades, generator at Well 7, PRV rebuilds (4).
 - Need: system reliability in emergency or power outage, system optimization (PRV tuning).
 - Cost: \$150,000



Total Estimated Cost = \$2,150,000

Estimated Monthly User Fee Impact = \$16.17

Recommended Project B (Rehab Existing Farragut Reservoir, New Dromore Reservoir)

- 1) **Tank Rehabilitation**
 - o Description: paint and lining upgrades to extend the usable life (25-30 years).
 - o Need: existing tank is 75+ years old and leaking. Existing internal coating is spalling off.
 - o Cost: \$350,000
- 2) **Repair or Replace Transmission Mains**
 - o Description: repair or replace 5,000 LF of aging 12", 10", and 8" lines from Well 7 to Tank, and Tank to Navy facility.
 - o Need: 75+ years old, known to have had significant leaks, joints are issue (not pipe itself).
 - o Cost: \$500,000
- 3) **Dromore Upgrades**
 - o Description: replace Dromore Reservoir and booster, potentially move new tank to higher elevation, replace lines.
 - o Need: undersized reservoir (11K gal) does not supply adequate domestic or fire flow needs (serves approximately 20 homes).
 - o Cost: \$500,000
- 4) **Distribution Looping**
 - o Description: connect dead end mains.
 - o Need: Improve low pressure and flow problems, increase fire flow capabilities.
 - o Cost: \$200,000
- 5) **System Maintenance and Reliability Projects**
 - o Description: SCADA upgrades, generator at Well 7, PRV rebuilds (4).
 - o Need: system reliability in emergency or power outage, system optimization (PRV tuning).
 - o Cost: \$150,000

Total Estimated Cost = \$1,700,000

Estimated Monthly User Fee Impact = \$12.79



Recommended Project C (Minimum Project)

1) Tank Rehabilitation

- Description: paint and lining upgrades to extend the usable life (25-30 years).
- Need: existing tank is 75+ years old and leaking. Existing internal coating is spalling off.
- Cost: \$350,000

2) Repair or Replace Transmission Mains

- Description: repair or replace 5,000 LF of aging 12", 10", and 8" lines from Well 7 to Tank, and Tank to Navy facility.
- Need: 75+ years old, known to have had significant leaks, joints are issue (not pipe itself).
- Cost: \$500,000

3) System Maintenance and Reliability Projects

- Description: Dromore tank re-painting, leak repair, SCADA upgrades, generator at Well 7, PRV rebuilds.
- Need: system reliability in emergency or power outage, system optimization (PRV tuning).
- Cost: \$250,000

No upgrades to Dromore Reservoir or Dromore Pump Station other than cleaning/painting.



Total Estimated Cost = \$1,100,000

Estimated Monthly User Fee Impact = \$8.27

No Action" Project

- 1) Would continue to waste approximately 50% of pumped water
 - o approximately \$10,000 annually.
 - o Wear/tear at 2X for well pumps.
- 2) Would need to establish a significant repair fund.
 - o \$8 per user per month for 5 years = \$228,000
- 3) Current customers would have to pay for system repairs/emergencies upfront.
- 4) Would have to address repairs/emergencies immediately and not have the benefit of very favorable financing terms (30 years, 1.75% interest, partial principal forgiveness).

Estimated Monthly User Fee Impact = \$8.00

Meter Replacement Project

Meter Replacement

- o Description: replace old and inaccurate meters in Bayview area with more accurate radio read meters. Add meters to unmetered locations.
- o Need: increased accuracy, less labor to read (few hours vs. day), increases available flow to customer, year-round readings, better customer leak detection.

Total Estimated Cost = \$500,000

Estimated Monthly User Fee Impact = \$3.76

Bayview Water & Sewer District: Potential Project Matrix					
ALTERNATIVES	KEY FACTORS				
	Estimated Monthly Cost to Customers	Expected Life	Increase System Storage and Fire Flow	Improved System Pressures/Flow to Customers	Will There Be Significant Future Needs?
Project A (New Tank)	\$16.17	75-100	XX	XX	
Project B (Rehab Farragut Res, New Dromore Res)	\$12.79	25-30	X	X	X
Project C (Minimum Project)	\$8.27	25-30			XX
"No Action" Project	\$8.00				XX
Meter Replacement Project	\$3.76	20-25		X	

