



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Simpson, Brown, Helgeson, Manning and Mital  
FROM: Brad Taylor, Water Operations Manager; Mel Damewood, Engineering Manager;  
Wally McCullough, Water Engineering Supervisor  
DATE: January 22, 2016  
SUBJECT: Water Utility – Update on New Water Filtration Plant and Emergency Preparedness  
OBJECTIVE: Information Only

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## **Issue**

On February 2, 2016, staff will present an update to the Board on the Water Utility's proposed new Water Filtration Plant and our efforts related to emergency preparedness.

## **Background**

EWEB is one of the only large utilities in the Pacific Northwest without a redundant water supply and efforts have been on-going to address this issue. This work ramped up in 2014 and 2015 after EWEB solidified a point of diversion on the Willamette River just below the confluence of the Coast Fork and the Middle Fork for approximately 20 million gallons per day (MGD).

Realizing that even with a redundant source, both EWEB and our customers still need to be prepared for disruptions in service. With this in mind, EWEB has been actively involved with and promoting emergency preparedness for the last several years.

EWEB's efforts related to both of these items were described in detail in a March 3, 2015 Board Memorandum (2015 Memo) which is attached as Exhibit 1 for reference.

This memo provides an update on these items, focusing on progress made over the last year and current thoughts on next steps. Also included is a discussion on our research related to potential State and Federal funding sources for the new water filtration plant and an overview of the anticipated source protection efforts for the new source.

## **Discussion**

### Work Completed Since 2015 Update

#### *Communication and Community Engagement*

Barney & Worth Inc. conducted opinion research regarding Water Reliability Initiative (WRI) messaging in 2012. Implementation of the water communication plans based on their research provided customers with many more opportunities to learn about water reliability issues. EWEB's goals were to increase awareness of the risks of relying on a single source of supply and to increase customer tolerance for rate increases necessary for water reliability investment.

In 2015 EWEB requested Barney & Worth Inc. to conduct follow up opinion research to determine the effectiveness of our public awareness campaign and identify any new water reliability issues. This research, consisting of both a telephone survey and focus group discussions, indicates outstanding success using messaging initially developed by Barney & Worth in 2012. Key findings:

- Customers show a significant increase (30%) in awareness of water supply risks related to a single source compared to 2012.
- Over half of customers surveyed think developing additional drinking water sources is very important, a 21% increase compared to 2012 when a third of customers rated this issue as very important.
- About two thirds of customers surveyed support rate increases for development of an additional water source, a 17% increase compared to 2012 when less than half of customers expressed a tolerance for rate increases for this purpose.

### *Property Acquisition*

Property is needed for both a raw water intake and a water filtration plant. In 2015, EWEB successfully completed the transaction to obtain the intake property in a trade with Wildish for our Jordan Pitt property on the McKenzie River.

Associated with the intake is the Judkins Property. See map included with 2015 Memo for location. While this property would allow facilities to be placed above the flood plain with better access, its use requires tunneling below the adjacent railroad and through rock. To ascertain this feasibility, in 2015 EWEB retained Parsons Brinckerhoff to complete a tunneling feasibility and risk assessment study. The results of this evaluation, expected in early 2016 will decide if acquiring the Judkins property is warranted.

For the filtration plant, EWEB has evaluated numerous locations in the vicinity of the intake property and has identified a preferred location. Due diligence work has been completed for this property. This work includes:

- A filtration plant siting feasibility study (completed for two potential properties),
- Geotechnical investigations including 15 test pits at the site,
- A wetland delineation, and
- Surveying work to document boundaries and encroachments

Work is proceeding towards obtaining rights to this property and under the guidance of legal counsel an offer has been submitted. While the original goal of acquiring a property for the filtration plant by the end of 2015 was not met, EWEB is hopeful that rights to property can be obtained in 2016 within a timeframe that does not affect the overall schedule.

### *Permitting*

Permitting will be a time consuming task for both the river intake and the treatment plant. In 2015 EWEB retained David Evans Associates (DEA) to assist with the permitting process. DEA has completed similar permitting work for other water supply projects in Oregon.

In 2015, DEA prepared a permitting strategy for the project, both the intake and the filtration plant, which will be followed moving forward. Per this strategy, permit applications will be submitted upon acquisition of all properties and preparation of preliminary designs.

In 2015, EWEB also participated in Development Issues Meetings with the City of Springfield for both the acquired Intake Property and the preferred Filtration Plant Property. While there are planning and land use hurdles to overcome with both sites i.e. annexations, etc., they are not considered significant barriers to development. EWEB has retained a land use consultant to assist with this effort.

#### *Water Quality Sampling*

EWEB continues water quality sampling at the proposed intake site. Historically these samples have been periodic ‘grab’ samples. In 2015, staff installed a sonde (a submersible instrument) at the site which is collecting continuous water quality data.

The data collected to date is consistent with that presented with the 2015 Memo.

#### *Emergency Preparedness*

EWEB’s efforts towards emergency preparedness were detailed in Memorandum provided to the Board in October 2015. In 2015 EWEB’s primary efforts were focused on completing the outfitting of the remaining two distribution trailers. These efforts were successful and EWEB now has 3 distribution trailers. One has the dual purpose of public education and has been used at multiple community events as part of our emergency preparedness awareness campaign, while the remaining two are strictly distribution trailers. Each of these are provided with distribution manifolds that supply approximately 100 distribution nozzles.

Concurrent with this work is the partnership with the American Red Cross to provide customers with emergency water storage containers. This project has been a cornerstone of our emergency preparedness messaging and the successful partnership is gaining statewide recognition.

#### Next Steps

##### *Communications and Community Engagement*

In 2016 an updated Water Communication Plan will be developed to increase awareness of the importance of investing in water reliability and to maintain support for the incremental rate increases needed to finance the entire water capital plan. Key concerns raised by surveyed customers that will be addressed in the updated communication plan:

- It is important that the community invest in its water system to assure a healthy local economy and jobs by having a reliable water supply.
- Some participants said their highest concern was that Eugene’s water supply could be impacted by climate change.
- Customers surveyed expressed a desire for increased transparency when making decisions.
- Generally, customers said that the community needs to be better prepared for emergencies and they felt that EWEB was a strong community partner in this effort. Customers surveyed expressed appreciation for EWEB’s partnership with the American Red Cross.
- Customers surveyed were largely unaware of EWEB’s plans to return to the Willamette River as a water source and would like more information.

