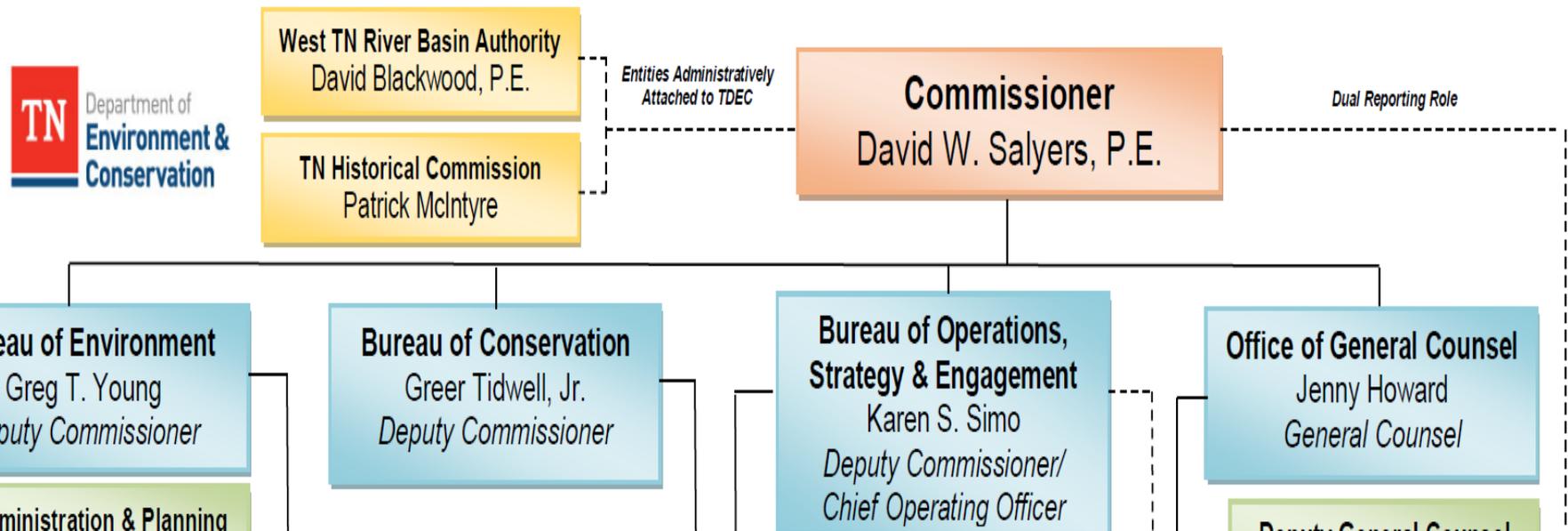




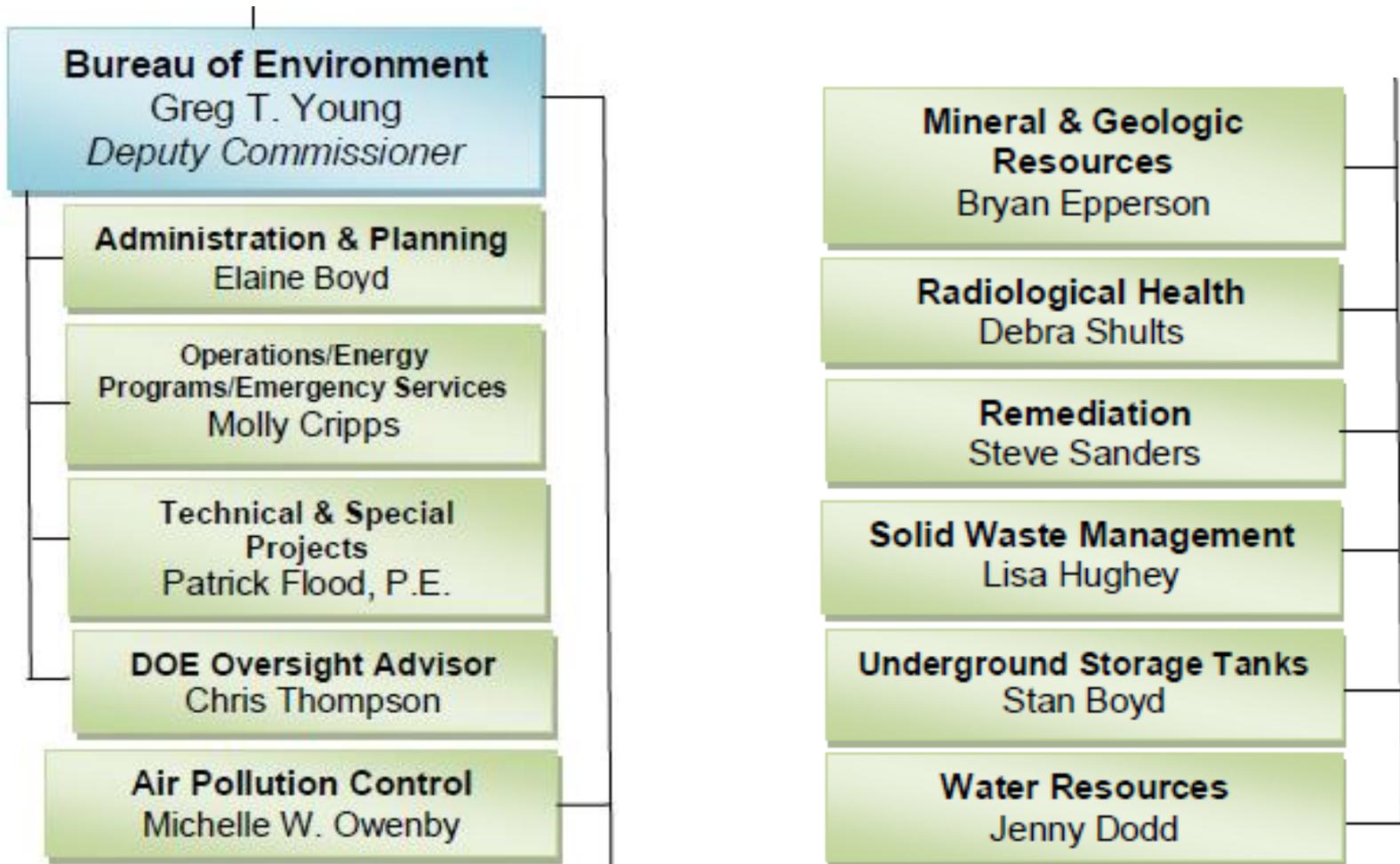
Department of  
**Environment &  
Conservation**