Open House 2 – 8/16/2018



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
Bruce Powell	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	3444 Cherokee	
Bob Keafisher	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17156 E Capetown BV	twfishys@hotmail.com
Marva Jensen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34239 N Hollyhock Bayview	same
Don Thraillkill	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34239 N. Hollyhock Bayview	donthraillkill@gmail.com
SUE DAMON	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33556 N. MACDONALD DR BAYVIEW	nomadskm@aol.com
Cindy Hansen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	18226 E Dundanish Dr Bayview	
Mikie McKendel	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16861 E. Pier Rd Bayview	mckendel@sncglobal.net
Faye Bare	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34102 Corbin	683-7018
Jim Jones	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	812 W. York Ave, Spokane 99205	sj28ipj@gmail.com
DAVE WOJNOSKI	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16504 6TH ST	djwojo@FRONTIER-com
JACKIE WOJNOSKI	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16504 6TH ST	✓ ✓
Robert & Nellie Simpson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17587 E. Bayview	
CHARLES MURRAY	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16990 CAPE HORN	683-3357
Rosemary Brennan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34228 N. Corbin Ave	683-3963
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
Chairman Jipson Ken & Marilyn Saunders	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17209 E. Humboldt Ave Bayview ID 83823	208-683-9010 tijssen@roadrunner.com
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17838 E. Chopunnish, Bayview	208-683-9510 saundersk@earthlink.net
Tim & Debbi Lorenz	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	18050 Duwamish Dr., Bayview	480-682-9529 tlorenz@ekglobal.com
Jamie Munzer	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17474 E Cape Horn Rd Bayview	208 683 1751
Joe & Lynn Hanz	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	20104 E Cape Horn Rd Bayview	208 683 - 1632
Art Jones	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	20330 E BUNK VISTA W., BAYVIEW	208-561-5063
Carie O'Shaughnessy	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	268 GLACIER LN RD, BAYVIEW	208-683-0770
Karen Renn	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34084 N Scenic Bay	509-993-4840
Bruce Stomack	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17008 JO'S "E" DOCK	208-683-0700 (CONNECTED VIA MARINA)
MD Compton	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	A-16 SENIC BAY MARINA	509-489-5572
El-fundi	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	20139 E Perimeter Rd. Bayview	
Kay Black	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17380 E Bitter End Marina Rd Bayview	509-981-7143
Bob Prince	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16587 6th St. Bayview	208-659-3812
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
Hance B. Ny	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34160 N. Spruce Ave, Bayview ID 83803	
Bruce + Judy Robinson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16057 E 4th	
Bob + Marilyn Weaver	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34168 Lime Kiln Rd Bayview, ID 83803	
Roger DAHLSEID	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	1753 E Bannock " " "	
Colleen Dahlsoie	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17532 E Bannock - Bayview ID 83803	
GARY MAID DONALD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17813 E. Hudson Bay Id, " " "	208-683-2211 macdonaldsresort@gmail.com
TED BARE	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34102 N. CORBIN BAYVIEW, ID 83803	208 683 7018
Margaret Nelson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34005 N CORBIN Bayview	208 683-3960
Jerry Richman	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16365 E 5th ST P3802	
Kathy Richman	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16365 E 5th ST	
Judith Baykin	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16167 E 5th	208-683-1021
Barbara McDonald	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33981 Pend Oreille Dr & Patrick	208-683-1615
DEBRA DIEMLER	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34560 LYVELL	208-683-1042
Mavis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34121 N. Corbin	208 661-8259
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSO?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
Nina Jean & Dean Knowles	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34417 N. Robin, Bayview, ID 83803	NIVESca6@gmail.com
George Chris Gormsen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	18354 Hwy 54 Bayview ID 83803	Fixinem@gmail.com
Steve Linda Jenkins	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17309 E. North Shore Ln Id. 83803	
Pat & Gary Flynn	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	Seaside Bay Park A-14	p.flynn288@twc.com
Chris Peck	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	20790 E Cape Horn Rd 83803	chrispeck1970@yahoo.com
Chuck Walker	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	842 Glacier Loop Rd 83803	
JOSEPH P. MYERS	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	16042 E. SHELLEFFER ST. 83803	John P. Myers jpm@comcast.com
Ellen France (Mary Kenneth)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	177040 E Highway 59 83803	
Ali Spahn	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33915 N. Fir Ave Bayview 83803	dispan@e-yahoo.com
DAVE HAMILTON	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	PO Box 12 BAYVIEW 83803	
CARL COSTELLO	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	P.O. Box 332 Bayview ID 83803	
PAUL STANTON	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	745077 TROTIE RD SEPT	
Carol Stewart	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	PO Box 381 Careywood Id 83809	
L & Ron Fredrick	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34584 N. Lincoln Rd 83803	
Sioux & John Taylor	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	149 Cape Horn Drive Bayview, ID 83803	JT208683106@hotmail.com



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
JACKIE CLOFF	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34250 E CAFE HORN CIR	
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
Deano Cowan + Annette	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17544 E Arapaho Rd Bayview AZ	
Penny Jacobson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16374 E 5th Bayview	
Larry & Judy Bergerson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16003 E 1st St. Bayview	
W. LEE AST	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	18204 E DULWAMISH BV	
Danielle, Jonathan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34546 N. Lyvel Ave Bayview	
David & Patricia Bengtson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34216 Flattens Road Bayview	
John Murphy	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17530 Twenty Bird Ct. MacDonald	
Debra Murphy	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	A-Dock	
Bar Colleen	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	16804 E 4th St Bayview	
Mary Jo Mrote	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	PO Box 124 BV - 83803	
J. Cheryl	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34226 N Jeepster	
Zed Salgo	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unsure	16304 NE 4th street	
Louis B. Chavez	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	856 Rock Springs Rd	
Bernardo B. Beck	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17280 E. Bitter End MARINA RD	
JEFF WILKINS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	216 GLACIER Loop RD, BAYVIEW	



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
Sheryl Puckett	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16023 E. Schaeffer Str.	
Alyson Williams	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16032 E Schaeffer Str	
Raquel Kellicott	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33881 N Moonbeam Ct	
Darwin Kellicott	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	" "	
Cynthia Gardner	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17724 NORTHSHORE LANE	
Donald P. Gardner	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17724 E NORTHSHORE LN.	
Edith Bishop	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure		
Bob Moore	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	17686 E. BANNOCK	
Dorothy Johnson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34230 N Bardill	
Maya Hmlun	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33679 N Fir	
Randy Henderson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	37679 N. Fir	
Dale E. Dymaster	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33727 N. Pine	
Walter & Jan Johnson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	16480 E. 6th	
Crystal + Lee Anderson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	33935 N. Spruce	
Kate Jones	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	34416 N Raven Pl	



PUBLIC HEARING: ATTENDANCE SIGN-IN
AUGUST 16, 2018, 6 P.M.