##### *Property Acquisition*

EWEB is currently waiting for a response to our offer for the preferred Filtration Plant Property. If

rights to this property are obtained, either through an accepted offer or subsequent negotiations, EWEB will continue with due diligence activities to confirm the property is acceptable and proceed with development of the site.

#### *Filtration Plant Preliminary Design*

Anticipating that rights to property for the Filtration Plant are obtained in early to mid 2016, EWEB has solicited proposals from consultants for preliminary design services for the Plant. This is a formal solicitation closing on January 28, 2016.

Upon selection of a consultant and negotiation of the scope of work, we will begin efforts evaluating and identifying the treatment processes required for the Filtration Plant. It is anticipated that by the time this effort is completed, the property will be secured and we will be able to move into site layout and other elements of preliminary design that are property dependent.

Included with the preliminary design scope of work will be the preparation of updated cost estimates for the project. These should be available towards the end of 2016.

#### *Permitting*

Per the permitting strategy developed in 2015, as soon as preliminary design documents are available we will be submitting permit applications for both the intake and filtration plant. Activities supporting the permitting efforts will then be ongoing through construction of the project.

#### *Overall Schedule*

At this time, EWEB is confident that the project can be completed on schedule i.e. construction begins in 2019 with the plant operational by end of 2021. It is acknowledged that 2016 will be a critical year related to this schedule. This year, rights to filtration plant property must be obtained along with the subsequent preliminary design and permitting efforts started or the schedule could be affected.

#### *Emergency Preparedness*

Consistent with the plan shared with the Board at the October 2015 Board Meeting, EWEB is currently researching equipment for a 'water treatment trailer'. The goal is to have this operational by year end.

#### Source Protection

EWEB's current focus is on water quality monitoring, establishing spill response system and conducting drills, and expanding opportunities for septic system assistance that focuses on residential areas immediately upstream of our intakes.

EWEB's approach to protecting the sources of drinking water for the proposed new water filtration plant (i.e., Middle Fork and Coast Fork Willamette watersheds) include three main themes:

- 1) Initiate efforts associated with water quality monitoring, spill response, and collecting GIS and other data to conduct threat and vulnerability assessments;
- 2) Build on existing partnerships and identify opportunities to engage in collaborative projects that help lay the foundation for longer term source protection efforts (e.g., partnering with Friends for Buford Park around water quality monitoring, conducting

spill response drills with local agencies, engaging The Nature Conservancy on restoration and management of their lands); and

- 3) Developing a 10-year strategic plan and estimated budget that details how source protection efforts can be expanded into these two watersheds over time. Staff plan to bring the draft strategic plan to the Board for discussion and feedback in April/May depending on Board agenda priorities.

### Potential Outside Funding Sources

Construction of the proposed new filtration plant and intake will require significant expenditures. With this in mind and as requested by the Board, EWEB staff have researched the known possible federal and state infrastructure funding resources EWEB might seek to offset these expenditures.

Traditionally, the vast majority of drinking water infrastructure investments in the United States have been financed locally and by ratepayers. In the 1960's and 70's, the federal government brought forward crucial federal investments in drinking water and wastewater infrastructure to coincide with new federal laws and standards on water quality and drinking water safety, in order to help the nation meet these new compliance requirements. However, other than a brief surge after an update of the federal Safe Drinking Water Act in 1995, these federal investments have long stopped keeping pace with growing infrastructure needs and inflation. Local and state funds have represented an increasing percentage of national public drinking water and wastewater investment—rising to more than 95 percent in recent years.

Although infrastructure investments can both create construction jobs and improve the foundation upon which the nation's economy rests, Congress has been reticent to increase existing funding streams for drinking water and wastewater infrastructure. This is in large part due to recent conflict in Congress over federal spending limits and the national deficit. Other apprehensions cited in Congress have included perceptions that increased federal funding could lead states and localities to redeploy their own drinking water infrastructure investments to other public priorities, known as “displacement”, or that new federal aid could distort price signals to water utilities on such matters as preventative maintenance –and for ratepayers, water usage price signals.

As such, federal drinking water infrastructure resources seem likely to remain largely finite, oversubscribed and highly competitive. In these circumstances, most federal resources target assistance to small and/or economically disadvantaged communities which in many cases cannot easily access the municipal bond market (and the accompanying tax preference) or other funding problems that EWEB is not likely to face.

EWEB staff are interfacing with federal and state agency staff at this time to clarify details, criteria, and EWEB eligibility to avail ourselves to the following federal funding streams, as well as to determine any resources we have not yet identified. The full list of targets being examined at this time is included as Exhibit 2.

### **TBL Assessment**

A triple bottom line assessment will be completed for selected improvements where alternatives analysis is appropriate.

**Recommendation**

None. This is an information item only.

**Requested Board Action**

None. This is an information item only. Staff will be available to answer questions at the February 2, 2016 Board meeting. If you have any questions, please call Brad Taylor at 541-685-7385 or email [brad.taylor@eweb.org](mailto:brad.taylor@eweb.org).

**Exhibit 1 - March 3, 2015 Board Memorandum**



**MEMORANDUM**  
EUGENE WATER & ELECTRIC BOARD  
*Rely on us.*

TO: Commissioners Mital, Brown, Helgeson, Manning and Simpson  
FROM: AWS Project Team; Brad Taylor, Water Operations Manager and Mel Damewood,  
Engineering Manager  
DATE: February 20, 2015  
SUBJECT: Alternative Water Supply Update  
OBJECTIVE: Information Only

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**Issue**

On March 3, 2015, staff will present an update to the Board on the Water Utility’s Alternative Water Supply (AWS) Project, a major project within the broader Water Reliability Initiative (WRI), and our efforts towards construction of a second source of supply on the Willamette River.

