



TO: Commissioners Carlson, Mital, Helgeson, Schlossberg and Brown
FROM: Karen Kelley, Water Division Manager
DATE: January 7th, 2020
SUBJECT: Base Level Storage Tank Upgrades – Status Update
OBJECTIVE: Information Only

Issue

In 2019, staff began preliminary design and planning work to replace EWEB’s base level storage tanks. The objective of this backgrounder is to provide information to the board about the upcoming projects and to present the public engagement plan.

Background

As part of the 2015 Water System Master Plan (Master Plan), staff identified a resilient spine for the water system. The first priority resilient spine is defined as those facilities that need to be available immediately following a Cascadia Subduction Zone earthquake.

- One of the Hayden Bridge Raw Water Intakes,
- Half of the Hayden Bridge Filtration Plant,
- Transmission mains,
- Base level storage tanks.

EWEB has been working on strengthening the resilient spine for the last 10 years and has completed improvements at both raw water intakes, and at the treatment plant including adding standby power capabilities and constructing a new disinfection system.

With the majority of the work completed at the intakes and the filtration plant, we are shifting focus to the distribution system, particularly on the transmission mains and the base level storage tanks (the subject of this backgrounder).

Existing Water System

The EWEB water distribution system has four base level water storage tanks that provide storage for the entire distribution system.

- Hayden Bridge: 15 million gallons (MG) constructed in 2001
- College Hill 607 (College Hill): 15 MG constructed in 1939

- Hawkins Hill 607 (Hawkins): 20 MG constructed in 1961
- Santa Clara 398 (Santa Clara): 20 MG constructed in 1974

Hawkins, Santa Clara, and College Hill have reached the end of their useful lives, all have significant structural issues and are not expected to be operational after a major earthquake event. Hydraulic issues exist which result in inefficient filling and draining cycles affecting water quality. In addition, due to a leaking roof and potential water quality issues, the Oregon Health Authority Drinking Water Services requires EWEB repair or decommission College Hill in 2023.

The following sections will discuss the issues with each reservoir, the proposed plan to create hardened storage, and the public communication strategy.

Discussion

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

- Provide resilient and redundant facilities
- Enhance operations
- Improve water quality

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

- Provide secure facilities with open space
- Protect water quality
- Enhance operational and hydraulic efficiencies
- Limit visual impacts
- Meet current seismic design standards

There are challenges associated with construction at all three of these sites:

- College Hill: located in an area with a very active neighborhood group and has a large group of facility users with a vested interest in the public space the existing site offers. The site does not require any land use applications but does require a building permit.
- Hawkins and E. 40th Ave: located within the City of Eugene’s South Hills Study area, and therefore require both tentative and final Planned Unit Development (PUD) approval. Both of these land use applications have an opportunity for public comment and potential appeal at both the local and the state level. The process for each application can take anywhere from six months to years after application submittal depending on if an appeal is filed.

To mitigate risks and to facilitate the decommissioning of College Hill in 2023, staff is working on the land use applications and preliminary designs for all three sites concurrently. The CIP includes a new tank in service every two years, with the first tank in service to facilitate the decommissioning

of College Hill in 2023.

These water storage improvements are once-in-a-lifetime projects that will provide safe drinking water to the next generations of Eugene residents. While these projects will benefit every EWEB water customer, there will be construction impacts to the immediate neighbors. Staff is aware of how these significant projects will impact the community and in particular the immediate neighbors. To address this, staff has developed a public engagement plan, presented in the next section.

Public Engagement Plan

The storage tank improvements will be highly visible projects impacting highly engaged neighborhoods in our community. Our communication efforts must take into consideration multiple, sometimes competing interests among various interested stakeholders.

To help inform public engagement efforts, EWEB retained a consultant in July 2019 to interview a small group of neighbors and other key stakeholders who are knowledgeable about EWEB, the storage sites and surrounding neighborhoods (see Attachment 1).