# Clean Water Regulatory Update

# Organization Chart and Points of Contact

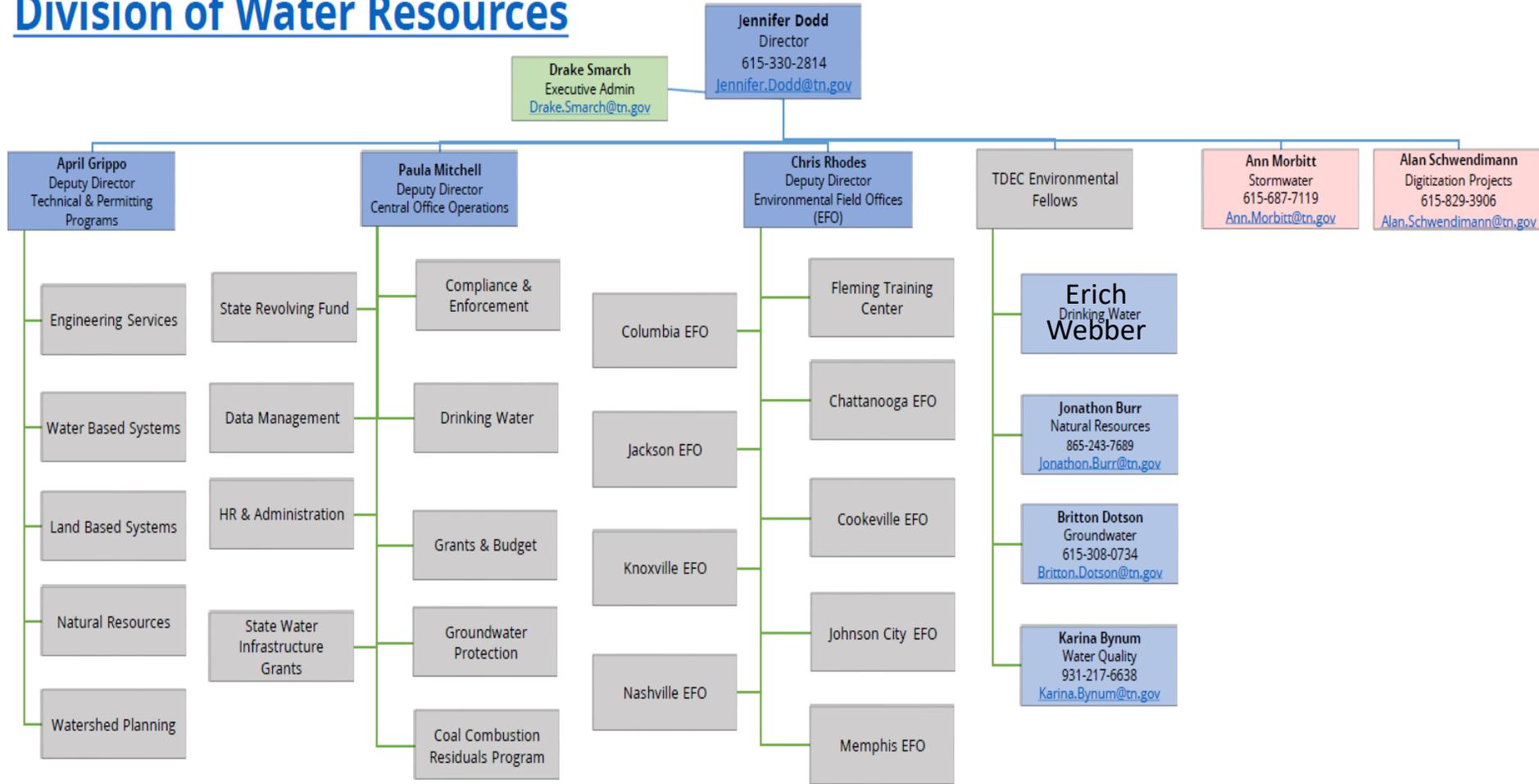


