



TO: Commissioners Mital, Schlossberg, Helgeson, Brown and Carlson  
FROM: Karen Kelley, Water Operations Manager  
Laura Farthing, Senior Engineer & Project Manager  
DATE: October 6, 2020  
SUBJECT: Base Level Storage Tank Upgrades  
OBJECTIVE: Information and Guidance

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## ISSUE

In January 2020, staff provided the board with information on a series of projects to replace EWEB's base-level storage tanks. The objective of this backgrounder is to provide an update to the board on project planning, engineering and design considerations, and public engagement for two active projects (College Hill and E. 40<sup>th</sup> Ave. storage tanks) and to solicit guidance regarding the current project path.

## BACKGROUND

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 Hill, Santa Clara, and College Hill, all have significant structural issues and are expected to fail during an 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 by the end of 2023.

The ten-year Capital Improvements Plan (CIP) includes the following projects:

- **East 40th Avenue:** One new 7.5 MG tank with the potential for a second tank in the future, on a vacant 10-acre site which was acquired by EWEB in the 1950s for future water storage. Additionally, new 36-inch diameter transmission main from West Amazon St. to the intersection of E. 40<sup>th</sup> Ave and Patterson St. is included in the CIP. This work is being timed with the City of Eugene street projects.
- **College Hill:** One new 7.5 MG tank in the near term with potential for a second 7.5 MG tank

later, replacing the existing 80-year old 15 MG reservoir.

- **Hawkins Hill:** Two new 7.5 MG tanks, replacing the existing 20 MG tank.

The CIP also includes decommissioning the Santa Clara pump station and storage tank.

Through the 2015 Water Master Plan effort and subsequent structural evaluations, it has been 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

Initial planning for the College Hill, E. 40<sup>th</sup> and Hawkins projects began in 2019, and the projects entered the land use, engineering design and public engagement phases in January 2020.

## **DISCUSSION**

The following sections discuss zoning and land use requirements, project planning, engineering and site design considerations, and public outreach for the College Hill and E. 40<sup>th</sup> Ave. projects. Hawkins Hill is still in the earliest planning stages, and planning has not yet begun for Santa Clara.

### **Zoning and Land Use Requirements**

The College Hill site does not require any land use applications but does require a building permit.

The E. 40<sup>th</sup> Ave. site is located within the City of Eugene's South Hills Study area. The Study was intended to limit the density of residential housing development, and states that Planned Unit Development (PUD) provisions shall be applied under certain conditions.

In April 2020, EWEB submitted a Zone Verification application to the City of Eugene, requesting verification that non-elevated water storage tanks are an allowed use on EWEB's property, and therefore not automatically subject to PUD procedures based on the following:

- Water storage tanks are an essential public utility and are necessary due to the residential growth assumptions adopted in the Metro Plan and the Envision Eugene process.
- These new facilities are required to ensure an available water source following an earthquake event in accordance with the Oregon Resiliency Plan.
- The planned water tanks are not major developments and the proposed project does not require partitioning of the property.
- The size of the site and the slope where the tanks will be situated do not meet the PUD criteria covered by the South Hills Study. In addition, the tanks will be partially buried to limit the visual impact to the community.
- The tanks will not impact traffic on local streets and will not have any dedicated parking spaces.
- EWEB is not intending to construct any housing on the property.

The City Planning Department determined that construction of public water storage at the East 40<sup>th</sup> site is an allowed use provided it meets the City of Eugene landscaping and screening requirements and does not require PUD approval

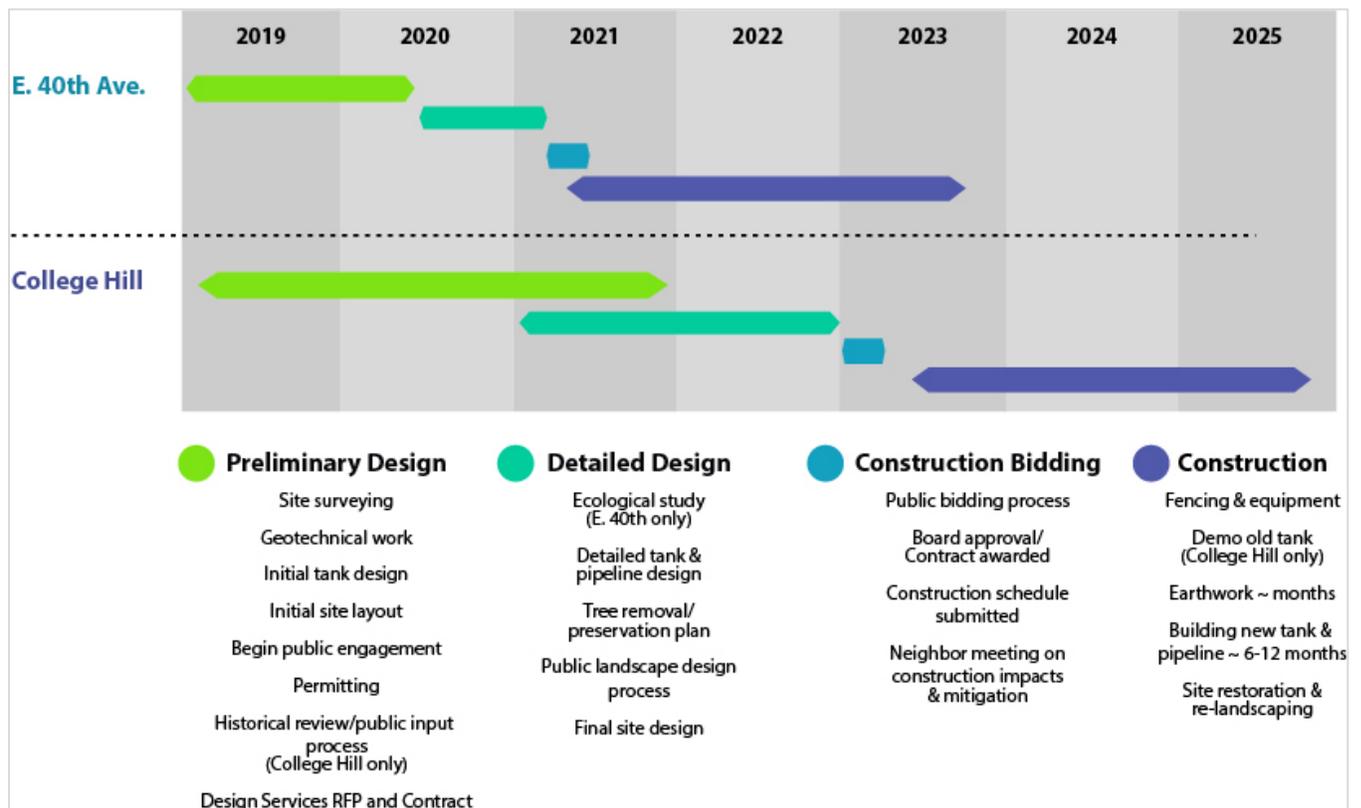
Information about the City’s determination was posted on the project website and shared with neighbors in early July 2020.

