



# Net Zero

Energy

Water

Waste



## Tobyhanna Army Depot Water Leak Detection and Water Conservation

Located in the Pocono Mountains of Northeastern Pennsylvania and surrounded by 161 acres of wetlands, Tobyhanna Army Depot (TYAD) draws their entire water supply from six deep groundwater wells. Some of the water mains at the facility are over 60 years old. A recently completed acoustic leak detection survey discovered six previously unidentified system leaks. The Army Working Capital Fund (AWCF) provided the \$60k for the leak detection survey, which was conducted through the U.S. Army Corps of Engineers (USACE) – Baltimore District. The six system leaks were responsible for a loss of approximately 90,000 gallons of water per day, which is 26% of the average daily water use at TYAD.

Using a combination of repairs, best management practices, and installation of meters, TYAD has reduced its water loss to approximately 11,000 gallons of water per day (less than 7% of the average daily water used).



Monthly reviews are conducted on 54 leak detection sensors placed on TYAD water main valves

One of the best management practices implemented at TYAD was the installation of a drinking water leak detection system. As a result, 54 leak detection sensors were strategically placed throughout the installation by magnetically attaching them to water main valve stems. The sensors check sound levels each day, and the results of the tests are reviewed each month for evidence of leaks by in-house personnel. The project cost of \$83k was also funded by AWCF and implemented through the USACE – Baltimore District. Since implementation, three minor leaks have been detected and repaired.

Another technique used at TYAD to control and reduce water loss is monitoring water pressure. As part of their new Water Quality Panel Project, three water pressure sensors were installed that can provide real-time notification of major system breaks or leaks. Additional monitors at a cost of \$1.5k each will be installed as funding allows.

### Contribution to Net Zero



DOD Goal	Net Zero Area	FY10 Status	FY11 Status
<b>Potable Water Use</b> Target: 26% by FY2020 Baseline: FY2007	<b>Potable Water Use</b> Target: 26% by FY2015 50% by FY2020 Baseline: NA	14%	34%

TYAD has already surpassed the DoD's goal of 26% potable water use reduction by FY2015 and is well on its way to meeting the 50% reduction goal by FY2020.