# Organization Chart and Points of Contact



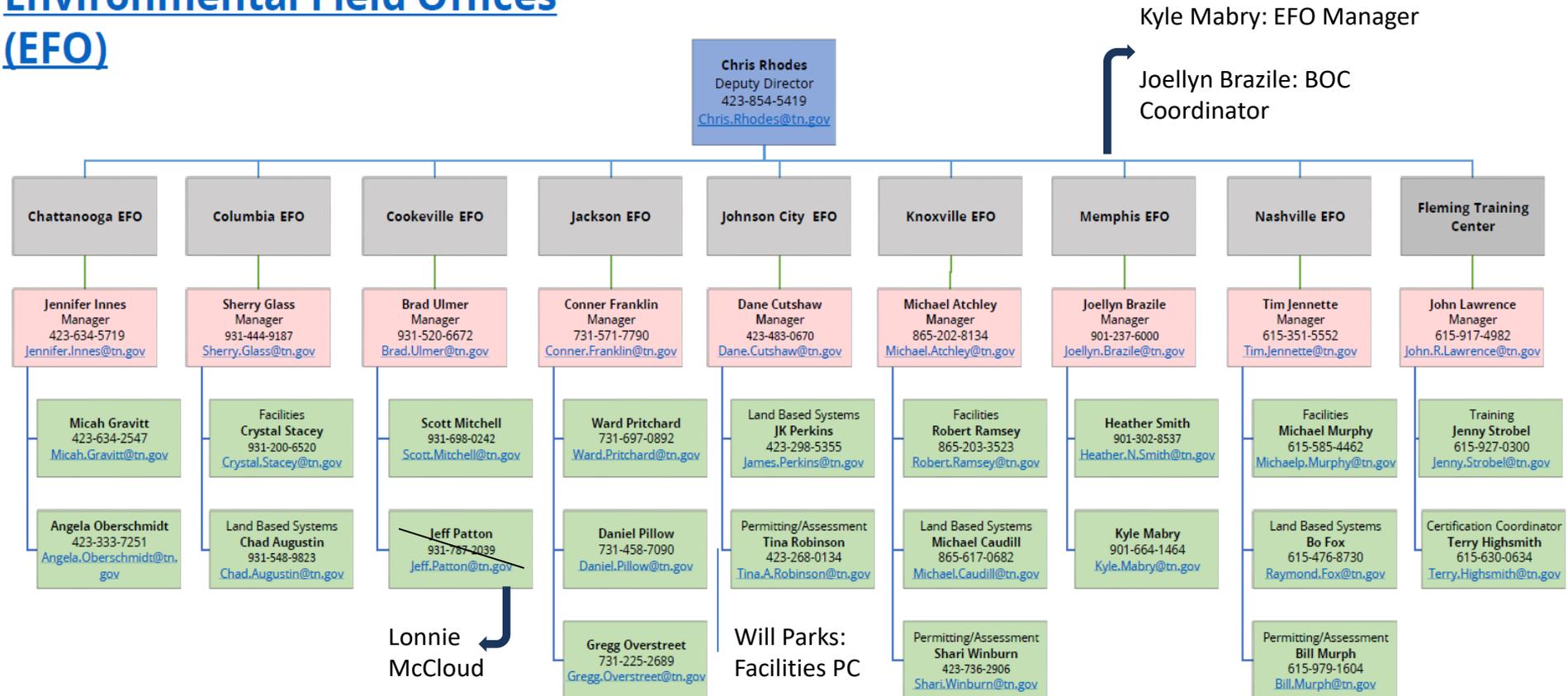
# Organization Chart and Points of Contact