Name	Are you connected to BWSD?	Address (Street, City, State, Zip)	Contact Information (Phone and/or Email)
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		

Recommended Project A (New Tank)

1) New Storage Reservoir – North side of Bayview

- Description: New large reservoir to serve all of BWSD, replace Farragut Reservoir and small Dromore tank and booster to increase pressure. Consolidates storage and eliminates a booster station.
- Expected Life – 100 years.
- Need: undersized Dromore tank (11K gal) and booster, better fire flow, address pressure complaints.
- Cost: \$1,000,000

2) New Transmission Main

- Description: Abandon portions of aging/leaky line in Farragut Area and install new line from Well 7 to BWSD (2,800 LF).
- Need: Replace leaking and aging piping in the Farragut Area.
- Cost: \$300,000

3) New Distribution/Transmission Mains

- Description: Connect wells (south side of town) to new reservoir on north side of town (6,300 LF).
- Need: Improve low pressure and flow problems, increase fire flow capabilities.
- Cost: \$700,000

4) System Maintenance and Reliability Projects

- Description: SCADA upgrades, generator at Well 7, pressure-reducing valve (PRV) rebuilds (4).
- Need: system reliability in emergency or power outage, system optimization (PRV tuning).
- Cost: \$150,000

Total Estimated Cost = \$2,150,000

Estimated Monthly User Fee Impact = \$16.17



Recommended Project B (Rehab Existing Farragut Reservoir, New Dromore Repair)

1) Tank Rehabilitation

- Description: Paint and lining upgrades to extend the usable life (25-30 years).
- Need: Existing tank is 75+ years old and leaking. Existing internal coating is spalling off.
- Cost: \$350,000

2) Repair or Replace Transmission Mains

- Description: Repair or replace 5,000 LF of aging 12", 10" and 8" from Well 7 to Tank, and Tank to Navy Facility.
- Cost: \$500,000

3) Dromore Upgrades

- Description: Replace Dromore Reservoir and booster, potentially move new tank to higher elevation, replace lines.
- Need: Undersized reservoir (11K gal) does not supply adequate domestic or fire flow needs (serves approximately 20 homes).
- Cost: \$500,000

4) Distribution Looping

- Description: Connect dead-end mains.
- Need: Improve low pressure and flow problems, increase fire flow capabilities.
- Cost: \$200,000

5) System Maintenance and Reliability Projects

- Description: SCADA upgrades, generator at Well 7, pressure-reducing valve (PRV) rebuilds (4).
- Need: System reliability in emergency or power outage, system optimization (PRV tuning).
- Cost: \$150,000

Total Estimated Cost = \$1,700,000

Estimated Monthly User Fee Impact = \$12.79



Recommended Project C (Minimum Project)

1) Tank Rehabilitation

- Description: Paint and lining upgrades to extend the usable life (25-30 years).
- Need: Existing tank is 75+ years old and leaking. Existing internal coating is spalling off.
- Cost: \$350,000

2) Repair or Replace Transmission Mains

- Description: Repair or replace 5,000 LF of aging 12", 10" and 8" from Well 7 to Tank, and Tank to Navy Facility.
- Need: 75+ years old, known to have had significant leaks, joints are issue (not pipe itself).
- Cost: \$500,000

3) System Maintenance and Reliability Projects

- Description: Dromore tank re-painting, leak repair, SCADA upgrades, generator at Well 7, pressure-reducing valve (PRV) rebuilds.
- Need: System reliability in emergency or power outage, system optimization (PRV tuning).
- Cost: \$250,000



Total Estimated Cost = \$1,100,000

Estimated Monthly User Fee Impact = \$8.27

“No Action” Project

- 1) **Would continue to waste approximately 50% of pumped water**
 - Approximately \$10,000 annually.
 - Wear/tear at 2X for well pumps.
- 2) **Would need to establish a significant repair fund.**
 - \$8 per user per month for 5 years = \$228,000
- 3) **Current customers would have to pay for system repairs/emergencies upfront.**
- 4) **Would have to address repairs/emergencies immediately and not have the benefit of very favorable financing terms (30 years, 1.75% interest, partial principal forgiveness).**

Estimated Monthly User Fee Impact = \$8.00

— THIS PROJECT IS AN OPTION AS ADD-ON ONLY TO PROJECT A, B OR C. —

Meter Replacement Project

Meter Replacement

- Description: replace old and inaccurate meters in Bayview area with more accurate radio read meters. Add meters to unmetered locations.
- Need: increased accuracy, less labor to read (few hours vs. day), increases available flow to customer, year-round readings, better customer leak detection.

Total Estimated Cost = \$500,000

Estimated Monthly User Fee Impact = \$3.76

Bayview Water & Sewer District: Potential Project Matrix

ALTERNATIVES	KEY FACTORS				
	Estimated Monthly Cost to Customers	Expected Life	Increase System Storage and Fire Flow	Improved System Pressures/Flow to Customers	Will There Be Significant Future Needs?
Project A (New Tank)	\$16.17	75-100	XX	XX	
Project B (Rehab Farragut Res, New Dromore Res)	\$12.79	25-30	X	X	X
Project C (Minimum Project)	\$8.27	25-30			XX
"No Action" Project	\$8.00				XX
Meter Replacement Project	\$3.76	20-25		X	

