

# Manhasset-Lakeville Water District Replacement of the Munsey Park Elevated Water Storage Tank

## Frequently Asked Questions

### Why are we replacing the Munsey Park Tank?

- The existing tank was constructed in 1929 and is at the end of its useful service life. Riveted steel elevated tanks have a useful life in the range of 75 to 100 years.
- The existing tank, specifically the riveted connections, is deteriorating and is in need of major rehabilitation or replacement. However, due to its age, it does not make sense to rehabilitate it, so replacement is the only feasible option.
- The existing tank does not conform with current New York State Building Code standards related to hurricane wind and seismic load conditions.
- The rehabilitation of the old legged/lattice style tanks are labor intensive and therefore expensive. More steel/surface area = more cost. More importantly, the old style tank, with crevices and connections, is more prone to corrosion.
- The cost to replace the tank is comparable with rehabilitation costs.
- When compared to the age, condition and style of the existing tank, the new tank will allow for easier and less expensive maintenance into the future. In addition the new tank will be constructed to meet current building code provisions for hurricane and seismic load conditions.
- Persistent and extensive corrosion have comprised the sanitary and structural integrity of the tank, which now requires frequent monitoring and interim emergency repairs. The new tank will be of modern welded steel construction that will improve public health protection based on its roof design and base metal thickness to keep contamination from entering the tank.
- The new tank will provide more water capacity and will improve water system reliability; therefore, the new water storage facility will improve fire protection for the community as well as water pressure and water safety.
- Replacement of aging infrastructure cannot wait until there is a system failure. Here are a few recent examples of government agencies undertaking infrastructure replacement projects as good planning measures:
  - Tappan Zee Bridge – Constructed in 1952 – being replaced
  - Goethals Bridge – Constructed in 1928 – being replaced
  - West Hempstead Water District Elevated Water Storage Tank (same style as MLWD) – Constructed in 1928 – Replaced in 2004

- Water Authority of Great Neck North Elevated Water Storage Tank – Constructed in the 1930s – Replaced in late the 1990’s
- Roslyn Viaduct - Constructed in 1949 – replaced in 2014
- The recent Elk River chemical spill that occurred this past January in West Virginia impacted the water supply for over 300,000 residents. Investigators are looking at the design, age and maintenance of a West Virginia chemical tank that leaked, a nondescript storage container built with rivets instead of welds and installed in 1938 (reference - Wall Street Journal· Wed. January 15, 2014.

### Why not replace with a ground tank?

- Elevated tanks offer benefits that cannot be attained with ground storage:
  - Emergency water supply without electrical power.
  - Surge protection and distribution system pressure balance to prevent water main breaks.
  - Instantaneous fire fighting supply.
- An elevated tank works on gravity which minimizes overall water district energy use, benefiting the environment.
- Ground storage relies on pumps and electrical power supplies. Ground storage would require double pumping and very large electric motors, which place extensive demand on the electrical system under high energy demands. This will result in significantly higher operating costs and could result in localized power outages because of added stress on the electrical grid during peak demand periods.

### Why not move the tank to another location?

- The tank’s location is a function of elevation in order to provide optimum pressure for community fire protection, water pressure and water safety.
- Average ground elevation of this plant is about 205 feet above mean sea level, the highest elevation, when compared to the general topography in the near vicinity within the District. It is an optimal location for an elevated water storage structure.
- The existing water transmission and distribution system has been designed and constructed to accommodate a water storage tank at the existing site. The strategic location of the tank site with the extensive water main infrastructure is designed to provide for reliable and vital water supply to meet summer time and emergency water demand conditions, including fire fighting needs.
- The District owns and maintains this site for this very purpose.
- Replacement on the same site has the least impact on the environment and community, as abutting property owners have purchased their property with an awareness of the existing tank, a situation that cannot hold true elsewhere within the District.

## Will the tank fall over?

- The tank will be designed to meet the latest applicable building code (including potential seismic conditions and hurricane wind loading standards) by our licensed professional engineering firm H2M- Water. The existing tank does not conform with current New York State Building Code standards related to hurricane wind and seismic load conditions.
- Work preparation will include geotechnical analysis and the appropriate foundation design.
- The work will be publicly bid and contractors will need to demonstrate proficiency in tank construction.

## Have similar projects been conducted in the past?

- Yes, during 2002 the West Hempstead Water District successfully replaced a 74 year old 300,000 gallon multi-legged bolted steel elevated tank with 600,000 gallon single pedestal elevated spheroid on a much smaller site in a residential community. A detailed project history is available.
- The Village of Garden City and New York American Water (Glen Head) are in the planning process to replace two riveted steel water storage tanks constructed in the late 1920's to early 1930's over the next five years.

## What is the project cost and how will it be financed?

- The total capital cost of the project is estimated to be \$3,200,000. This includes new tank construction, site work, demolition and site restoration.
- The project will be financed through water district capital improvement reserve funds.

## Has the environmental impact of the project been evaluated?

- The project involves the replacement, rehabilitation or reconstruction of a structure or facility, in kind, on the same site. Therefore, the project is a type II action, which is exempt from SEQRA.
- However, even though the project is exempt from SEQRA, the Board has authorized the preparation of a full EAF, Part 1 and 2, to evaluate the environmental significance in order to have as much information as reasonably possible.
- Based on an analysis of the full EAF, we confirm that the project will not have an adverse impact on the environment.

## What is the project schedule ?

- The project design is currently underway.
- In addition to a March 5m 2014 meeting with elected representatives of nearby jurisdictions, the Water District will hold a community outreach meeting on April 8<sup>th</sup>.
- Project is scheduled to be bid this spring.
- Construction is projected to commence during this summer.
- Project is anticipated to be completed by the winter of 2015-2016.

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