## Division of Water Resources



# Organization Chart and Points of Contact

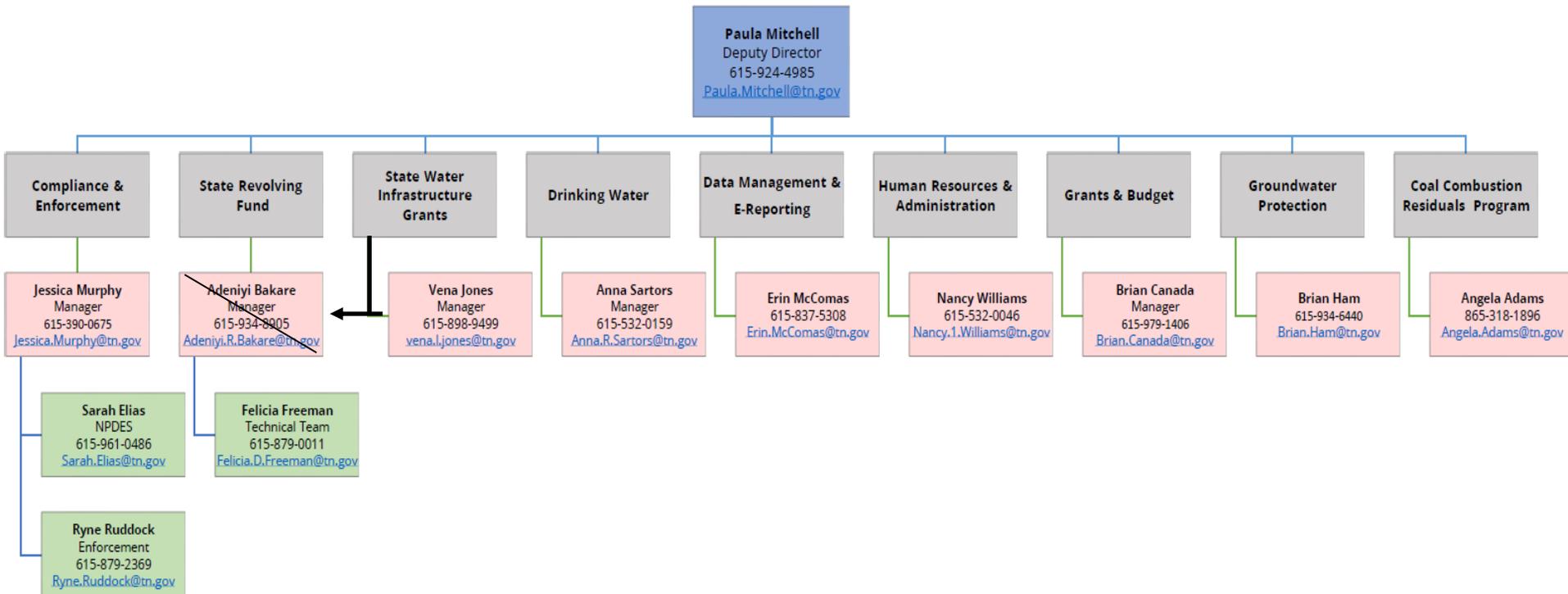
## Division of Water Resources Environmental Field Offices (EFO)