Bayview Water and Sewer District: Project Preferences

Project	Project A New Tank	Project B Rehab Existing Farragut Reservoir, New Dromore	Project C Minimum Project	"No Action"	Meter Replacement Project Add on to Project A, B, or C				
Total Estimated Cost	\$2,150,000	\$1,700,00	\$1,100,000	\$0	\$500,000				
Estimated Monthly User Fee Impact	\$16.17	\$12.79	\$8.27	\$8.00	\$3.76				
<p>Please select your first and second project preferences using the dots. You may place both dots on the same project if you feel strongly about only one project.</p> <ul style="list-style-type: none">• First Project Preference: Green Dot• Second Project Preference: Red Dot• Meter Preference: Yellow Dot <p>The project team will weight the first preferences more heavily than the second choice preferences. This information will show the BAPD Board which options are favored by open house participants and will be used to guide them in how to proceed. The team and BAPD Board understands that this informal polling will not reflect all BAPD customers thoughts.</p>					<p>Should the meters be included in the selected project?</p> <table><tr><th>YES</th><th>NO</th></tr><tr><td></td><td></td></tr></table>	YES	NO		
	YES	NO							

Bayview Water and Sewer District: Project Preferences					

Project	Project A New Tank	Project B Rehab Existing Farragut Reservoir, New Dromore Reservoir	Project C Minimum Project	Project D "No Action"	Meter Replacement Project Add on to Project A, B, or C
Total Estimated Cost	\$2,150,000	\$1,700,00	\$1,100,000	\$0	\$500,000
Estimated Monthly User Fee Impact	\$16.17	\$12.79	\$8.27	\$8.00	\$3.76

Results from Dots Placed at Open House (Approx. 85 people; 77 registered voters)*

First Project Preference: Green Dot	50	4	32	3	Should the meters be included in the selected project?	
Second Project Preference: Red Dot	37	14	32	2	YES	NO
Total Dots (1st and 2nd)	87	18	64	5	35	48
Weighted Scores (1st=2 pts; 2nd=1pt)	137	22	96	8		

Results from Preferences Noted Via Email/Proxy/Once Dots Ran Out at Open House (41 people; 33 registered voters)*	
1	100%
2	100%
3	100%
4	100%
5	100%
6	100%
7	100%
8	100%
9	100%
10	100%
11	100%
12	100%
13	100%
14	100%
15	100%
16	100%
17	100%
18	100%
19	100%
20	100%
21	100%
22	100%
23	100%
24	100%
25	100%
26	100%
27	100%
28	100%
29	100%
30	100%
31	100%
32	100%
33	100%
34	100%
35	100%
36	100%
37	100%
38	100%
39	100%
40	100%
41	100%

First Project Preference: Green Dot	30	0	6	5	Should the meters be included in the selected project?	
Second Project Preference: Red Dot	8	14	4	1	YES	NO
Total Dots (1st and 2nd)	38	14	10	6	12	13
Weighted Scores (1st=2pts; 2nd=1pt)	68	14	16	11		

OVERALL RESULTS* (Approx. 126 people; 110 registered voters)					

First Project Preference: Green Dot	80	4	38	8	Should the meters be included in the selected project?	
Second Project Preference: Red Dot	45	28	36	3	YES	NO
Total Dots (1st and 2nd)	125	32	74	11	47	61
Weighted Scores (1st=2 pts; 2nd=1pt)	205	36	112	19		

*Please Note: Not everyone gave 2nd and meter preferences. Everyone gave at least the 1st preference.

PUBLIC OPEN HOUSE: COMMENTS - WATER SYSTEM

AUGUST 16, 2018, 6 P.M.

Name and Contact Information:

BOB MOORE

208-683-5707

jeanm1936@icloud.com

Comments:

- I voted for option A because:
- 1- The system is aging and in constant need of repair.
 - 2- plan and act for the future of Bayview.
 - 3- The need for action will only be greater in the future and more expensive.
 - 4- ignore the nay-sayers as there are those who will always be that way.

The ladies explaining the whys and wherefores were wonderful considering some of the comments and questions

Project Packets Preferences:

If you did not attend the open house on August 16, you can still make your project preference(s) known to the BWSD Board. The project packet options can be found on BWSD's website. Based on the four project packet options, A – New Tank, B – Rehab Existing Farragut Reservoir/New Dromore Reservoir, C – Minimum Project, or the “No Action” Project, **please email your first and second preference to BWSD@jub.com by Monday, August 20, at 5 p.m.** If you feel strongly about only one project packet, you can list that for both your preferences. Additionally, please let us know if you think the Meter Replacement Project should be included in your preferred options or not (“Yes” or “No”).

Example: Project packet preferences for Joe Smith:

- 1st Preference: Project A
- 2nd Preference: Project B
- Meter Project: No

The project team will weight the first choice preferences more heavily than the second choice preferences. This information will show the BWSD Board which options are favored by open house participants and will be used to guide them in how to proceed. The team and BWSD Board understands that this informal polling will not reflect all BWSD customer's thoughts.

Additional Public Input

Technical Review Submittal

Ellery Howard

From: Roger and Colleen Dahlseid <missionvlydoc@gmail.com>
Sent: Wednesday, June 27, 2018 9:00 AM
To: Ellery Howard; BWSDSharonmeyer@hotmail.com; rdoney@verizon.net; Robyn Edwards; Stephen May; jjbwsd111@yahoo.com
Subject: Public hearing information

Directors and Ellery Howard,

After much contemplation of the meeting yesterday, I do not feel I was candid enough with you in our discussion.

I felt that the meeting on June 20th was a lost opportunity. I also feel that if you continue on your present approach to the bond alternatives, the project in it's entirety may very well become another "lost opportunity".

