



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Helgeson, Brown, Mital, Simpson and Carlson
FROM: Jeanine Parisi, Government Affairs Coordinator and Wallace McCullough, Water Engineering Supervisor
DATE: April 13, 2017
SUBJECT: Second Source Blue Ribbon Panel
OBJECTIVE: Information Only

Background

A new intake and seismically sound water filtration plant on the Willamette River is EWEB's biggest investment in Water Reliability. Public awareness of the need for a second source of drinking water is steadily gaining ground, and community education about the project specifics is well-underway. To supplement these broad outreach efforts, EWEB solicited input from a team of community stakeholders and subject matter experts about critical components of the project to complement engineering expertise.

Discussion

EWEB asked nine people for their independent feedback and perspectives on the preliminary design recommendations and to offer their advice on how best to move this project forward. Panel members were selected based on their professional background in important facets of this project, including emergency preparedness and response, water quality monitoring, watershed protection, infrastructure planning and facility operations. Members were:

- Kevin Batridge, Lake Oswego Tigard Water Treatment Plant, Assistant Plant Manager
- Josh Bruce, UO/Oregon Partnership for Disaster Resilience, Director
- Amanda Gilbert, Coast Fork Watershed Council, Executive Director
- Johan Hogervorst, Willamette National Forest, Lead Hydrologist
- Gregory Nieckarz, Seavey Loop Property Owner
- Sarah Puls, Lane County Public Health Drinking Water Program
- Dr. Stewart Rounds, United States Geological Survey, Lead Hydrologist
- Eric Wold, Willamalane Parks & Recreation District, Assistant Superintendent
- Joe Zaludek, Eugene-Springfield Fire Chief

The panel met three times to learn more about the project (siting decisions, water treatment regime, operational plan, resiliency features, etc.) and participated in a site tour. Notes were taken and feedback compiled for panel review. The panelists affirmed the general design and project direction,

and offered valuable insights to consider as we move forward. Attached is a summary of the panelists' observations and recommendations.

We have recently received a letter of support for the Second Source project from Oregon Resiliency Officer Michael Harryman, also attached.

Recommendation and Action

This is an information item only, no action required. If you have any questions or wish to make comments on the information please contact Jeannine Parisi at 541-685-7451 or email at jeannine.paris@eweb.org.

Attachments:

Blue Ribbon Panel Findings & Recommendations
EWEB – Letter of Support from Michael Harryman, Oregon State Resiliency Officer



Blue Ribbon Panel FINDINGS & RECOMMENDATIONS

Facility Siting and Design Findings

Overall, EWEB has a solid, well thought out plan for the new Willamette River water source and filtration plant. The planned location and siting for the facilities appears to optimize water quality, resiliency, operational logistics and practical connectivity to the transmission and distribution system. A modular design and phased build out should allow the utility to accommodate potential growth without overcommitting initial investments.

Recommendations:

- Take into account the potential for future partnerships with other water utilities throughout the design process to leave open the opportunities for further regional benefits.
- Design the new plant to be scalable, with sufficient space and infrastructure to expand.
- Investigate filtration plant design for peer utilities – regional, national, international – particularly in earthquake prone areas.
- Consider the effects on river recreation in the design of the new water intake. Create an amenity – not an attractive nuisance or eyesore.

Operations Findings

EWEB is designing the facilities with resiliency in mind. The additional investments in resilient features will help ensure the plant is operational after a disaster and can serve as a regional asset in a worst-case scenario.

Recommendations:

- High quality drinking water requires not just a good source and good treatment process. Attentive and well-trained operators are just as important to ensuring delivery of great water every day.
- Consider the optimal balance between operating the Hayden Bridge and Willamette plants, based on cost-effectiveness.
- Identify operational protocols for the new plant that produce cost savings, balancing efficiency and dependability.
- Install control systems for the new plant that are similar to Hayden Bridge, or vice versa, to ease the transition for operators.



Water Quality Findings

EWEB has collected a lot of water quality data in this reach of the Willamette River. Overall, it is fair to say it is a reliable and high quality source for our community and can meet EWEB's goals of providing the same or better quality water compared to Hayden Bridge. Threats to raw-water quality exists, but the technology EWEB plans to utilize is designed to address identified threats. EWEB is nationally recognized for putting innovative programs in place to monitor for, manage and reduce upstream threats, and it would be a good idea to extend these efforts to include the Willamette River source.