These Guiding Principles for EWEB's public engagement plan have been shaped with input from this stakeholder group, EWEB staff, and other knowledgeable observers.

1. As a first priority, focus on involving those audiences who are most directly affected by the storage facility improvements: site neighbors, neighborhood association boards, and special interest groups.
2. Communicate early and often, striving to reach every EWEB customer with information about planned improvements, schedule, benefits and costs.
3. Explain the crucial role the water storage facilities serve in Eugene's water supply system, and the benefits to all customers from the planned improvements.
4. Clearly communicate opportunities for public input and involvement.
5. Establish methods for the public to ask questions and express concerns, and reply promptly to all inquiries.

Public Involvement

The water storage project sites are integrated with the surrounding neighborhoods and are valued open space that enhance the quality of life for residents. As such, it's important to keep the public informed and involved. However, it is not possible for the public to be involved in all major decisions. Determining the appropriate level of involvement, and clearly communicating those opportunities will help to improve the quality of decisions, avoid false expectations, and keep the projects on track.

Decisions that affect water quality, safety, and engineering (such as tank size, siting, elevation, and security measures) must be made by qualified staff to comply with regulations and present very little opportunity for public input. The valuable opportunities for public input involve site aesthetics and amenities. For property retained by EWEB and not used for storage facilities, site neighbors and other residents will be invited to participate in decisions that involve:

- Landscape design - earth, rock, water and vegetation features
- Public amenities (outside the fenced tanks) - interpretive displays, recreational features

Opportunities for public input will be widely advertised on EWEB's website, through neighborhood association newsletters, email communications, and other channels.

Construction mitigation

EWEB will develop a thorough construction mitigation plan, and share with acutely impacted neighbors prior to beginning any construction activities. The construction mitigation plan will establish methods for regular communications with residents regarding process and schedule, specify contact persons for general construction information and concerns, and outline strategies for noise management, dust control, neighborhood safety, and other construction impacts.

Communication tools and channels

Throughout the course of the projects, EWEB will leverage a variety of communication tools and channels, with a focus on the following:

- Project website (eweb.org/waterstorage) - up-to-date information and schedule of public meetings/events
- Interested parties email list – stakeholders may opt-in to receive periodic updates via email
- Handouts/briefings – project overviews and frequent site-specific updates (first round of briefings included as Attachments 2-5 and also available for download on the website)
- Site signage - accessible and visible to the public
- Public meetings – formal (as required by PUD) and informal neighborhood meetings
- Other existing tools such as Pipeline newsletter, social media and traditional media

Triple Bottom Line (TBL) Assessment

A TBL will be prepared for each site as design efforts move forward and individual site alternatives are evaluated. Considerations will be given to all the TBL categories including things like resiliency, environmentally friendly construction, enhancing community interaction and long term land use and water supply protection.

Recommendation/Requested Board Action

For information only – Staff are seeking board approval of the direction the project is moving in or feedback so approval can be obtained.

ATTACHMENT 1

In August 2019, EWEB hired a consultant (Barney & Worth) to interview neighbors and other stakeholders about their interests and concerns related to water tank improvement projects at College Hill, Hawkins Hill and E. 40th. Eighteen residents participated in the interviews.

1



Resiliency matters

- "I'm concerned about seismic vulnerability and sabotage."
- "More storage capacity is a benefit."
- "The safer the water, the better it is for the community."
- "People should be concerned about the viability of old reservoirs in an earthquake."

2



Public access is highly valued

- "A nice gathering place across the generations."
- "Keep sites accessible to all, serving the entire community."
- "Open space is good."
- "College Hill is an important gathering place."

3



Communication is critical

- "Start outreach early; involving people late makes them angry."
- "Go to neighborhood associations and use their newsletters."
- "Newspaper coverage is no longer effective."
- "No surprises. Give advance warning - tell people why you are doing this."