My comments are intended to be constructive, and are filtered by my own personal desire to see the users of the district get the most value for the \$ they can afford and the most critical deficiencies of the system be addressed.

The way the two options: new vs rehab are presently constructed, with a \$4.00 difference in monthly costs, essentially makes them one in the same. To continue down that road potentially provides 2 choices--and risks the very likely results of forcing a minimum option or worse yet, to do nothing.

I feel that there has not been an awareness or an effort to construct a viable option that addresses the fact, given our current number of users and their income status, that we simply do not have the ability to afford the increases required to finance projects of this size, To put it bluntly, an inability to be in touch with the user base. I know that you don't want to be looking at this again in 30 years when the DEQ loan is paid, but it may be a fact of life that the projected user base approximating close to 700 people at that time, will be more able to absorb the increase in fees than our present 473 user base. I have not seen this fact given the consideration I feel it warrants.

When Steve says that we just can't seem to "run the numbers" to give our low and fixed income users an alternative, I have not seen any effort to do that. I know that to alter the rehab option to the minimum of a 60k tank for Dromore is not ideal, but it may very well be all that your user base can handle at this time. They have the intellect to weight the option, they are not being given the opportunity. I would say the same principal can be applied to the new construction option, can the new tank be scaled down to 275,000 gallons to give some cost relief?

What I am trying to convey is that a dedicated effort to come up with a rehab option that will actually be a cost effective option needs to be given consideration.

My final comment is the costs--I brought up the fact yesterday that new construction cost per gallon on the the new 300,000 tower is indicated at \$3 (considering \$100,000 of the 1 mil is for land- or \$3.33 if no land allowance) while the new construction for the Dromore tank is shown @ \$5 per gallon. Ellery, you mentioned that the figure included the lines, however, the figures presented add an additional \$400,000 for lines.

If you are adding a 20% contingency or whatever it is, it needs to be consistent and done across the options in a clearly definable amount. The way it is now, it clearly indicates "skewed" figures and leads people to draw the conclusion of bias.

Thank you for taking the time to read this and hopefully consider it. Please know that my intent here is to better the situation and not be critical of any of you or the process. Again, I don't want all this effort to end up as a missed opportunity.

Ellery Howard

From: Ellery Howard
Sent: Monday, July 9, 2018 10:14 AM
To: Tribbett, Tara (trib9125@vandals.uidaho.edu)
Cc: Gemma Puddy; Katy.Baker-Casile@deq.idaho.gov
Subject: RE: BWSD follow up questions

Hi Ms. Tribbett,

Thanks for your interest in understanding the issues that have been presented to the public regarding the preliminary findings of the planning effort for the BWSD's water system. Keep in mind that this is a separate (yet related) issue from the potential revenue bond election that would be considered in November. Currently we are working on a Water System Facility Plan that reviews the existing water system and identifies the strengths as well as the needs/deficiencies and recommends potential projects to address them. Part of the effort of the Facility Plan involves collecting the public's input. That's currently where we are at in the process. Obviously, the potential revenue bond is related because it is the method that the BWSD Board is considering as a way to pay for the projects to address the system deficiencies. However, I just wanted to clarify that they are separate processes. BWSD is moving both of these along concurrently to take advantage of the very favorable financing terms of the IDEQ loan that they were approved for. Let me know if you have any further questions related to this aspect. Katy Baker-Casile at IDEQ may also be a resource for additional questions that you may have related to their requirements. Her e-mail is katy.baker-casile@deq.idaho.gov

Below, I have attempted to provide answers to your questions in blue as best as I can at the moment. As I noted in previous e-mails, I wanted to wait to respond until I had all of the information that I needed. BWSD and I had been working with KEC (electrical provider) to provide some of the necessary information. Also keep in mind that the planning effort for the Water System Facility Plan is ongoing and refinements (based on further information and public input) will be made.

ELLERY HOWARD, P.E.
Project Manager

J-U-B ENGINEERS, Inc.
7825 Meadowlark Way, Coeur d'Alene, Idaho 83815
e ehoward@jub.com w www.jub.com
p 208 762 8787 f 208 762 9797



From: Tribbett, Tara (trib9125@vandals.uidaho.edu) [<mailto:trib9125@vandals.uidaho.edu>]
Sent: Thursday, June 21, 2018 1:19 PM
To: Ellery Howard <ehoward@jub.com>; Gemma Puddy <gpuddy@langdongroupinc.com>
Subject: BWSD follow up questions

Hi Ellery and Gemma,

There are a lot of questions I have after your presentation yesterday, so I'll just jump right in. I am collecting information for our local paper about the proposal for a water system upgrade.

First, can you email me a copy of the PowerPoint presentation. This would be a good reference point for me. I also wanted to know if you have maps in pdf form which are more extensive, and show the outlay of the water system of Bayview, plus maps of our Bayview septic system.

The information that was presented in the Open House and last meeting is still in draft form and is currently being updated. We are in the process of developing some handouts for the public that could be made available as a pdf. I will let you know when those are available. There is also an FAQ on the BWSD website related to the revenue bond that may provide you with some answers to bond questions.

Secondly, I just wanted to start with some historical questions, which I wonder if you garnered from your analysis: (The more information you can give me, the more precise information, the better)

(1) How long has this been going on, the leakage at this peak level, which is what again?

