

Summary of Water Tank Site Visit

Select Board

Wednesday, May 31, 2023

Site: Paines Hill

Site Visit Start: 2 p.m.

***This is an informational meeting only no deliberation took place**

Select Board Members; Chair Laurie Bent, and Tom Palmer along with Wright- Pierce Engineering Firm met at the location of Doublet Hill. There were approximately 29 people who attended this informational site walk meeting. Below is a summary of the Paines Hill site visit, and the proposed tank site plan.

Background

- The existing tank is a 1-million-gallon (MG) concrete tank, constructed in 1953, is +/-27 feet high with +/-22 feet exposed (5 feet buried), +/- 80 feet in diameter, with a ground elevation of +/-346 feet, and overflow elevation of 367.5 feet.
- The existing tanks were constructed at the ideal locations as they are the highest elevations in town.
- The proposed tank site as shown by the stakes and balloon deployed during the site walk is directly behind the existing tank to the east. Refer to Attachment 1 – Preliminary Tank Site Plan. The Preliminary Tank Site Plan is intended to facilitate discussions with residents and committees. Details of tank construction will be finalized during the design phase.
- The proposed design consists of a 1.6 to 1.8 MG, 80-foot diameter, prestressed wire wound concrete Type III tank, increase overflow elevation from 367.5 feet to 397.5 – 407.5 feet (to be determined in design), increase height from +/-27 feet to +/-57-67 feet (tank height will vary based on final grade).

Key Issues

- The elevation of the existing tanks is too low to provide adequate pressure and fire protection to 300-400 homes in Weston due to development at elevations higher than the system was designed to serve. The new tanks will need to be constructed to a higher elevation to provide adequate pressure and firefighting capacity in accordance with regulatory requirements.
- The Paines Hill tank serves as the controlling tank for Weston's water system – it is the most important tank. The existing tank must remain in service during construction.

Site Constraints

Engineering

- The new tank will be prestressed concrete. The concrete wall panels must be formed and poured on site and put into place by a large crane.
- The original site considered for the new tank was in front (west) of the existing tank. This location would prevent the disturbance of Article 97 land but would require clearing all vegetation between 148 Highland Street and the tank and would provide no space for construction laydown. This alternative also required a variance from zoning for in set-back requirements.
- Once a tank location is agreed upon, geotechnical borings will be completed to determine soil and ledge conditions.
- Sizing for the proposed additional 0.5M gal (spread amongst all 3 tanks) of storage for emergency use (another foot or two of diameter of the water tank) would add on the order of 1-2% to cost.

Topographic

- The site is relatively flat but grade drops off to the north and east.

Conservation

- The existing parcel is surrounded to the north and east by land preserved under Article 97 as Protected Open Space. The existing parcel is surrounded to the south and west by residential homes.
- Taking of Article 97 land must be approved by MEPA which requires an alternatives analysis demonstrating that this option results in the least impact to protected land.
- The location of the new tank must be determined prior to continuing with the MEPA permitting process.
- The forest is a contiguous, advanced ecosystem (prime forest land) consisting of mature trees. MEPA will be looking for land with equal value for the land swap.
- The new tank, 25-to-30-foot buffer around the tank, and the access road will remain cleared. The rest of the site, which is initially cleared for construction laydown, can be reforested.
- The existing tank site should be protected for future water supply use.

Aesthetic

- The strip of vegetation between the new tank and 156 Highland Street provides important screening and should be maintained as much as possible. Constructing the access road to the north of the existing tank, rather than to the south, would allow this strip to remain.
- The same antennas on top of the existing tank will be transferred to the new tank.
- Site fencing is required around the tank for security.

Resident Input

- All attendees were asked to sign-in. Town Manager, DPW, Conservation Commission, Tree Advisory Group, Planning Board, Town Engineer, Select Board, and Wright-Pierce in attendance.
- Question asked about where new access driveway would be located. WP indicated that it is currently proposed to the south of the existing tank and that the existing fence will be relocated closer to the existing tank. Others suggested the access road go on the North side of the existing tank so that the vegetation between the 156 Highland St remains. WP will consider the viability of this location.
- Neighbor asked what is the minimum amount of zone clearing around the tank? Tree clearing will be a huge issue. WP explained that screening will be maintained between the existing tank and the south parcels and between the existing tank and the new tank. The back side of the proposed lot would be cleared for construction and staging of the new tank.
- Neighbor asked how much more pressure will we have with the new tanks? WP indicated that it will depend on the elevation of your home. But in general, everyone will see an improvement of approximately 20 psi.
- Participant asked if the cleared area can be re-forested? WP said yes, but will just need to maintain a 25–30-foot buffer around the tank.
- Neighbor commented that the new tank will adversely affect the value of homes. Neighbors prefer to have the cleared staging area in the front so that it can be reforested and the tank in the back.
- WP summarized construction sequencing noting that the tank construction itself will take 4-5 months while the entire project will take about 1 year including site work.

- Question asked if cutting rebar creates a lot of noise? WP stated that no, rebar is pre-cut and pre-bent.
- Question asked if there was ledge requiring blasting? WP indicated that geotechnical borings would need to be performed to determine extent of ledge.
- Neighbor stated that they would rather have a site visit in the winter so we can see the balloon without the leaves. The town indicated that site walks were scheduled right after the Town Meeting as requested by attendees that participated in the Tank Forums.
- Neighbor commented that they would much rather see the tank go back a lot farther. Neighbors would be willing to discuss giving strips of their land to conservation. WP commented that preservation of conservation land versus developed land is preferred by MEPA.
- Neighbor asked why not give the existing tank parcel back? The Town stated that the existing tank will be preserved as Article 97 for water supply purposes so in the future a replacement tank can be considered on this parcel.
- Participant asked what the cost differential is to moving the tank back further into Article 97 land. As noted herein however, this alternative was deemed unacceptable to residents.
- Neighbor asked if town can keep the access road as conservation land but have an easement? WP stated that no, MEPA considers an easement as a permanent taking.
- Planning Board commented that certain trees are more valuable than others and requested that a tree survey be conducted as part of the design. The Town and WP indicated that in order to construct the tank, the trees will need to be cleared on the proposed parcel as discussed. Screening will be preserved as previously discussed.
- Tree Advisory Group stated that MEPA will look for a similar parcel which would mean one with an advanced ecosystem with pine and oaks, etc.
- Planning Board recommended preparing sections looking at the tank from all the neighbors' houses.

Action Item Summary

Task	Owner
Evaluate feasibility of constructing the access road behind the existing tank.	WP

See Paines Hill Preliminary Water Tank Site Map Attached

Meeting ended at 3:00 p.m.

Tom Palmer
Clerk

Note: A copy of all documents, explanatory material, and exhibits presented to and used by the Select Board as part of this meeting are attached to the approved minutes