**Background**

EWEB is one of the only large utilities in the Pacific Northwest without a redundant water supply system. While the Hayden Bridge Filtration Plant and its McKenzie River supply have served the utility well, the sole reliance on this supply is a vulnerability that the EWEB Board has decided to address.

Alternatives for a redundant supply are not readily available. EWEB has investigated groundwater sources and determined that interferences in the groundwater use of neighboring utilities prevent this from becoming a viable alternative for a primary second source. This left surface water as the best alternative and EWEB has been working on obtaining a water right on the Willamette River for the past several years. This was a complicated and lengthy process but finally in 2014, EWEB solidified a point of diversion on the Willamette River just below the confluence of the Coast Fork and the Middle Fork for approximately 20 million gallons per day (MGD). With this in place, EWEB is diligently working towards the eventual construction of a river intake and treatment plant which would fully utilize the new water right.

This work on a Willamette River intake and treatment plant is just part of EWEB’s AWS project. The 2015 Water System Master documents EWEB’s current Average Day Demand (ADD) to be approximately 24 MGD. Over the 20 year planning window the ADD is projected to increase to approximately 33 MGD. Average Day Demand represents water use beyond what is essential for non-discretionary use of potable water during an emergency.

The new surface water supply could provide the bulk of the ADD demand, however, additional AWS activities will need to be implemented in the future to fully meet this demand. These activities will entail work on our interties (we have existing interties with Springfield utility Board (SUB) and Rainbow Water District (RWD) that can supply approximately 2 to 3 mgd) as well as potentially some work developing groundwater supplies.



Additionally, EWEB needs to develop a robust Water Curtailment Plan to assist in the reduction of water use during supply disruptions. This is particularly critical during periods of high demand. AMI technology is one option that could be explored as a viable tool to assist in these efforts.

## **Discussion**

The work completed to date on the AWS project is discussed below along with the anticipated future activities. Also discussed are the anticipated expenditures and the proposed funding mechanism as well as a discussion on guidance to be requested of the board.

### Work Completed to date

The following sections summarize the work that has been completed to date:

#### *Communication and Community Engagement*

Communication efforts regarding the AWS project have been on-going since 2011 with market research that led to the 2012 Water Reliability Initiative (WRI) Communication Plan. EWEB has been following the strategy and tasks recommended by this plan since that time. The current status of EWEB's activities related to each strategy is shown in Attachment 1. As communication efforts have progressed, EWEB has continually updated our messaging in response to customer feedback, helping EWEB communicate more clearly about the value of water and that the customer's water bill is an ongoing investment in water reliability.

#### *Property Acquisition*

Several properties will need to be obtained for the AWS project. Property is needed for a river intake facility and for a treatment plant. For the river intake, staff has identified two properties, the Wildish Parcel and the Judkins Parcel, that together are suitable for the intake facilities. The majority of the effort to date has been associated with the due diligence activities required for their acquisition. These two properties are shown on Attachment 2. The due diligence activities completed to date are outlined below:

- River Survey: EWEB completed a full bathymetric (underwater topographic) survey of approximately 4,000 feet of the Willamette River. This survey confirmed that multiple areas along the Wildish Property would be suitable for a river intake.
- Topographic Survey: Both properties were surveyed by EWEB surveyors to establish elevations and contouring of the each property.
- Boundary Survey: A boundary survey was completed for both parcels. The Wildish Parcel requires a serial lot line adjustment. The application for this adjustment has satisfied city conditions of approval. Final approval is expected March 11, 2015
- Phase 1 Environmental: EWEB staff completed a Phase 1 environmental study for both properties. This resulted in a geophysical survey of the Wildish site.
- Geophysical Survey: A Geophysical scan was conducted on the Wildish site to identify any potential buried items. Wildish has been asked to excavate areas of concern to verify underground conditions. This excavation is anticipated to begin in early March.

- Geotechnical Investigation: Foundation Engineering, Inc performed a geotechnical investigation of both properties. Several borings and test pits were dug on each property. No unusual or unexpected materials were found.
- Land Use/Zoning/Utilities: EWEB attended a development issues meeting with the city of Springfield, SUB, LTD, and the Fire Marshall. Both properties are currently in Springfield's UGB and will likely have to be annexed to the city. The proposed facilities are an allowed use under the properties zoning and no other major issues were identified.

EWEB is in contract to complete purchase of Judkins Property in April 2015. EWEB has created a draft agreement with Wildish to exchange EWEB's Jordan Pit property on the McKenzie River for Wildish property on the Willamette River. The Jordan Pit property was originally obtained for a potential water intake however it is not needed for that function any longer. This property exchange is not likely to require any funds from EWEB to close.

EWEB is still considering treatment plant site alternatives in the vicinity of the river intake properties. The goal is to obtain a treatment plant site by the end of 2015.

#### *Water Quality Sampling*

In an effort to provide information for future water treatment plant design criteria on the Willamette River, a long term assessment of water quality characteristics was initiated by EWEB staff on April, 2013. To date, 7 quarterly samples and 1 storm event sample have been collected by staff from the mainstem Willamette River just below the confluence of the Middle Fork and Coast Fork. Samples have been analyzed by certified labs for bacteria, metals, nutrients, volatile and semi-volatile organic compounds and other physical parameters. In addition, staff plan to assess samples for pesticides, waste water compounds, endocrine disruptors and blue-green algae. Complimenting discrete sampling activities, time-series data (turbidity, temperature, conductivity and pH) has also been collected from the site intermittently.

Ongoing sampling efforts in the McKenzie River during this same time period have yielded a similar number of sampling events, which provide a good basis for comparison with Willamette River data.

A coarse review of analytical data received to date, for both the McKenzie and Willamette, indicates more similarities than differences between the two systems. Although anomalies do exist, analytical results from both mainstem sites are relatively consistent. The results are shown in Attachment 3. Metal concentrations appear to fall within an order of magnitude for both sites. The Willamette site did receive the only hits for Cadmium and Lead during this time period, but both concentrations were quite low.