BWSD has historically dealt with leaks in the old lines between the wells, tanks, and town which were part of the old Farragut naval installation. I have assisted BWSD with the design of some of these repairs dating back about 15 years. The joints on the older pipes just tend to slowly begin leaking over time. Over the years, BWSD has also had a local excavator assist them with repairs on this older pipe. During the current planning effort, I have attempted to quantify the amount of “non-revenue” water – basically the difference in what is metered at the wells and what goes through the individual meters at the point of delivery. In years 2015 and 2016 it was more, but the non-revenue water is currently around 50 million gallons per year based on 2017 data. While there are some connections that are not metered (mainly the Navy), all signs indicate that most of the “missing” water is due to leaks.

(2) What was the determined cost to the community, per person on their water bills, for this leakage?

BWSD spent over \$19,200 in 2017 for the electrical charges for the wells. Currently the non-revenue water is about 50% of what is pumped, so there is an estimated “cost” of around \$9,600 in electrical costs. In addition, the pumps are having to work twice as much as necessary and the wear and tear reduces the expected life by about 50% as well. That is a “cost” that doesn’t show up until the pump wears out. BWSD does not specifically charge for this non-revenue water – it is just a part of the costs included in the water bill (like regular maintenance, personnel, minor repairs, electricity, etc.). There is a base fee for water service of \$24, which includes up to 5,000 gallons per month (as measured at the individual meters).

(3) How much money did JUB earn from the two \$45,000 grants from IDEQ to study the existing water system?

These grants are a 50% reimbursable grant through IDEQ up to the total of \$45,000. In other words, for every \$1 that BWSD spends on IDEQ-approved tasks related to this Water System Facility Plan, they can request reimbursement for \$0.50 up to a maximum of \$45,000. Currently BWSD has requested reimbursement for \$29,951, which includes \$27,576 to JUB for the Water System Facility Plan and \$2,375 for the underwater video review of the water line in the lake that serves the Cape Horn area. These have all been reviewed and approved by IDEQ.

(4) What is the maximum amount of the loan which Bayview Water and Sewer District has been approved for? And, can I get a copy of each of the proposals for the July meeting and their detailed cost JUB would charge for each option?

BWSD has been approved for up to \$3,332,000 of a potential loan (1.75% interest, 30 year term) with up to \$214,464 principal forgiveness. The potential projects that will be presented in the upcoming July meeting are currently being developed. Many scenarios/projects have been discussed in the last Open House, the numerous public workshops, and the last public meeting. What will be presented in the July 26 meeting will be a culmination of those discussions. Keep in mind that JUB will not “charge” additional for the preparation of these potential projects as it is part of the process for the Water Facility Plan. Also note that JUB is an engineering firm and that any actual future construction would be performed by public works contractors after a public bid process. We prepare estimates of these future construction costs based what we believe that public works contractors will charge for the work.

(5) I need more specific information about the projects JUB has proposed to the Board of BWSD, and their costs?

As was discussed in the last meeting, the potential projects to correct the known existing system deficiencies will be presented at the July 26th meeting. At that time, the ESTIMATED costs will presented as well. Once again, keep in mind

that these estimated costs will be used for budgetary purposes only. The actual costs will be determined once any future projects are bid, awarded and constructed.

(6) How many houses are connected to the BWSD water system? Many people in the meeting eluded to the fact they can vote on this issue, but they are not on BWSD water system-how many houses has JUB estimated are on private systems?

According to BWSD records, the water system had 473 connections at the end of 2017. There are also at least 4 small water systems within the BWSD district boundary but are not currently connected to the BWSD system. Each of those systems have about 10-20 connections (or potential connections) each. So there are 60 – 80 potential future connections to the BWSD system within those small water systems.

(7) Has any contact from JUB been made to future real estate developers, or any associate at Super1 in Athol, about this BWSD proposal?

No.

(8) Will JUB be able to consider my request to establish this infrastructure system so it runs on green energy-what would this look like, in detail? Ellery, do you have specific experience with this kind of engineering where free green energy is linked to water infrastructure?

Green infrastructure costs are always considered in planning efforts such as this. This typically involves looking for ways to increase the efficiencies of the infrastructure (pumps, lights, etc.) to reduce the electrical demand. Reducing the leaks by a significant amount is the easiest way to achieve a significant reduction in the electrical costs. We have been working with the local (and only) electrical provider to review/audit the BWSD water system and they have concurred that leak reduction is the best way to reduce electricity demand. The provider, Kootenai Electric Cooperative, is a local electrical cooperative that is able to get some of the lowest electrical costs in the nation for the benefit of their users. As you know, other forms of power such as solar or wind would require an additional upfront cost to install. I do have experience with the design of solar powered pumps, etc. for remote water system locations. However, I have yet to find where any energy is provided free of some kind of charge (maintenance, installation, etc.). As always, if you have some information on this, I would be very interested in it. Please feel free to pass it along to me or the BWSD Board.

(9) What is the overall cost quoted by JUB to BWSD at this juncture in the project potential? Be specific with numbers please.

As indicated earlier in this e-mail and in previous meetings, one of the key issues is to determine if the Board and public want to try and rehab the existing Farragut Tank and replace the Dromore Tank or build a new tank to serve all of the district with better flow and fire protection. The estimated costs for these options will be presented at the next meeting on July 26 and be available to be publicly discussed. This public input that is gathered over the next few months will be used by the Board to determine how they proceed with the revenue bond in November.

(10) Has JUB received any information from the federal or state of Idaho government about emerging public infrastructure projects sourced out through private contracts? If not, how did JUB find out about this project?

I'm a little unclear on what you are asking here. What I can tell you is that BWSD utilized a publicly advertised request for proposals that was answered by a number of engineering firms in accordance with State Law (qualification based selection). This process was required and approved by IDEQ in order to use their funding. BWSD interviewed several firms and ended up selecting JUB in 2017 to assist them with this planning effort.

