SCHUYKILL ACTION NETWORK

2020 Water Utility Forum

1/28/2020
Albright College
1442 Bern Street
Reading, Pennsylvania

PLEASE PUT CELL PHONES ON SILENT OR VIBRATE DURING THIS PROGRAM.
Helping Operators Achieve Excellence

DEP’s Wastewater Technical Assistance Program

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What is Technical Assistance (TA)?

• TA is a hands-on workplace training approach used for improving operational and maintenance conditions that affect water quality.

• TA is more about Workers than Workplace
  — Training component
  — Compliance component
  — Aspirational component

• PA’s holistic approach has two parts to address permit non-compliance and to enhance biological nutrient reduction (BNR)
Wastewater Technical Assistance Program

Two Tracks for PA DEP WWTAP:

1. Operator Outreach Wage-Payroll Program
   — Water Program Specialist supervising
   — Part-time Licensed Operators throughout State
   — Focus on Attaining / Maintaining Compliance

2. Enhanced Technical Assistance for Optimization
   — Water Program Specialist using electronic monitoring equipment deployed up to 2 months
   — Federally Funded BNR Program
   — Focus on Achieving Higher Quality Effluent
   — Wage-payroll TA may lead to instrument-based facility optimization TA.
Licensed operators helping licensed operators

- Permit Compliance
- Improved Performance / Effluent Quality
- Laboratory Training & Interpreting Data
- Chemical Use, Dosing, & Safety
- Wastewater Treatment Operations Plan
- Biosolids Management Plan
- Energy Conservation / Pollution Prevention
- Preventative Maintenance
- Collection System Operation
- Asset Management
- Pre-Treatment / Industrial User Management
- Record-keeping and Reporting
Some POTW, in compliance, could do better. Enter Process Optimization!

- In-situ digital recording probes
- Mini-SCADA w/4-20mA control
- Realtime & Historical Trend Graphs
- pH/Temp; DO; ORP; TSS; NH4-N; NO3-N
- UVAS/TOC/BOD
- Complete Environmental Laboratory

Microscope | Centrifuge | Settleometers | Colorimetry
Compliance Assistance & Optimization

Proper Process Monitoring & Control results:
- Increased effluent quality
- Energy optimization / reduction / savings
- Reduced chemical usage
- Time and manpower savings
- More budget for better things!

Growing the pie
Technical Assistance Referrals

Sources:

• Review of Violations on eDMR and ICIS
• Operator Professional Meetings
• EPA Operator Outreach Program
• Cold Calls to Treatment Systems
• DEP Inspector Referrals
• Operator Self-Referrals
Operator Outreach Program

The PA Department of Environmental Protection (DEP) Wastewater Outreach Technical Assistance Program uses peer-based professional operators to provide technical assistance to wastewater systems. The program employs the services of the same operators current and past operators, many of whom have extensive knowledge and experience in specific treatment areas.

1. When a request for assistance is received, DEP program staff visit the site and determine the type of assistance needed.
2. Assistance is provided during pre-arranged visits.
3. Assistance services are usually provided during pre-arranged visits.

There is no cost for assistance. However, in order to improve the system’s operations, some expenditures may result from implementation of program recommendations.

Initiating Outreach Assistance:

- Preventing pollution.
- Protecting and conserving infrastructure and water resources.
Our TA Web Pages-

Enhanced Technical Assistance

The PA Department of Environmental Protection (DEP) is offering an Enhanced Technical Assistance Evaluation (ETAE) with the goal of assisting operators and permittees in reducing nutrients in their plant discharges while maintaining and/or surpassing the requirements of effluent limits established in NPDES permits.

DEP representatives utilize in-line process monitoring equipment and various bench top laboratory equipment to assist operators in gathering process control and performance information.

1. The equipment is capable of monitoring the waste treatment process for ammonia, nitrates, DO, pH, MLSS, ORP, BOD (equivalent), and clarifier solids.

Wastewater Reports
Complaints and Emergencies
Enhanced Technical Assistance
Helping Facilities Succeed
Operator Outreach Program
Small Flow Treatment Facilities
Wastewater Monitoring
Our TA Web Pages-

DEP > Businesses > Water > Bureau of Clean Water > Wastewater Operations and Assistance > Wastewater Operator Resources

Wastewater Operator Resources

Wastewater operators are encouraged to visit the Operator Certification Information Center for information concerning operator licensing, exams, and related information. Additional resources are available below.

- DEP Publications
- Spreadsheets
- Energy Efficiency
- Asset Management
- Training Materials
- Wastewater Instructional Videos

DEP Publications

- Best Practices for Water and Wastewater Operators (PDF)
  (3900-FS-DEP431B)
- Discharge Monitoring Reports – Overview and Summary (PDF)
  (3800-BK-DEP3047)
- Fact Sheet – Management of “Non-Detect” Results for Discharge Monitoring Reports (PDF)
  (3800-FS-DEP4262)
Our TA Web Pages-

Complaints and Emergencies

Complaints

Each of the six DEP Regional Offices has program staff capable of responding to water quality complaints.

To report a complaint to one of the regional offices covering the area where you live, complete the electronic Environmental Complaint Form, which will be automatically forwarded to the regional office covering the area where you live. You may also call the regional office.

Complaints of pollution after normal business hours (8:00am – 5:00pm), weekends, and holidays should be reported through the DEP’s Emergency Response Program in the region where the pollution is occurring (see below).

Emergencies

Wastewater Reports
Complaints and Emergencies
Enhanced Technical Assistance
Helping Facilities Succeed
Operator Outreach Program
Small Flow Treatment Facilities
Observations From The Field:

No. 1 Operator Error:
• Not enough sludge wasting!

Others:
• Inattention to Detail
• Reactive Maintenance
• Always Fight the Last Battle
• Jack-of-all-Trades / Master of None
Observed about Sewage Treatment Operations:

• Not enough Process Monitoring
  — Failure to relate lab results back to operations
• Not enough manpower dedicated to operations
• Lack of Funding
  — Maintenance and Contingency Funds
• Lack of Planning
  — No asset management program
• Too many “Convenient Fictions”
• Politics of Local Oversight
  — Bosses need training, too.
Field Installations
Field Installations
Field Installations
Technical Assistance Case Studies

How WWTAP has helped WWTP Operators
TA Examples: Bryn Athyn Borough
TA Examples: Norristown Borough
TA Examples: Portland Borough
WTE Reports are (mostly) available on-line at “Helping Facilities Succeed” page on dep.gov: https://www.dep.pa.gov/Business/Water/CleanWater/WastewaterOps/Pages/Helping-Facilities-Succeed.aspx
How To Contact WWTAP

Requests for assistance can be made through your regional DEP office or by contacting the program directly at the following address and phone numbers:

Bureau of Clean Water
Division of Operations
RCSOB, PO Box 8774
Harrisburg, PA 17105
Tel. 717-787-6744
THANK YOU!

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