Bacteria and nutrients also appear to be fairly comparable. The Willamette site yielded the highest *E. coli* value, as compared to the highest McKenzie site value, but most were comparable with one outlier. The similar results aren't all that surprising considering the respective watersheds are quite alike, especially when looking at the entire watershed. The Middle Fork Willamette Watershed, which provides the bulk of the flow to the mainstem Willamette, is over 90% forested. The McKenzie Watershed, by comparison, is approximately 89% forested.

In addition to internal sampling efforts, EWEB staff have also begun compiling water quality data from outside sources in order to further understand potential water quality impacts upstream and develop a comprehensive assessment of current and future threats. Both the McKenzie and Upper Willamette watersheds have many similarities in terms of potential water quality threats. These similarities include development, storm runoff, agricultural practices, transportation corridors and large reservoirs capable of producing significant algal blooms. However, there are also notable differences between the two watersheds. Staff are looking to better understand how these differences relate to water quality in the mainstem Willamette and what potential impact they may have on a future water treatment plant operations.

#### *Master Plan Analysis*

As part of the 2015 Master Plan, a Resiliency Plan was completed to help EWEB evaluate how the utility will adhere to the guidelines laid out in the Oregon Resiliency Plan (ORP). The ORP defines performance goals for water utilities to have critical infrastructure available following a Cascadia subduction zone earthquake. The areas that are defined include water supply source, major transmission mains, water supply to critical facilities (such as hospitals), water for fire suppression, water available for community distribution, and having the distribution system operational. The performance goals per the ORP require that a water supply source be 20-30% operational and that major transmission mains need to be 80-90% operational within 0-24 hours following an event.

To evaluate how AWS can help EWEB meet these performance goals, the Master Plan evaluated how to deliver water from the new treatment plant into the system. The results show that EWEB will be required to construct a new transmission main (to provide capacity for 20 mgd) from the new treatment plant to the Knickerbocker Bridge and potentially further into our system. Hydraulic analysis is on-going. The new transmission main would be designed and constructed to the most recent seismic design standards to ensure that it will be available and operational following an earthquake.

#### *Emergency Preparedness*

EWEB's efforts towards emergency preparedness have been focused in two areas; communications and emergency water delivery. EWEB's communication efforts have been discussed previously.

The emergency water delivery system effort began in 2012. EWEB started with the purchase of one trailer. This was retrofitted with plumbing and pumping system equipment to be able to provide water from a pressurized or non pressurized system. EWEB also researched and invested in collapsible containers to carry potable water to distribution sites.

Following this investment there was a period of evaluation and experimentation. The trailer was set up in our yard and at events to test how well the systems worked. Further modifications were made to our first trailer and two additional trailers were purchased. There will be distribution manifold testing in the coming weeks after which these trailers will be retrofitted with plumbing and pumping system equipment similar to our first trailer.

Expenditures to date for the emergency water delivery system totals approximately \$220,000.

### Next Steps and High Level Schedule

The work necessary to successfully complete the AWS project is shown on Attachment 4. The activities are shown at a high level. As we get further into the project, the schedule will be broken down into greater detail. Our future planned activities are discussed below:

#### *Communications*

Community engagement will be an on-going process until the end of the project. The WRI communication strategy has been planned to ramp up just ahead of planned rate increases with the intention of helping customers understand what they are buying with their rate dollar and that the Commissioners are focused on affordability while assuring water reliability. The intensity of WRI communication is planned to peak during the construction phase of AWS development but is being crafted to sustain water reliability messaging well into the future.

#### *Emergency Water Supply Efforts*

EWEB's emergency water supply efforts will also continue well into the future. In the near term, our existing fleet of trailers and distribution facilities will be completed and tested. This will be the bulk of the effort in 2015.

Late in 2015 we will also be researching and evaluating options for the purchase of a trailer with treatment equipment that would have the ability to treat river water to potable water standards. Several other utilities are looking into these also so we will be consulting with them to ensure that we make the right decisions moving forward.

In the long term, EWEB's efforts will be focused on maintaining, testing, and practicing using the distribution trailers and equipment. Even with a second water supply there will still be local outages that could require the use of this equipment.

Commissioners will see this as an item in the 2015 water capital budget true-up in May. Rollover and potentially some transfer funds will be in the true-up to accommodate this years efforts.

#### *New River Intake*

Work on the proposed new intake will be the first task undertaken for the new AWS facilities. In 2015 state and federal permit applications will be submitted for the in-river work to initiate the permit process. This will be the most difficult of all permitting efforts for the entire project and will likely require a multi-year effort. The goal is to get it started as soon as possible to avoid any delays in completion of the overall project. Final design and construction of the intake will not take long relative to the treatment plant design and construction. As such, this work will be coordinated with the construction of the treatment plant.

#### *Treatment Plant*

2016 will be a critical year for the treatment plant. In order to complete the treatment plant construction by the end of 2021, conceptual design needs to be complete by the end of 2016 or early 2017. EWEB already has a team pulled together to help set the design criteria for the plant. This team has met several times in 2014 and regular meetings will occur in 2015, likely extending through the course of the project. In addition, in late 2015 an outside consultant will be retained to assist in the conceptual design and cost estimating for the plant.

Once conceptual design is complete, final design and permitting efforts will begin, continuing through 2018. The current plan is for construction to begin in 2019 and be completed by the end of 2021. As noted on the schedule in Attachment 4, construction will not begin on the treatment plant until permitting is complete for the new intake.

#### Current Estimate and Funding

The anticipated annual expenditures for the AWS project are shown on Attachment 4. These match the amounts in the current CIP except for the first 3 years, 2015-2017. For 2015 the current CIP does not include the property purchase which is the majority of the amount shown. For 2016 and 2017, the estimated amounts increased by approximately \$400,000 each year to reflect planned activities. These estimated amounts as well as the overall project costs will be refined as we get further into the project.

The AWS project is the Water Utility's only Type 3 project and will be funded with a combination of bonds and AWS designated funds. At a future Board meeting, staff will request that the Board approve a resolution which will authorize EWEB to be reimbursed from future bond proceeds for AWS costs paid using other funds. Once the scope of the AWS project has been determined, staff will also request the Board to approve a resolution authorizing the issuance of bonds. By charter, the City Council must grant EWEB authority to issue bonds. The bond issuance process may take eight months from the time the EWEB Board first considers the resolution until funds are received.