4



Construction impacts are a big concern

- "I'm worried about construction: a huge hole in the ground and 20 dump trucks a day."
- "This is all about construction impacts: noise, traffic, dust, damage to natural resources."
- "Tell the story upfront. Explain 'why' so neighbors can endure the impacts."

ATTACHMENT 2



WATER STORAGE IMPROVEMENT PROJECTS



Access to clean water is vital to our community. EWEB is hard at work making sure safe, reliable water continues to flow even as critical infrastructure ages and new challenges arise.

In addition to programs to safeguard water quality in the McKenzie River, we have fortified the Hayden Bridge Water Filtration plant, are upgrading water pump stations and improving water mains. We are also developing neighborhood emergency water stations in case of a major disruption to our water distribution system.

There's still more work to do. In the next decade, we plan to construct new water storage facilities near 40th Ave. and Donald St., and replace the water storage systems at EWEB's College Hill and Hawkins Hill sites. This is a significant investment aimed at diversifying EWEB's water storage system with additional, but smaller tanks, to enhance resiliency, water quality, and systems operations.

Projects at the three sites include:



New 7.5 million gallon tank replacing the existing 15 MG tank built in 1930s. Potential for second 7.5 MG tank in future.



Two new 7.5 million gallon tanks replacing the existing 20 MG tank built in the 1960s.



Two new 7.5 MG tanks on a vacant 10-acre site acquired by EWEB in 1950 as a future water storage site.

Although these facilities are located in the hills of south Eugene, the improvements benefit the entire community – generations of residents, hundreds of business, medical facilities and emergency services, schools and parks.

What's the status of the work?

As a public utility, we are committed to careful planning, responsible use of public funds, and meaningful customer engagement.

We are in early planning stages of this work. Technical assessments are underway, we are creating community outreach plans and reaching out to neighbors and other interested parties.

Check out
eweb.org/waterstorage
for more project
information and
updates.

ATTACHMENT 3



WATER STORAGE IMPROVEMENT PROJECTS



New water storage tanks at E. 40th Ave. and Donald St. have been identified as part of the backbone of the water system that would be needed after an earthquake in order to meet critical community needs, including fire suppression, health and emergency response, and drinking water distribution.

As part of EWEB's Water Storage Improvement Projects, we plan to construct two new 7.5 million gallon (MG) tanks on the site.

This is a significant investment aimed at diversifying EWEB's water storage system with additional, but smaller tanks to enhance resiliency, water quality, and systems operations.

Why is this project necessary?

Constructing new water storage facilities on this site will enhance the reliability and resiliency of Eugene's drinking water system. The new tanks will provide system wide redundancy and backup both for unplanned outages and for planned maintenance.

Constructing a new water storage facility at E. 40th Ave. is a cost-effective solution long-term for improving water quality and resiliency for all Eugene residents.

Site work and construction

We anticipate construction activity could start as early as 2022. Neighbors will be given at least three months notice prior to construction activity starting.

For public safety reasons, the site will be fenced prior to construction activity.

EWEB will develop and share with neighbors a Construction Mitigation Plan that establishes methods for regular communications with residents, and outlines strategies for noise management, dust control, neighborhood safety, and other construction impacts.

Public access

The new facilities will be designed according to contemporary standards, which prevent public access to critical drinking water facilities. In order to protect our drinking water supply, the new tank structures will be fenced.

Neighbors currently enjoy open access to the vacant property. Understanding that public access has been a valued community benefit, EWEB is evaluating options for maintaining areas of open space at the project site. We intend to work together with neighbors and other stakeholders to re-landscape portions of the site for public use, while ensuring responsible use of public funds.





Preliminary siting option. May be revised as the project progresses.

Anticipated Timeline



ATTACHMENT 4



WATER STORAGE IMPROVEMENT PROJECTS



EWEB's College Hill water storage tank is part of the backbone of the water system that would be needed after an earthquake in order to meet critical community needs, including fire suppression, health and emergency response, and drinking water distribution.

