

## Water Utility plans new south water tower

Joe Trueblood, Sheboygan Water Utility

There's a lot of confusion about water towers. People often ask how they work.

Old or new, water towers have several purposes. The main purpose is to store water. All water towers contain a large vertical pipe that supplies water to a storage vessel at the top (the sphere or ball, in most cases). Water moves up or down in this pipe depending on flow conditions. There is also an overflow pipe in case too much water goes into the storage vessel. Water utilities aim to fill water towers during the nighttime and then let the water level go down during the day depending on usage. This helps keep the water from going stagnant.

The second purpose of water towers is to provide water for fire-fighting. This water is stored and ready to go into action. In some cases, fire engines can pump more water out of a hydrant than can be pumped from the water treatment plant. So the stored water in a tower helps out.

Another purpose of water towers is to buffer pressure fluctuations in a distribution system, especially during pumping changes at the water treatment plant. Even if pumps shut off or sudden water usage occurs, the vertical column of water in a tower produces pressure, offsetting other pressure changes.

Sheboygan has three active water towers and two ground-level water reservoirs. Only one of these is located in the business center on the south side. Due to higher elevation, this area is also a boosted pressure zone. So the tower on Behrens Parkway operates on its own, downstream from a booster pump station.

With the planned expansion of the business center southward, the Water Utility began reviewing service to the new area. Given that the existing water tower cannot be taken out of service due to heavy industrial usage, the expansion area looked ideal for a new tower. After comparing several sites, the Utility identified a parcel of land west of S. Business Drive as ideal. The Utility then purchased 2.5 acres of land from the city for construction of a new water tower.

The new tower will serve the new business center, but it will work in tandem with the existing tower on Behrens Parkway. The new tower will hold 500,000 gallons of water, just like the old one. It will also allow the Utility to take the old tower out of service for badly needed maintenance on its surface coatings.

The Water Utility anticipates construction of the south tower during 2018. The estimated construction cost is \$2,400,000, which will be funded using water revenue bonds. The Utility pays all debt service using water revenues and does not receive any other funding. Once in service, the new tower will help ensure reliable water service to the area for decades to come.

Having the necessary infrastructure in place as it relates to industrial buildings is crucial to provide necessary fire flows in emergency systems. The city is in the final stages of expanding the business center to provide additional lots for industrial, small-scale industrial, and office

uses. The current business center near Weeden Creek Road and CTH OK has approximately 17 acres left for development. The expanded business center will provide lots ranging in size from two acres to forty acres based on the development requirement. The center is being designed to allow the larger lots to be subdivided to meet the needs of new and expanding businesses. The city plans to start construction of water and sewer mains, storm sewer improvements, streets and grading in early 2018 with an estimated project completion in late 2018. If you know of a business that has expansion opportunities, please contact the Development Department at [development@sheboyganwi.gov](mailto:development@sheboyganwi.gov)

Note: tank logo not yet determined.