(11) I need your copies of information gathered about the Navy's part in paying for any of this infrastructure, what their "flat rate fee is (Ellery said this), and how much water they are using based on whatever measurements (per month?) you use to assess water consumption in Bayview.

The Navy originally donated Well 7, the tank in the Farragut area, and the associated piping to the BWSD in the mid-1970's. Part of the condition at that time was that BWSD would continue to serve them. They currently pay a flat fee of \$330 per month, but their true water use is unknown as there is not a meter on both of their large diameter connections to the BWSD system. We have had several productive meetings with the local Navy administration and have gained a better understanding of their current and planned futures uses within their facility. Ways to potentially meter the large

pipes connecting their system to the BWSD system have been a major point of those discussions. Metering these large diameter connections is not an easy (or inexpensive) task. However, the Navy has replaced virtually all of their water system components (inside the fenced area) in the last 10-15 years, so we believe that they most likely do not have any significant leaks.

(12) Where, specifically, is the water leakage most egregious, if this became a piecemeal project, and what would the cost be for this rehab scenario?

The pipes from Well 7 to the Farragut Tank, and then down into town are believed to be the majority of the leaks. This is due to the age of the pipe (installed in 1940's) and the type of joints in that piping, as well as the known historical leaks that have been addressed over the years. Estimated costs for rehab vs. replacement of these pipes will be presented at the July 26 meeting.

(13) Are you absolutely sure Farragut State Park is not on the Reservoir tank the town is using, because there are spickets all over the park? What water system do they run off, and what can you tell me about that? I have a hard time believing their old infrastructure from the Navy does not still run to the main tank?

Yes – the water systems that serve Bayview and the Park are completely separate. The main tank for the Park is on your left as you enter the Park and pass the Park HQ. There is an emergency connection valve between the two systems that is closed. It is only opened during an emergency.

(14) Ellery, you mentioned lead in the joints. Is our water currently being tested for lead, and can you speak to lead in our water system more? Did you measure lead levels in your analysis?

The lead in the joints that I mentioned in the old piping is not in direct contact with the water. There is a gasket in between it and the water. As part of their yearly testing, BWSD tests for lead and other constituents. Testing for last year (and previous years) has shown lead levels well below the regulatory action level. A copy of the water quality report for 2017 is available on the BWSD website.

Can I have the contact information of the bond lawyer who was on the panel at the meeting? I have specific questions about bond covenants.

The bond counsel will be at the next meeting in July 26 to answer any questions at that time. If you had some specific questions, I would encourage you to submit them to BWSD as soon as possible. As other people may have the same questions as you, it may be very helpful to use your list to add to the existing FAQ sheet that would provide more information related to the bond.

Thank you for your thorough, expeditious responses.

If I were you, I would be more forthcoming and articulate with information, because that meeting was a disaster. Our community has a gradient of wealth status, and is mirroring the private affluence coupled with poverty of those living off social security checks only, and public decay of infrastructure we are experiencing as a Nation. I felt, overall, this presentation, was extremely tone deaf to this, and the glaring fact our community is full of white hairs, which won't live to see this loan paid off. If this project is so costly it can't be paid off sooner, it's not going to float in the ballot box.

In education,

Tara V. Tribbett, M.Ed.

To learn, read.

To know, write.

Ellery Howard

From: Roger and Colleen Dahlseid <missionvlydoc@gmail.com>
Sent: Sunday, July 15, 2018 4:01 PM
To: BWSDSharonK@hotmail.com; r.doney@verizon.net; Robyn Edwards; Stephen May; jjbwsd111@yahoo.com; Ellery Howard
Subject: BWSD Workshop July 16, 2018

I am contacting you today as an observer that has attended all but one of your water facilities planning workshops. In the absence of a "Goal Statement", if I were asked to state the goal of the effort I have observed, I would have to say:

"To spend every \$ we can of the cheap money being offered, thereby, providing an infrastructure far beyond the needs of the district and far beyond what our small and limited income user base can afford."

I would like each of you to consider a new approach to this project at the meeting tomorrow. One that lines up with the following stated goal:

"To resolve the most critical deficiencies identified by the water facilities study at the lowest possible cost to the BWSD user base."

I realize that this would necessitate a huge departure from the scenarios that you have presented so far for the proposed bond. Building a 100 year life new reservoir would probably not line up with that goal nor would running a \$700,000 new distribution system. The Dromore tank would most likely have to be considered in terms of meeting the minimum requirements. It could effect the way you look at the scope of replacing the existing water meters. I believe it wold require a fresh approach, to look at every component of each proposed scenario in what we call "a zero-based" budget concept. Is this component necessary to resolving the most critical deficiencies. Is it needed or just "wanted" because it is the latest and best? Can if be justified by a cost/benefit analysis? Will it result in a cost that is beyond our user group's ability to pay?

It won't be fun and it won't be easy but it just could result in something that is credible and shows a true dedication to consider this from what the real needs are. Addressing what we can afford until such time as our user base is larger and more affluent and can handle the cost of a larger infrastructure project. I believe the user base will recognize the credibility of this approach and appreciate your consideration on their behalf.

None of us can guarantee what the result would be in the final bond election, but it would go a long way in showing your approach was designed by a true concern for the cost vs the benefit to the guy you are soliciting the vote from; one that deserves their serious consideration.

This is not an easy job you have, but leadership does matter and you can make our system better at a price folks can afford.