To reduce the total bond amount, in December 2013 the Board approved an additional 3% rate increase effective February 2014 to begin setting aside funds for AWS. In the 11 remaining months of the 2014 calendar year \$890,000 was transferred to the AWS Designated Fund. Approximately \$1,000,000 per year will be transferred to the AWS fund to be used for future AWS expenses and reduce the amount of bonds issued for AWS construction.

In addition, each spring the Board reviews and approves transfers among working cash, reserves and designated funds and has the opportunity to make additional AWS Designated Fund deposits. The AWS Designated Fund combined with Board approved rate increases will provide the resources necessary to support the construction costs and debt service expenses associated with the AWS project.

#### Direction from Board

As we proceed with the AWS project, there will be many instances where guidance will be sought from the Board which will affect the AWS project and its funding as well as the long term financial plan. These include:

#### *Capacity of First Phase*

The current estimate for the AWS project included in the CIP was based on the cost estimates originally prepared for a treatment plant and intake at our Headquarters Site. These costs were adjusted to reflect a 20 MGD river intake and a treatment plant with a capacity of approximately 10 MGD. Recall that our water right is for approximately 20 MGD and our current ADD is 24.

As we get further into conceptual design and site specific cost estimates should we be looking to construct a larger plant in the first phase? What if it becomes apparent that with the current CIP amount we can construct a larger plant? Should we? Alternatively, if existing allocated funds are

not sufficient for the desired capacity, should we re-prioritize other projects or discuss rate impacts?

*The Timing of Subsequent Phases for Full Capacity*

We don't anticipate being able to construct a 20 MGD plant with the available funds, thus requiring a second phase. When should this occur? In the 10 year CIP? Or within the 20 year Master Plan view?

**TBL Assessment**

A triple bottom line assessment will be completed for selected improvements where alternatives analysis is appropriate.

**Recommendation**

None. This is an information item only.

**Requested Board Action**

None. This is an information item only. Staff will be available to answer questions at the March 3, 2015 Board meeting. If you have any questions, please call Brad Taylor at 541-685-7385 or email [brad.taylor@eweb.org](mailto:brad.taylor@eweb.org).

# Attachment 1:

## Water Reliability Initiative Communications Status

In 2011 EWEB conducted market research that resulted in the 2012 Water Reliability Initiative Communication Plan. The plan included a task list. Task progress from late 2012 to 4<sup>th</sup> Q 2014 is summarized in the table below. Activity in the 1<sup>st</sup> Q 2015 is not included in this summary.

<b>Strategy</b>	<b>Current Status</b>
<b>Stakeholder Conversations</b>	<b>December 2014</b>
Policy briefings	<ul style="list-style-type: none"> <li>• 3<sup>rd</sup> Q 2013: Policymaker and media tour of Hayden Bridge Filtration Plant</li> <li>• 3<sup>rd</sup> Q 2014: Joint City Council/EWEB Board meeting</li> </ul>
Government relations	<ul style="list-style-type: none"> <li>• Jeannine Parisi advising</li> </ul>
Highly Interested & Interested Parties Outreach	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> Q 2014: League of Women's Voters</li> <li>• 2<sup>nd</sup> Q 2014: Friendly Area Neighbors; Neighborhood Association Leaders Council</li> <li>• 3<sup>rd</sup> Q: Green Lane</li> <li>• 4<sup>th</sup> Q 2014: Jeannine met with Councilor Chris Pryor</li> </ul>
Not Yet Interested Parties Outreach	<ul style="list-style-type: none"> <li>• 2<sup>nd</sup> Q 2014: Water distribution trailer article in Current Connections and in the City Council Newsletter; City of Eugene Public Works Open House</li> <li>• 3<sup>rd</sup> Q 2014: Several neighborhood association picnics</li> </ul>
EWEB staff update	<ul style="list-style-type: none"> <li>• Internal communication plan integrated into the initial plan in 2013</li> <li>• 2<sup>nd</sup> Q 2014: Water distribution trailer article in EWEB Daily News; First week of May publish water related internal communication about Drinking Water Week and PNWS-AWWA Conference</li> </ul>
<b>Technical Investigations</b>	<b>October 2014</b>
Water rights	<ul style="list-style-type: none"> <li>• Willamette River permit issued February 2013; in addition to groundwater permit</li> <li>• 2014: Willamette River permit property negotiations</li> <li>• Willamette River permit property due diligence stage; preparing messaging for 2015</li> </ul>
System assessment	<ul style="list-style-type: none"> <li>• The 2014 Master Plan Update will include a comprehensive system assessment; due April 2015</li> </ul>
Peer communities	<ul style="list-style-type: none"> <li>• Consultant included an overview of peer community water supply status as part of the 2013 Water Forum</li> <li>• 1<sup>st</sup> Q 2014: Integrated 2013 peer community assessment into Speaker's Bureau slideshow</li> <li>• 4<sup>th</sup> Q 2014: The emergency water supply storage container promotion featured partnership with peer communities.</li> <li>• Oregon City and Clackamas River Water Providers will be</li> </ul>