## Project Planning

The City’s zoning and land use determination was an important step in bringing clarity to the construction sequence and timeline for both the E. 40<sup>th</sup> and College Hill projects.

The City's decision enables EWEB to pursue our "preferred path" of constructing storage at East 40<sup>th</sup> before College Hill, allowing us to delay construction at College Hill until mid-2023. Constructing at East 40<sup>th</sup> before College Hill will provide the "replacement" storage needed to take the existing College Hill reservoir out-of-service, in its entirety, prior to building the new tank. As a reminder, the existing College Hill reservoir must be substantially rehabilitated or decommissioned by the end of 2023.

Following is high level summary of the major milestones for both projects:



## Engineering and Site Design

At the August 4, 2020 Board meeting, Commissioners approved a contract with Murray Smith Associates of Portland, OR for design and engineering-related services for a new 7.5 MG storage tank on the E. 40th Avenue site. The consulting services provided as part of this contract include civil, mechanical, and structural engineering services.

This phase of work will take approximately seven months and will determine the precise placement of the first storage tank.

The engineering criteria to be used for design and placement of the tanks at both sites includes (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 distance between tanks and neighbors' property lines
- 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 and emergency vehicles
- Security - protecting water quality and limiting attractive nuisance
- 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 additional tanks identified in the Water Master Plan and future replacement when the tanks reach the end of their useful life

At the E. 40<sup>th</sup> site, staff will also consider ecological and habit impacts in the final design and placement of tanks. The 10-acre site supports oak and Douglas fir forest, an open meadow, and other plant communities that provide habitat for a variety of birds and other wildlife. Neighbors have indicated that preserving natural areas and habitat are among their top interests for the site.

To better understand and address the potential environmental impacts of this project, EWEB is contracting with the consulting firm DOWL to conduct an ecological study at the E. 40<sup>th</sup> site. The study will identify sensitive habitat and species and help inform the tank design and landscaping plan to preserve and protect sensitive species during construction and restore the site to enhance the habitat afterwards.

As part of DOWL's preliminary research, neighbors will be invited to share their observations of unique or highly valued wildlife and habitat features on the property. Information about the ecological study was [posted on the project website](#) and shared with E. 40<sup>th</sup> neighbors in late August 2020.

## **Public Engagement**

As discussed with Commissioners at the January 2020 board meeting, determining the appropriate level of public 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

Staff has been in frequent communications with neighbors who live adjacent to both the E. 40<sup>th</sup> and College Hill sites. We have also initiated a project email list that is open to all members of the

community.

Since January 2020, staff has:

- Hosted 2 neighborhood meetings
- Sent 2 direct mail letters to adjacent neighbors
- Delivered 6 email updates to neighbors and other interested parties
- Submitted 2 articles to Neighborhood Association newsletters
- Provided 1 media interview
- Participated in multiple one-on-one conversations and site visits with highly interested neighbors

In addition, the project website ([eweb.org/waterstorage](http://eweb.org/waterstorage)) is maintained with all the latest project information, and links to additional materials.

Upcoming planned outreach includes:

#### **E. 40<sup>th</sup> Ave.**

- DOWL will reach out to neighbors to ask about observations of unique or highly valued habitat features on the property.
- A Southeast Neighbors (SEN) meeting/presentation is tentatively planned for a future date TBD and COVID-19 dependent.
- We expect to hold another neighborhood meeting/presentation in late 2020 with a project update and to collect input on the next phase of landscape renderings.

#### **College Hill**

- Historical review & public input: EWEB is currently working with the State Historic Preservation Office (SHPO) and a consultant to ensure we follow recommendations for historically significant facilities. Part of this process includes a public meeting to share the findings and gather input on mitigation strategies that appropriately honor College Hill historic features and its role in our community.
- Public meetings will be scheduled this fall or winter (pending COVID-19 status) to begin collecting input on future site uses and landscape design, as well as ways that we can appropriately honor College Hill historic features and its role in our community.

#### **Construction mitigation**

As each project approaches the construction phase, staff 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.

#### **Triple Bottom Line (TBL) Assessment**

A TBL is in development.

**Recommendation/Requested Board Action**

As requested by the Board, this is an informational update provided in order to solicit additional Board guidance regarding the current project path. Staff will be available to answer questions and receive feedback during the meeting.