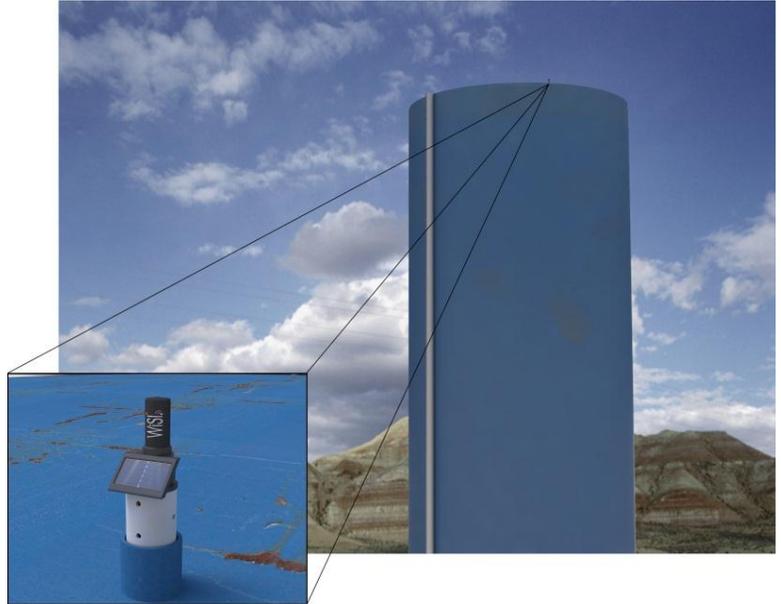


## Application

## Water and Wastewater – Tank Level Monitoring and Pump Control

Water tanks and towers are used to store water supply and provide reliable pressure to the local community, primarily during peak usage times or during an outage. By using a water tower, a municipality can size its pumps for average rather than peak demand, saving money.

Maintaining the water supply in the tank is important and a process that requires constant monitoring. A sensor is placed in the tank to measure the water level. If the level is too low, water must be pumped into the tank. Once the level reaches the optimum amount, the pump supplying water to the tank must be shut off.



## Solution

Using a WiSI-SP, the tank level sensor can be powered and monitored. The level reading is then wirelessly transmitted to the pump house where a coordinating WiSI-EP receives the information. A controlling logic device, such as a RTU or PLC, interprets the water level data and makes a determination to keep pumping or to turn the pumps off.

Due to the difficulty and inaccessibility to reach the top of the water tank, a weather-tight WiSI-SP node is an optimum solution. With an integrated solar panel and energy storage, radio, I/O, and sensor power only a single device is needed to monitor the tank level and transmit the information where it is used. There is no need for a separate monitoring device and radio. There are no batteries to change or maintenance on additional external equipment such as that used to provide power to the sensor and monitoring equipment. In some cases where a 2-inch perforated pipe is present to house the level sensor, no additional mounting hardware is needed. The WiSI slips right inside the existing pipe.

### WiSI SIGNALS USED:

- Analog Input, 4-20 mA
- 18V Instrument Supply