Recommendations:

- Continue monitoring water quality of the Willamette River, particularly in the Coast Fork.
- EWEB is seen as a leader in source protection and should continue to develop partnerships for water quality protection and collaboration opportunities as it moves into the Upper Willamette River watershed.
- Ozone treatment represents a best practice and should be included in the new plant's treatment regime to ensure consistent taste and odor, which will enhance public acceptance of the new source. Ozone treatment is best suited to deliver the best water quality even when faced with identified threats.
- Testing for toxic algae should be included in EWEB's monitoring plan.
- Survey business customers' needs for particular water quality/chemistry; for example, food and beverage producers, high-tech manufacturing and medical facilities.
- Work with communities that are located up-stream (Cottage Grove, Creswell, Oakridge) on risk mitigation measures such as current and future wastewater capital improvement plans.

Permitting Findings

EWEB should anticipate project permitting may take longer than expected.

Recommendations:

- Use land use consultants with local permitting knowledge to help ensure success.
- Familiarize regulatory staff with the site and project well in advance.
- For the land use permitting process, be upfront, transparent and start conversations early with any impacted neighborhoods.
- Reach out to regional advocates—key customers, emergency managers, public health professionals and others—to help tell EWEB's story.
- Even if there are permitting complications, keep this important infrastructure project moving forward.



Distribution Findings

The distribution system needs to be as resilient as the water treatment plant after an emergency.

Recommendations:

- Pipeline connections should ensure switching from one source to another is as seamless as possible.
- Invest in the Knickerbocker Bridge ASAP to improve seismic reliability.
- Work with SUB and Rainbow WD to improve regional system interconnectivity. This includes improving existing interties with SUB/Rainbow to increase service flexibility and capacity in both directions. Also includes exploring additional interties if needed/prudent.
- Consider other opportunities to improve resilience including the ability to move raw water to different treatment plants.

Resiliency Findings

EWEB's new water supply represents a huge step in improving the community's redundancy and resilience. Having sources from different watersheds allows for operational flexibility and could be a huge advantage for fire-fighting. Enabling increased production capacity under emerging conditions in order to meet the community's minimum water needs is a smart choice so there is potable water available in an emergency.

Recommendations:

- Ensure there are alternate sources for critical treatment supplies and fuel to operate the new plant in an emergency. Partnerships for fuel storage should be explored.
- Further investments in the new plant (more treatment capacity or resiliency features) should be balanced against other water system resiliency priorities, such as fortifying transmission lines.
- Exploring potential partnerships with other water suppliers could further diversify EWEB's water supply and support resilience efforts.
- Embrace EWEB role as a local resilience leader and engage multiple government entities (utilities, municipalities, etc.) to promote a broad vision of lifeline infrastructure resilience in the region.



Communications Findings

This is a “teachable moment”. It’s important to continue communicating with customers and other stakeholders about the importance of resilience and the project’s critical role.

Recommendations

- Use interpretive displays and/or a video to educate the public about reliability and resilience features of the new plant – these are value added investments.
- Communicate with other local jurisdictions and area water suppliers about EWEB’s reliability plans and progress – start the regional conversations now.
- Use the Cascadia recurrence level (the chances of a quake hitting the central Oregon region in the next 50 years is between 15 and 20 percent) when communicating seismic resilience investment decisions to the public for consistency with partners’ messaging.
- Reach out early to permitting agency staff so they are aware of the project’s purpose/intent, can tour the site, and start those conversations before the applications are submitted.
- Make sure customers whose water will include a mix of McKenzie and Willamette River water are informed of that change. Consider a notification process if the new plant is operating in emergency mode with capacity above normal operations.
- Find ways to share the message: EWEB is an industry leader in watershed protection and treatment plant operations.

**KATE BROWN
GOVERNOR**



April 10, 2017

Eugene Water & Electric Board
4200 Roosevelt Blvd.
Eugene, OR 97402

Dear Members:

As the Oregon State Resiliency Officer, I am responsible for directing, implementing and coordinating seismic safety and resiliency goal setting within the Executive branch of state government. The prospect of recovery from a Cascadia Subduction Zone earthquake is daunting, and my job is to support and coordinate various efforts across the state so together, we are more resilient. The Eugene Water & Electric Board's effort to diversify its water supply and fortify the region's drinking water infrastructure is commendable.

Eugene is the largest city in the Pacific Northwest that relies on a single source of water. With just a few days of storage in area reservoirs, having a single source of drinking water presents a significant risk to public health, safety and our economy in the event of a major natural or human-caused disaster. Securing a second source of water, with a new filtration plant built to modern seismic standards, is a model project that supports compliance with the Oregon Resilience Plan.

Having access to potable water for public safety needs and basic human health is essential for a community to withstand and quickly recover from a disaster. However, resiliency investments are not always easy to justify against other pressing infrastructure needs. EWEB's efforts to deliver this critical project in a timely and efficient manner deserves recognition and broad support.

I am personally gratified to see this project moving forward and encourage others in policy-making roles to lend their support through the planning and permitting process. Please do not hesitate to contact our office if we can be of any assistance.

Sincerely,

Mike Harryman

MH:slb