



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners McRae, Barofsky, Schlossberg, Brown, and Carlson
FROM: Karen Kelley, Chief Operations Officer; Laura Farthing, Senior Water Engineer;
Jennifer Connors, Communications and Marketing Supervisor
DATE: March 22, 2024
SUBJECT: College Hill 607 Reservoir Replacement Update
OBJECTIVE: Information

Issue

In 2023, staff began preliminary design and planning work to replace the existing College Hill Reservoir as part of EWEB's distributed base-level storage improvements. The objective of this backgrounder is to provide information to the board about the upcoming project and to present the public engagement plan.

Background

The EWEB water distribution system has multiple base-level water storage tanks that provide storage for the entire distribution system:

- College Hill 607 (College Hill): 15 MG constructed in 1939, decommissioned in early 2024
- Hawkins Hill 607 (Hawkins): 20 MG constructed in 1961
- Santa Clara 398 (Santa Clara): 20 MG constructed in 1974
- Hayden Bridge: 15 million gallons (MG) constructed in 2001
- E. 40th Ave (E. 40th): 15 MG constructed in 2023

College Hill, Santa Clara, and Hawkins have reached the end of their useful lives, have significant structural issues, and are expected to fail during a significant seismic event. In addition, hydraulic issues exist which result in inefficient filling and draining cycles affecting water quality. Additionally, College Hill posed significant water quality risks to the community and was required to be repaired or decommissioned by the Oregon Health Authority.

Discussion

Through the 2015 Water System Master Plan effort and subsequent structural evaluations, staff determined that replacing the large base-level reservoirs with multiple smaller distributed tanks would have the following benefits:

- Provide resilient and redundant facilities
- Enhance operations

- Improve water quality

The ten-year Water Capital Improvements Plan (CIP) included replacing College Hill and Hawkins Hill and building new storage tanks at the EWEB-owned E. 40th Ave site. The CIP also includes decommissioning the Santa Clara pump station and reservoir. The new storage projects will be completed to meet the following design criteria:

- Protect water quality
- Provide secure facilities
- Meet current seismic design standards
- Enhance operational and hydraulic efficiencies
- Limit visual impacts
- Integrate public space when feasible, ensuring it aligns with safety, cost-effectiveness, water quality standards, and principles of equity and inclusion

EWEB completed construction of new tanks at the E. 40th site in early 2024. With both tanks online, staff recently decommissioned the College Hill Reservoir in preparation for the upcoming College Hill Replacement project.

The existing reservoir is located on a site between Lincoln and Lawrence St. near 24th Ave. The site also houses the smaller decommissioned 603 Reservoir which was constructed in the 1920s. The project will include the following elements:

- **Historic mitigation** – the site is considered a locally significant historic structure and therefore EWEB has entered into consultation with the State Historic Mitigation Office (SHPO) to mitigate the historic loss working with agency stakeholder groups and the public in accordance with the Oregon Revised Statutes.
- **Existing 607 and 603 reservoirs and 703 elevated steel tank demolition** – the existing 15 MG and smaller 603 reservoirs will be demolished as part of the new tank construction project starting in late Spring 2024. The 703 elevated steel tank will be demolished under a separate contract after the Verizon lease expires.
- **Earthwork** – the bottom of the new tanks will be sited 10 ft lower than the existing 607 reservoir and will require rock excavation to construct the new tanks.
- **Tank construction** – two new 7.5 MG storage tanks similar to the E. 40th Ave tanks will be constructed within the footprint of the existing 607 storage tank.
- **Transmission main and Storm Drain construction** – a new 24” transmission main and 24” storm drain will be constructed from the site down Lincoln and along 23rd Ave to approximately Willamette St.
- **Backfilling, site restoration, and landscaping** – the tanks will be screened, and public amenities will be constructed. The landscaping and amenities scope will be part of a public process.

Engineering and Site Design

At the October 2023 Board meeting, Commissioners approved a contract with Consor North America for design and engineering-related services for two new 7.5 MG storage tanks on the existing College Hill Reservoir site. The consulting services provided as part of this contract include civil, mechanical, structural, and electrical engineering services.

This phase of work will take approximately eight months and will determine the precise placement of the storage tanks, the extent of backfilling, the location of associated facilities, final pipeline alignment,

and drain requirements.

The engineering criteria to be used for the design and placement of the tanks include (in no particular order):

- **Elevation** - the top of the water surface must be at 607 feet above sea level.
- **Proximity to residences** - to the extent possible, maximizing the distance between the tanks and adjacent residences which is not less than 40 feet in any location.
- **Compatibility** – placing tanks in locations and at buried depths to reduce impacts to neighbors' viewsheds and enable continued public use of the site.
- **Cost** - ensuring responsible use of public funds.
- **Access** - ensuring adequate access for maintenance vehicles.
- **Security** - protecting water quality and limiting attractive nuisance with fencing.
- **Excavation and construction** - considering slopes and soil conditions in order to minimize the duration and magnitude of disturbance, including tie-in piping and drain construction.
- **Future planning** - designing to accommodate future replacement when the tanks reach the end of their useful life.

The tanks themselves will be similar to the E. 40th Ave site. They will have the same diameter, bottom and top elevations, hatch sizing and location, piping configurations, and the same electrical requirements. The tanks will be backfilled to the greatest extent possible to minimize viewshed impacts for nearby neighbors. Additionally, the site was laid out to provide future space for replacement of a reservoir.

