Date: February 13, 2019

To: Tennessee Community Leaders

From: Jenny Dodd, Director, Division of Water Resources,
Tennessee Department of Environment and Conservation (TDEC)

Re: The Tennessee Plant Optimization Program

Greetings! I hope that your 2019 is off to a good start! TDEC is excited to share with you a new tool designed to help communities across Tennessee realize environmental and cost savings associated with water and wastewater treatment. The department's Tennessee Plant Optimization Program (TN POP) provides resources to support water and wastewater operators in achieving optimization in energy use and removal of nutrients for their facilities and their communities through low-and-no-cost measures. Existing participants – your peer communities – in TN POP and its predecessors, the Nutrient Optimization pilot and Water and Wastewater Energy Efficiency Partnership, are experiencing substantial cost savings and nutrient reduction in effluent. They've had additional successes: affordably avoiding rate increases, negating the need for costly capital improvements, and leveraging ongoing cost-savings for infrastructure and capital improvements.

There are significant environmental benefits, too. We have over 3000 miles of streams and over 15,000 acres of lake in Tennessee with impaired water quality due to nutrients, and this program is a component of Tennessee's ongoing efforts to accomplish long-term nutrient reduction in all of our water resources.

Nutrient loading is the result of many sources – from agriculture, to urban stormwater, to wastewater treatment plants. In 2011, TDEC, working with U.S. Department of Energy and TVA, developed and implemented the Energy Efficiency Partnership with water and wastewater facilities. In 2016, TDEC, working with Tennessee Association of Utility Districts (TAUD) and UT-Extension Municipal Technical Advisory Services (MTAS), piloted the Nutrient Optimization Program. The findings?

*Participating facilities consistently achieved ~20% ongoing reduction in energy usage and ~40% reduction in nutrients through low-to-no-cost measures.* Efficient use of existing resources allowed facilities to avoid rate increases and capital improvements; some facilities leveraged cost-savings to support needed infrastructure and capital investment improvements through SRF and other funding sources.
Through the TN POP, TDEC is working with partners – TAUD, MTAS, and the Tennessee Industrial Assessment Center (TIAC) - to support your water and wastewater treatment operators and staff in achieving cost-savings and improved facility performance, including cleaner effluent, through low-and-no-cost measures. On this website, you can access training videos, implementation and audit resources, case studies, technical assistance partners, and potential funding sources.

If your facility applies and qualifies as a member of the TN POP, which is a free program, it will benefit from:

- Technical assistance in pursuing facility optimization;
- Significant cost-savings opportunities, which can be leveraged to support additional personnel, capital improvements and infrastructure needs through SRF loans, avoidance of rate increases, avoidance of capital improvements and outlay;
- Reduce nutrients in effluent, which supports avoiding the need for implementation of nutrient limits in permits; and
- Flexible and informed regulatory oversight from TDEC's Division of Water Resources.

Join with your peers and TDEC to pursue optimization of energy usage and nutrient output in your water and wastewater treatment facilities. Interested facilities should contact Karina Bynum, karina.bynum@tn.gov, for more information on how to apply and join TN POP.