

# Tennessee Plant Optimization Program

Lakes, rivers and streams are a treasured resource for the people of Tennessee. They serve us in many ways and provide our water supply, flood control, recreation, fishing opportunities, transportation and commerce corridors. Before communities and industries discharge used water back into the rivers, they treat it to remove metals, organics, and other wastes. This treatment uses mechanical and biological processes at a treatment plant. To prevent algae growth and toxic blooms in the lakes and rivers, nitrogen and phosphorus can be also removed at the treatment plant.

Some plants have added new treatment processes, but these upgrades may not be affordable or necessary for all facilities. Several plants in Tennessee are reducing nitrogen and phosphorus, while optimizing treatment process in the plant without incurring large capital expenses. At many treatment plants, operators also optimize energy usage and improve energy efficiency and savings.

Tennessee Department of Environment and Conservation, Division of Water Resources has been championing plant optimization as an effective approach with environmental and economic benefits since 2011. Case studies from Tennessee cities and utilities are posted on the [TNPOP website](#).



The Tennessee Plan Optimization Program partners:

- Tennessee Association of Utility Districts, (TAUD)
- Municipal Technical Advisory Services (MTAS),
- Tennessee Industrial Assessment Center (TIAC)

support the participating facilities and their operators through site visits, training, development of optimization strategy, and technical assistance during the optimization process, all free of charge.

Training is provided during periodic site visits and as videos on the TNPOP website along with other resources such as audit checklists, case studies, and peer operator mentoring. The program also lends out diagnostic equipment for process testing.

The requirements for TNPOP participants are:

- Sign up for eMORs; provide 12 months of Nitrogen and Phosphorus baseline data prior to optimization and continue to use of eMOR reporting during and after optimization.
- Provide at least 12 months of baseline energy bills and provide energy bills during and 12 months after optimization.
- Complete preparatory training including diagnostic instrument use specified by the program partner.

The Division of Water Resources provides flexible and informed regulatory oversight and enforcement discretion during the optimization period. Interested facilities should contact Karina Bynum via [karina.bynum@tn.gov](mailto:karina.bynum@tn.gov) to apply.

**TN**

Department of  
**Environment &  
Conservation**

**Division of  
Water Resources**

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