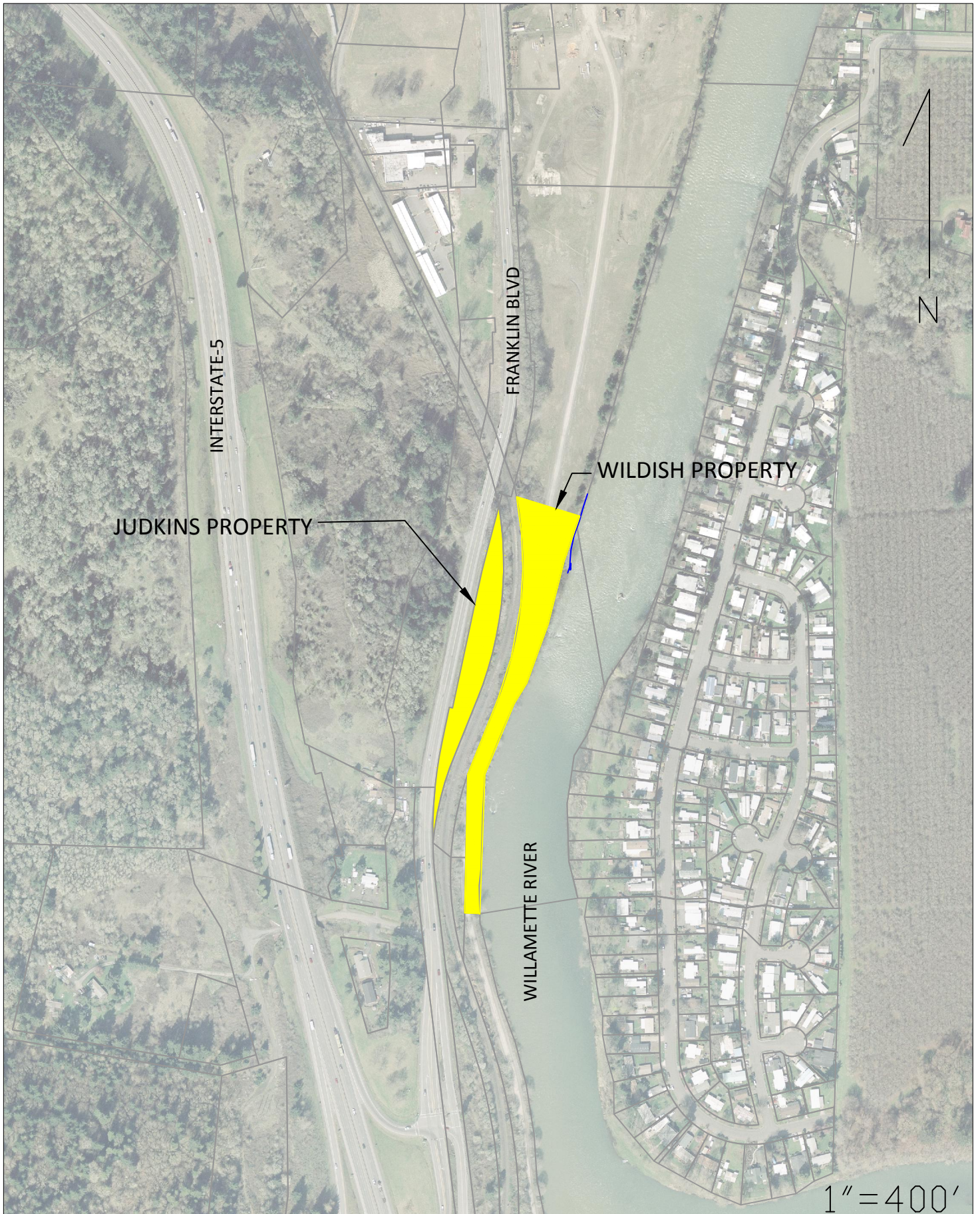
	launching container distribution in 2015. Other Portland Metro Area partnerships are pending.
Expert panel/business case evaluation	<ul style="list-style-type: none"> <li>• 2015 rates will be implemented in February 2015.</li> <li>• Discussion regarding 2016 business case begins in 1Q 2015.</li> </ul>
<b>Partnerships</b>	<b>December 2014</b>
Water supplier: listening process “Water Summit” or symposium	<p>Not ready to implement</p> <ul style="list-style-type: none"> <li>• Water Forum with major customers held November 2013</li> <li>• Business Continuity Planning Workshop held August 13, 2014</li> <li>• Business Continuity Planning Workshop scheduled for August 12, 2015 and will feature presenters from the Red Cross.</li> </ul>
Water Emergency Preparedness partnership with the Red Cross	<ul style="list-style-type: none"> <li>• Co-presenting with the Red Cross for some of the Speaker’s Bureau presentations</li> <li>• The 3-gallon emergency water supply storage container promotion features agreement with the American Red Cross and partnership with peer communities as well as the private sector</li> <li>• A joint exercise in October 11, 2014 is considered a success.</li> </ul>
Water Emergency Preparedness partnership with LPC	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> Q 2014: Jill Hoyenga developing a partnership with Lane Preparedness Coalition and City of Eugene Office of Emergency Management</li> <li>• 4<sup>th</sup> Q 2014: Jill Hoyenga was affirmed as the 2015 Lane Preparedness Coalition (LPC) Chair. LPC goals align with Water Reliability Initiative emergency preparedness messaging goals.</li> </ul>
City of Eugene Office of Emergency Management	<ul style="list-style-type: none"> <li>• 2014 funding partner for the emergency water storage container project</li> <li>• The Secretary of the Lane Preparedness Coalition is with the city of Eugene Office of Emergency Management.</li> <li>• 2015 funding partner for the emergency water storage container project</li> </ul>
Rainbow Water District	<ul style="list-style-type: none"> <li>• 2014 funding partner for the emergency water storage container project</li> <li>• 2015 funding partner for the emergency water storage container project</li> </ul>
Springfield Utility Board	<ul style="list-style-type: none"> <li>• 2015 funding partner for the emergency water storage container project</li> </ul>
<b>Community Conversation</b>	<b>December 2014</b>
Media Strategy	<ul style="list-style-type: none"> <li>• Developed in June 2013 and included in the 2014 Water Reliability Communications Plan</li> <li>• Align with media strategy in 2015</li> </ul>
Website	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> Q; 2013 CCR posted online includes water reliability</li> </ul>