The design of the College Hill storage tanks will incorporate the lessons learned during the E. 40th Ave construction project which include:

- Changing the interior washdown pipe support design to eliminate bolts in the floor slab,
- Adding additional safety requirements into the blasting specification which will include more robust minimum qualifications for the pre- and post-blast inspector and increased requirements for blasting mats.
- Utilizing a common concrete mix design that is readily available from multiple concrete suppliers to encourage competition, providing more consistent quality concrete and lowering overall project costs.
- Simplifying elements like backfilling details and underdrain configuration to make for a more efficient and streamlined construction project.

The construction of the new College Hill Storage Tanks will be taking place in a very active and engaged neighborhood and has a large group of facility users from the greater community with a vested interest in the public space the existing site offers. To mitigate these risks, staff is working closely with the neighborhood groups and the users of the existing facility.

Public Engagement

The goals for public engagement around this project include:

- Build and maintain customer trust and confidence.
- Clearly define and communicate public participation parameters and opportunities.
- Identify and gather perspectives from a diverse group of customers, including those who live and play at the reservoir as well as customers who live outside the College Hill neighborhood but are impacted by the project through water rates, quality, safety, and

reliability.

- Thoughtfully consider community input, respond in a timely way, and explain the reasoning behind decisions.
- Raise awareness of the crucial role water tanks serve in Eugene's water supply system and the benefits to all customers from the planned improvements.
- Provide information and support for staff and the Board to effectively engage the community and build confidence in decisions that involve trade-offs.

Public outreach principles, tools, and timelines were covered in detail in the [Sept. 5, 2023 Board memo](#) and presentation. Following is a brief recap and status update:

Communicate early and often using a variety of channels, including the project website, community events, email, video, surveys and comment forms, targeted conversations, and earned media.

- Detailed information about the project is easily accessible at EWEB.org/CollegeHill.
- The project email list, currently with 557 subscribers, is used to share updates, invitations to community meetings, and notifications about input opportunities.
- The project team has hosted 5 community events since kicking off the project in mid-2023.
- In addition to input gathered at community events (which is being tracked), the following online input opportunities have been offered:
 - General comment form published on the project website (175 comments received)
 - Historic Mitigation idea-generation survey (18 responses received and [posted on the website](#))
 - Historic Mitigation Options feedback questionnaire (30 responses received)
- The project team has received and responded to approximately 70 direct emails and comment cards on various topics related to construction and public access.
- In March, the communications team produced and shared this video about EWEB's legacy of drinking water stewardship: <https://youtu.be/7h2g46QnAU0>

Engage a diverse group of customers including site neighbors, neighborhood associations, site users, elected leaders, and community members who are often underrepresented in public processes.

- The project team is maintaining open lines of communication with Friendly Area Neighbors and Reservoir Watch.
- Staff are engaging routinely with City staff and elected officials.
- Project team is consulting with the State Historic Preservation Office, local agencies and tribal entities to collect mitigation ideas for the College Hill Reservoir.
- The team invited groups serving underrepresented populations to participate in the landscaping and public amenities design process for College Hill.

Public outreach timeline

EWEB is approaching public outreach and participation in two phases.

Phase 1: Historic Mitigation

Historic Mitigation is the process of memorializing historic structures before they are altered or removed. EWEB started collecting feedback for the historic mitigation of the College Hill Reservoir System in the fall of 2023. We held a public meeting, met with stakeholders (tribal, agency, and institutional partners), and collected ideas through a community survey. In the months since, we

analyzed the feedback and developed potential solutions, which are [published on the project website](#).

We are now collecting input on the options. This input will help the team understand what features resonate with the community and what adjustments may be necessary. We will use comments to develop the final historic mitigation plan and share it with the community. The desired outcome is a Historic Mitigation Plan, which will be formalized in a Memorandum of Understanding (MOU) with SHPO and other signatories, as appropriate.

Phase 2: Landscaping and public amenities.

EWEB will invite neighbors and other interested parties to participate in the design process for landscaping and public amenities. The project team is reiterating a clear and consistent message that while the new tanks will not be open for public use, EWEB is committed to a public input process for landscape restoration, screening of the new tanks, and low-impact recreation facilities that can be enjoyed by everyone, while aligning with broader community values such as responsible use of funds, public safety, and ease of maintenance.

We have already collected more than 150 comments on landscaping and will continue to gather feedback well into the construction process. Similar to the Historic Mitigation idea-generation survey, community input on landscaping will be posted on the project website.

The desired outcome is a Landscape and Recreation Plan. Once a final plan is developed, EWEB will use a bidding process to implement the plan and construct its elements. Landscaping and construction of public amenities will likely begin in 2026-2027 (after tank construction).

The Historic Mitigation and Landscaping & Amenities plans will come together to inform the public spaces on site.



TBL Assessment

A Triple Bottom Line (TBL) Assessment for the E. 40th Ave Water Storage project was completed during the design phase of the project. The TBL determined that there were considerable economic, social and environmental benefits to be gained by constructing two tanks at once on the site. The site and tank configuration are very similar for the College Hill project and the same TBL assumptions and criteria apply, for this reason staff adjusted the capital plan to construct two tanks at once on this site and have elected to not do a new TBL for storage tank options.

While the tanks are similar, the public use of the space is very different. Staff will be completing a TBL Assessment for the alternatives generated for the landscaping and public amenities to assist in making environmentally conscious, economical and equitable decisions.

Requested Board Action

This item is information only and accordingly there is no requested Board action.