

Cleaning will be an inside job

Written by Mark Jaeger
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Sending a diver into village tower could save a million gallons of water

If scrubbing your bathtub seems like a daunting task, imagine having to clean a 300,000-gallon elevated water tower.

The Village of Fredonia has decided to take a different approach to the routine cleaning by approaching the problem from within.

The Village Board recently accepted a recommendation from Public Works Director Al Neumann that the cleaning be done by Water Tower Clean & Coat of Lodi.

Neumann termed the process a “dive clean out.”

The Department of Natural Resources requires the operators of municipal water systems to inspect and clean water-storage facilities at least once every five years.

That process is relatively simple for the village’s two in-ground reservoirs and is handled by village workers. Cleaning the tower, however, requires specialists.

Rather than following the traditional route of draining the tower and then cleaning the residue accumulated at the bottom, Water Tower Clean & Coat intends to send a diver into the spherical tank from above.

According to the approved bid, the diver will conduct an underwater inspection and cleaning of the reservoir, including providing photographs. Debris will be vacuumed out of the bottom of the tank.

Neumann told trustees the innovative approach will minimize problems encountered in past water tower cleanings.

The conventional dry process requires draining water from the tower, no small process when the structure is near full. Water pumped from the tower has already been chlorinated and treated with sodium silicate to control iron discoloration, so those chemicals are wasted when the tank is emptied.

In addition, Neumann said draining the tower — and the loss of more than 1 million gallons of water — has posed multiple problems for the village in the past.

Regulating pressure in the water system is difficult when the elevated tower is taken off line. Pumps at the two wellhouses must be locked on and pressure relief valves installed on the system in an effort to maintain a relatively constant pressure.

When those valve adjustments are off even slightly, water mains can — and have — burst.

Neumann said the last time the tower was drained for cleaning, it was out of service for 38 days.

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During that time, he said, the empty tower compromised the village's fire protection.

The dive bid of \$2,800 was just \$200 more than competing conventional bids.

"The \$200 will be more than recaptured with less man hours on our part and savings for pumping water, along with a little more peace of mind," Neumann said in his summary report to the board.

The cleaning will be done in late spring or early summer.