	<p>content and messaging is aligned throughout;</p> <ul style="list-style-type: none"> <li>• 3<sup>rd</sup> Q 2014: The role of water conservation in water reliability webpage; 3-gallon emergency water supply storage bottle online order form</li> <li>• 4<sup>th</sup> Q 2014: Full annual review and update of the Water Reliability library of web pages was conducted</li> </ul>
Online surveys	<ul style="list-style-type: none"> <li>• Conducted throughout 2013</li> <li>• Reevaluating the format and instruments for surveys</li> </ul>
Social media	<ul style="list-style-type: none"> <li>• 2014: Drinking Water Week; 3-gallon emergency water supply container; Business Continuity Planning Workshop</li> <li>• 2015 Water Reliability Initiative social media themes are in development</li> </ul>
Video	<ul style="list-style-type: none"> <li>• 2014: In addition to the draft script written by Barney &amp; Worth</li> <li>• 2015: Public Affairs plans a Water Reliability video series</li> </ul>
Targeted mailings	<ul style="list-style-type: none"> <li>• Integrated WRI messaging into the peak hour newsletter mailings June 2014 and October 2014</li> <li>• 3<sup>rd</sup> Q 2014: Business Continuity Planning Workshop postcards</li> </ul>
Bill Inserts	<ul style="list-style-type: none"> <li>• Summer 2014: Do you know the value of your water?"</li> <li>• The Regional Water Communications stakeholders confirmed interest in developing a new 2015 "Value of Water" bill insert</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Published Drinking Water Savvy information sheets in May, June, July of 2013</li> <li>• Published Drinking Water Savvy information sheets in June and July of 2014</li> <li>• Began development of 2015 Water Reliability Infographic</li> </ul>
Public forums	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> Q 2014: Community Panel convened on the topic of WRI</li> <li>• Community panel scheduled for 3<sup>rd</sup> Q 2015</li> </ul>
Speakers bureau	<ul style="list-style-type: none"> <li>• Presentation developed in the 1<sup>st</sup> Q as co-presentation with the Red Cross</li> <li>• Some neighborhood associations (winter storm emergency preparedness presentation and WRI)</li> </ul>
Events	<ul style="list-style-type: none"> <li>• The Incident Response Water Trailer was featured at the Disaster Relief Trials October 2014 and EWEB's Run to Stay Warm event in November 2014</li> </ul>

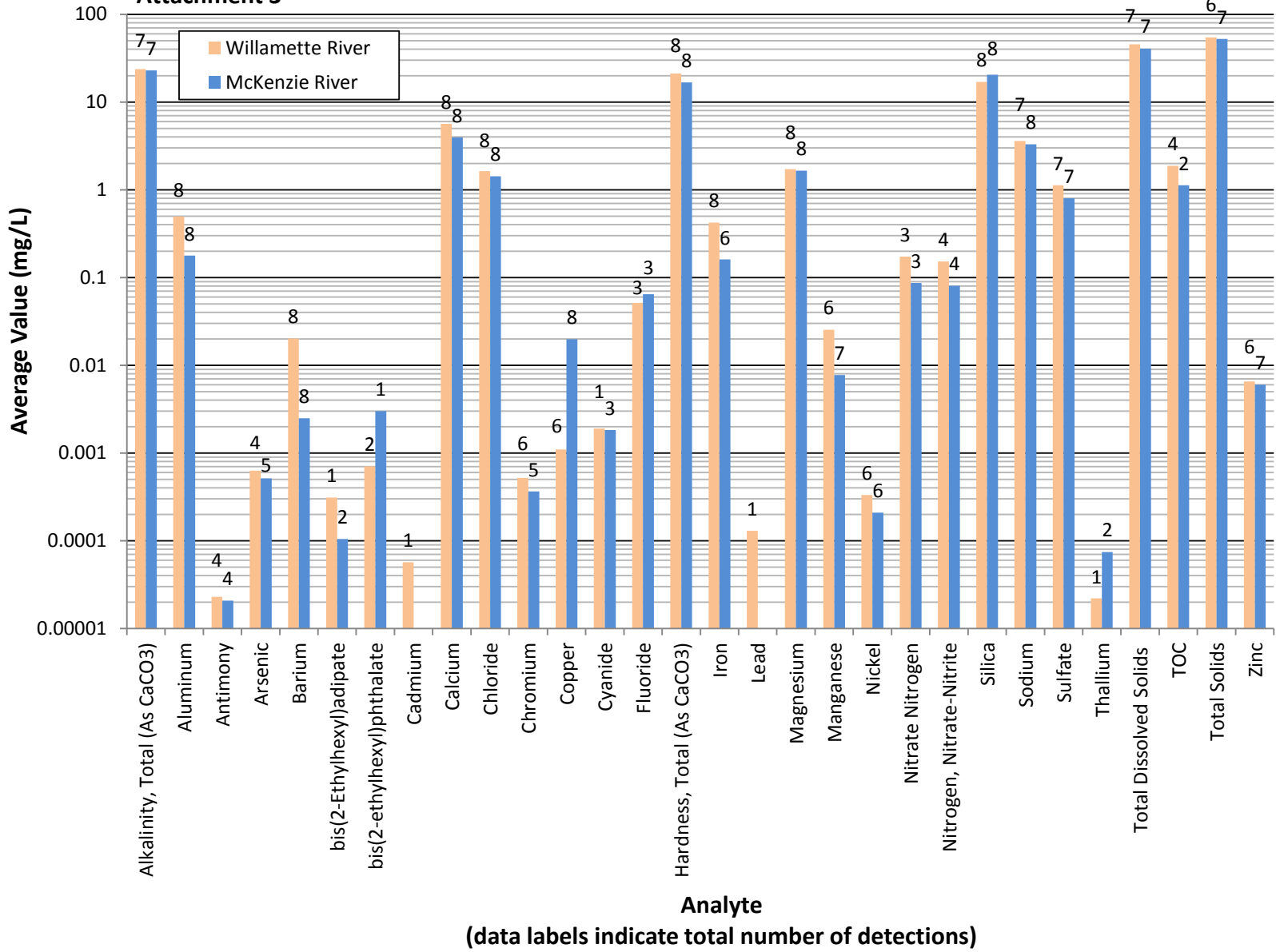


# ATTACHMENT 2: OVERVIEW OF INTAKE PROPERTIES



Attachment 3

Analytical Comparison



Attachment 4

**AWS High Level Schedule**

Task	2015				2016				2017				2018				2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.0 Communications & Community Outreach	[Active]																											
2.0 Emergency Preparedness	[Active]																											
3.0 Intake and WTP Property Acquisition	[Active]																											
4.0 Intake																												
Design and Permitting					Could Be Difficult- Allow 3-4 Years																							
Construction																	One year of construction - coordinate with plant const.											
5.0 Treatment Plant																												
Pre-Design - Plant Design/Operational Criteria Set					Plant Conceptual Design Set																							
Final Design - Permitting									[Active]																			
Construction																	Will not start until Intake permitting is complete											
6.0 Transmission Improvements																												
Design/Construction																					Required to deliver water into system.							
Anticipated Annual Expenditures	\$ 2,000,000				\$ 500,000				\$ 500,000				\$ 6,000,000				\$ 19,000,000				\$ 20,000,000				\$ 20,000,000			