Colleen Dahlseid

Ellery Howard

From: Roger and Colleen Dahlseid <missionvlydoc@gmail.com>
Sent: Tuesday, July 17, 2018 12:01 PM
To: Ellery Howard
Subject: BWSD Workshop yesterday

Just wanted to thank you again for your consideration in yesterday's meeting.

I wish that the discussion of the meters and the new option C hadn't been at the very end of the meeting when Jan had to leave and not a lot of discussion happened.

Considering your thought on handling the meter replacement on an annual basis together with the Emergency Management and Fire concerns with the Dromore tank, would it be more beneficial to withdraw the meter project than the Dromore?

When you consider the fire flow issues, the benefit of Dromore extends far beyond the few users.

Just a thought I wanted to bring up.

Thanks again.
Colleen

Ellery Howard

From: Ellery Howard
Sent: Wednesday, August 8, 2018 2:09 PM
To: 'Sheryl Puckett'
Cc: Stephen May; Meyer; r.doney@verizon.net; robynedwardsbayview@gmail.com; Jan Jones
Subject: RE: Why does this idea seem so good?

Hi Sheryl,

I really do like to see these type of responses from people because it means they are engaged and actively looking for solutions! So thank you for being a conduit and passing them along. With that said, let me dive right into a response to this well thought out question.

First of all, the major issue with the expected life span of the Farragut Tank is indeed the structural integrity of something that is 75+ years old and was built during the 1940's when construction practices and materials handling were not the same as today. Along those same lines, is that the existing tank only holds water in the upper 1/3 of the structure so any additional significant weight (ie. Stainless steel liner) will only add to the problem. Another issue with a steel liner is that if you made it just slightly smaller than the concrete tank, then you would not have any way to weld, maintain or inspect the backside of the steel liner. If you made the steel liner smaller in order to have some space to construct and maintain it in the future, then the volume of the tank would be significantly reduced.

Probably the biggest challenge to putting something like a steel liner on the inside of the existing tank is that there are 4 concrete columns on the inside of the tank that help hold the roof up. They are located about half way between the tank wall and the center of the tank. On top of these columns are concrete beams that connect each of the 4 columns. Basically, there is a box frame inside of the tank that would make setting some other tank inside very difficult if not impossible.

The issue with putting a good long-lasting coating on the inside really is a function of how well the existing coating is removed. In the past, we have written very good specifications that require complete removal of the coating as well as leaving the surface rough enough to hold the new coating. All surfaces are inspected before they are coated. In just the past 10 years, significant advances have been made with coatings that can "build" thick layers and yet stay semi-flexible and seal cracks. Another option on a concrete tank is to use a custom fit pvc liner that is essentially hung around the edges above the water line. Either of these options are a good choice for the rehab of the existing Farragut tank. Here again, the interior columns/pilasters do indeed make this a bit challenging.

As I pointed out earlier, one of the big questions for Bayview is do we invest significant funds (approx. \$350K) for the rehab of a structure that only has about 25-30 years of remaining life or invest in a new tank that is more expensive, but has a much longer life span, increases the fire flow capabilities, and also addresses the issues with the Dromore tank? What's interesting to note is that expected life of a rehabbed Farragut tank is close to the same as the 30 year loan from DEQ. In other words, at the end of 30 year loan, the issue of a new tank will need to be addressed once again.

Hopefully this answers your questions. Thanks again for asking questions and trying to gain a better understanding of the issues facing the water BWSD water system!

-Ellery

From: Sheryl Puckett <sherylpp@gmail.com>
Sent: Monday, August 6, 2018 1:48 PM

To: Ellery Howard <ehoward@jub.com>

Cc: Stephen May <newday@roadrunner.com>; Meyer <meyer6420@roadrunner.com>; r.doney@verizon.net; robynedwardsbayview@gmail.com; Jan Jones <janjones111@yahoo.com>

Subject: Why does this idea seem so good?

This idea seems to have merit.

Sheryl

1. I was thinking about the problems that Bayview Water and Sewer were having with the water system, especially, the big water tanks. It struck me that repainting the tanks may invite the same thing to happen. It would depend on the adhesion of the coating and the quality of the materials and application. It then occurred to me that the problem is with the skin of the inside of the tank not the structure of the tanks. I thought, "Why not put a modern tank inside the existing concrete structures. A stainless steel liner would not have to be as strong as a freestanding tank because the old tank could support it. And it would last many years. There may be other modern tanks made of fiberglass or plastic that could be used for many years. **More importantly, they would have a known life expectancy.** Hope this explains my ideas on the matter.

David Tomberg

August 19, 2018

BWSD Board of Directors
Ellery Howard, JUB Engineers

Thank you all for the opportunity provided at the public open house on August 16th. I appreciate your willingness to listen to the district users and provide information.

There were those that don't care what the bond options are and will contend with the Board on anything that you do. My only comment here is to say that I am glad there were only a very few.

Two distinct user groups, occupying opposite ends of the spectrum, became clearly visible in the "straw-poll" vote:

-) The more affluent group, many being summer residents that are not registered to vote in our elections. A growth initiative and the finances to make it happen are no problem to these folks.
-) The original Bayview residents and those new retirees who are buying up the old properties in Bayview and rehabbing them into modest retirement homes. Folks having lower and fixed incomes who cannot afford the financial burden and would like to see future growth fund itself.

As you make the difficult decision between the two contrasting bond options, I am seeking your recognition that many of those supporting the growth option--"A"--won't be here in November and do not have legal residency to vote if they were here. The lower and fixed income residents will be here and will vote their pocket books in November.

I cannot think of a more disappointing outcome than to have the bond election fail.

Thank you for your time and consideration.

Colleen Dahlseid