As part of EWEB's Water Storage Improvement Projects, we plan to replace the existing 80-year-old, 15 million gallon (MG) tank with a new 7.5 MG tank, and a potential second 7.5 MG tank in the future.

This is a significant investment aimed at diversifying EWEB's water storage system with additional, but smaller tanks to enhance resiliency, water quality, and systems operations.

Why is this project necessary?

- 1 College Hill's water tank is nearing the end of its useful life, does not meet current seismic standards, and requires significant, expensive repairs to protect the safety and quality of the drinking water inside.
- 2 Citing contamination concerns from leaking roof joints, the Oregon Health Authority is requiring EWEB to rehabilitate or decommission College Hill in 2023.
- 3 The College Hill storage tank does not drain and fill effectively, which impacts water quality.

Constructing a new water storage facility at College Hill and removing the existing facility is the most cost-effective solution long-term, and will improve water quality and resiliency for all Eugene residents.

Site work and construction

We anticipate construction activity likely will begin in 2021. Neighbors will be given at least three months notice prior to construction activity starting.

For public safety reasons, the site will be fenced during construction activity and the existing tank structures will be removed.

EWEB will develop and share with neighbors a Construction Mitigation Plan that establishes methods for regular communications with residents, and outlines strategies for noise management, dust control, neighborhood safety, and other construction impacts.

Public access and honoring College Hill's history

The new facilities will be designed according to contemporary standards, which prevent public access to critical drinking water facilities. In order to protect our drinking water supply, the new tank structure(s) will be fenced.

Understanding that public access has been a valued community benefit, EWEB is evaluating options for maintaining areas of open space at the project site. We will invite ideas from neighbors about how to appropriately honor College Hill historic features and role in our community, while ensuring responsible use of public funds. This could include re-landscaping portions of the site for public use and erecting interpretive signage to educate visitors and celebrate the site's history.

Check out
eweb.org/waterstorage
for more project
information and
updates.



Preliminary siting option. May be revised as the project progresses.

Anticipated Timeline

2018

2019

2020

2021

2022

Planning

Design

Construction

Public Outreach & Engagement

ATTACHMENT 5



WATER STORAGE IMPROVEMENT PROJECTS



EWEB's Hawkins Hill water storage tank is part of the backbone of the water system that would be needed after an earthquake in order to meet critical community needs, including fire suppression, health and emergency response, and drinking water distribution.

As part of EWEB's Water Storage Improvement Projects, we plan to replace the existing 57-year-old, 20 million gallon (MG) tank with two 7.5 MG tanks.

This is a significant investment aimed at diversifying EWEB's water storage system with additional, but smaller tanks to enhance resiliency, water quality, and systems operations.

Why is this project necessary?

The Hawkins Hill water storage tank does not meet current seismic standards, and requires significant, expensive repairs to protect the safety and quality of the drinking water inside.

Constructing a new water storage facility at Hawkins Hill and decommissioning the existing facility is the most cost-effective solution long-term, and will improve water quality and resiliency for all Eugene residents.

Site work and construction

We anticipate construction activity could start as early as 2022. Neighbors will be given at least three months notice prior to construction activity starting.

For public safety reasons, the site will be fenced during construction activity.

EWEB will develop and share with neighbors a Construction Mitigation Plan that establishes methods for regular communications with residents, and outlines strategies for noise management, dust control, neighborhood safety, and other construction impacts.

Public access

The new facilities will be designed according to contemporary standards, which prevent public access to critical drinking water facilities. In order to protect our drinking water supply, the new tank structures will be fenced.

Neighbors currently enjoy walking paths around the facility. Understanding that public access has been a valued community benefit, EWEB is evaluating options for maintaining areas of open space at the project site. We intend to work together with neighbors and other stakeholders to re-landscape portions of the site for public use, while ensuring responsible use of public funds.





Preliminary siting option. May be revised as the project progresses.

Anticipated Timeline