## **Exhibit 2 – Potential Funding Opportunities**

### **Federal Drinking Water Infrastructure Funding Opportunities**

#### **US EPA**

##### **Drinking Water State Revolving Fund (DWSRF)**

EPA’s DWSRF funding provides low-interest loans to finance improvements to drinking water systems, with a particular focus on providing funds to small and disadvantaged communities and to programs that encourage pollution prevention as a tool for ensuring safe drinking water.

Other uses include, Loan Guarantees, purchase of debt or refinancing, bond insurance.

There may be possible affordability grant for “additionality” measures (i.e. early adoption of new technologies that are not cost effective/economical yet).

##### **Clean Water State Revolving Fund (CWSRF)**

Wastewater oriented: As with DWSRF, CWSRF may be used for Loans, Guarantees, possible affordability grant for “additionality” measures, purchase of debt or refinancing, bond insurance.

#### **USDA**

##### **Rural Development Water and Environmental Program (WEP)**

WEP has an integrated Water and Waste Disposal (WWD) Loan and Grant Program. It is a Combined Loan/Grant program at different ratios. It is a needs based program for communities less than 10,000.

Applicants must demonstrate their need for Federal assistance by showing that they cannot obtain credit from commercial lenders or investors.

##### **Emergency Community Water Assistance Grants**

This program, for communities less than 10,000, helps eligible communities prepare for, or recover from, an emergency that threatens the availability of safe, reliable drinking water for households and businesses.

It offers water transmission line grants up to \$150,000 for the construction of waterline extensions, repairs to breaks or leaks in existing water distribution lines, and related maintenance necessary to replenish water supply, as well as Water Source grants up to \$500,000 for construction of a new water source, intake and/or treatment facility.

#### **FEMA**

##### **FEDFUND**

For use after presidentially-declared disaster event, applicants may receive funding to restore and repair the facility to its original state. FEMA can also provide funds to mitigate damage

from future disasters. For example, if a road was washed out during a flood, FEMA would consider funding to upsize the culvert, increase pipe capacity, or redirect stormwater flow. Water and Wastewater Utilities are eligible. There is a 75/25 Federal/ Local cost sharing requirement.

### **FEMA Hazard Mitigation Assistance (HMA) Program**

Hazard Mitigation is any action taken to reduce to eliminate long term risk to people and property from natural disasters. Hazard Mitigation projects may include, but are not limited to buy-outs, elevations and safe rooms.

#### **Pre-Disaster Mitigation Program (PDM)**

The PDM Program, authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, is designed to assist States, territories, Federally-recognized tribes, and local communities in implementing a sustained pre-disaster natural hazard mitigation program. The goal is to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters. This program awards planning and project grants and provides opportunities for raising public awareness about reducing future losses before disaster strikes. PDM grants are funded annually by Congressional appropriations and are awarded on a nationally competitive basis.

#### **Hazard Mitigation Grant Program (HMGP)**

The purpose of the HMGP program is to help communities implement hazard mitigation measures following a Presidential major disaster declaration. Hazard mitigation is any action taken to reduce or eliminate long term risk to people and property from natural hazards.

#### **Public Assistance Grant Program (PAGP)**

Through the PA Program, FEMA provides supplemental Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain Private Non-Profit (PNP) organizations. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

#### **Flood Mitigation Assistance Program (FMA)**

The FMA program is authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FMA provides funding to States, Territories, federally-recognized tribes and local communities for projects that reduce or eliminate long-term risk of flood damage to structures insured under the NFIP.

FMA funding is available for flood hazard mitigation projects, plan development and management costs. Funding is appropriated by Congress annually.

## **Department of Commerce Economic Development Administration (EDA) Grants**

This program was found to have included at least one water infrastructure example: a community received a \$2 million grant to upgrade water treatment plant to attract and locate a new large employer from Japan. This was a “distressed” community (unemployment/median income/population below poverty line, etc.

## **Housing and Urban Development (HUD)**

### **Community Development Block Grant (CDBG)**

Drinking Water Infrastructure can be funded by CDBG funds. Activities must principally benefit low- and moderate-income persons. Low- and moderate-income is defined as 80 percent of county median income.

## **U.S. Small Business Administration**

SBA’s Office of Disaster Assistance provides low-interest, long-term loans following a disaster. These loans are available to private for-profit and private non-profit drinking water and wastewater utilities. The loans help utilities return infrastructure to its pre-disaster operability. Loans may be for up to 30 years.

## **EPA’s WIFIA (new, already being changed due to recently passed legislation, December 2015)**

The WIFIA program provides low interest rate financing for the construction of water and wastewater infrastructure. Funded projects must be nationally or regionally significant. Individual projects must be reasonably anticipated to cost no less than \$20 million.

WIFIA works separately from, but in coordination with, the State Revolving Fund (SRF) programs to provide subsidized financing for large dollar-value projects.

Eligible assistance recipients include corporations, partnerships, municipal entities, and SRF programs.

Eligible projects include: Clean Water SRF eligible projects; Drinking Water SRF eligible projects; Projects for enhanced energy efficiency at drinking water and wastewater facilities; Brackish or seawater desalination project, an aquifer recharge project, water recycling project; Acquisition of property if it is integral to the project or will mitigate the environmental impact of a project; Bundled SRF projects submitted under one application by an SRF program; A combination of projects secured by a common security pledge.