# Organization Chart and Points of Contact

## Division of Water Resources

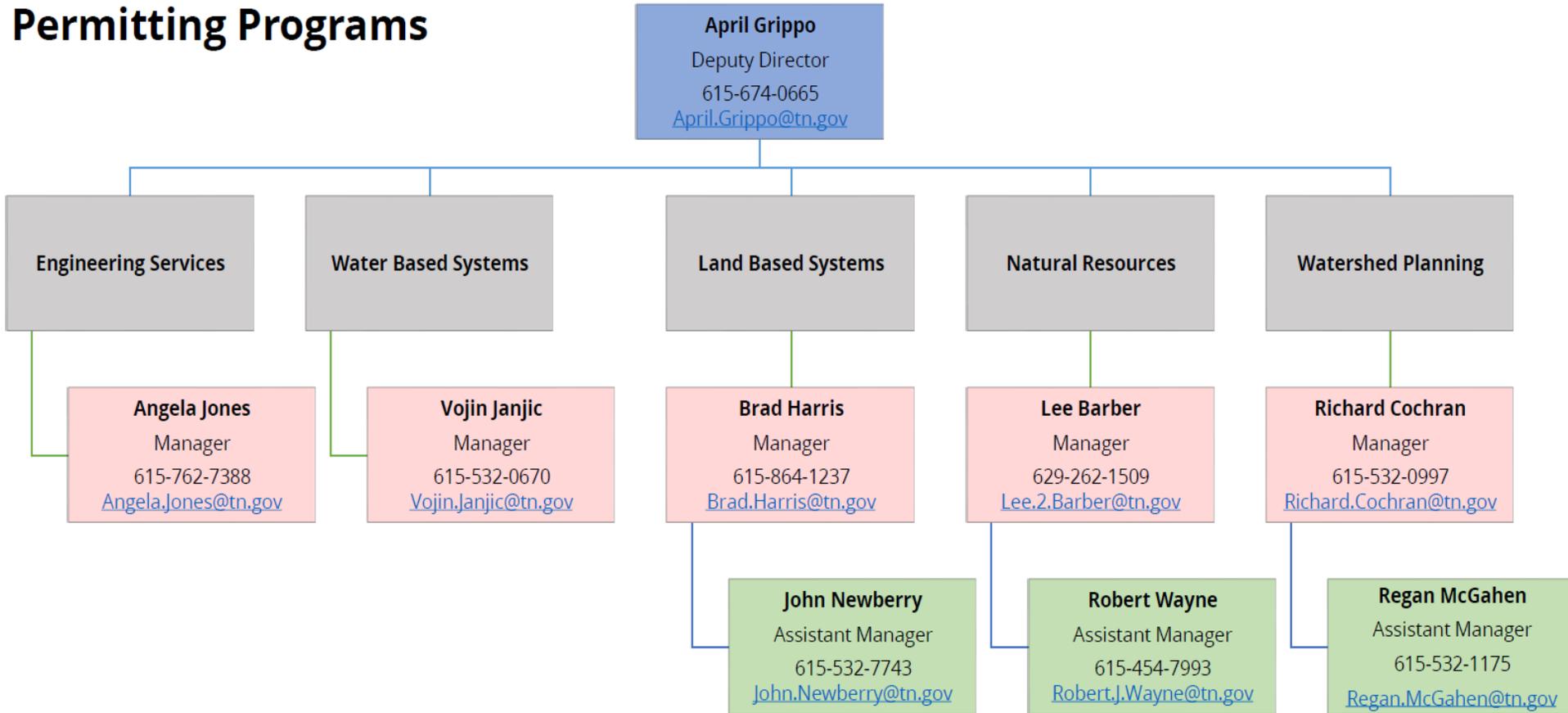
### Central Office Operations



# Organization Chart and Points of Contact

## Division of Water Resources

### Central Office Technical & Permitting Programs



# External Affairs

<u>Field Office (FO) Location</u>	<u>Regional Director</u>		
Chattanooga FO 1301 Riverfront Pkwy, Suite 206 Chattanooga, TN 37402	Meghan Ploch 423-619-6743	Johnson City FO 2305 Silverdale Rd. Johnson City, TN 37601	Jan Compton 423-240-0675
Columbia FO 1421 Hampshire Pk. Columbia, TN 38401	Chuck Yoest 931-922-8121	Knoxville FO 3711 Middlebrook Pk. Knoxville, TN 37921	John LeCroy 865-314-1539
Cookeville FO 1221 South Willow Ave. Cookeville, TN 38506	Tara Wohlgemuth 931-287-7995	Memphis FO 8383 Wolf Lake Dr. Bartlett, TN 38133	Kathryn Schulte 901-506-7561
Jackson FO 1625 Hollywood Dr. Jackson, TN 38305	Rudy Collins 731-616-4456	Nashville FO 711 R.S. Gass Blvd. Nashville, TN 37216	Vacant 615-687-7078

# Catch-all Email Addresses (some)

- Compliance and Enforcement
  - [dwrwater.compliance@tn.gov](mailto:dwrwater.compliance@tn.gov)
- Engineering/Plans Review
  - [dwr.engineering@tn.gov](mailto:dwr.engineering@tn.gov)
- Permits
  - [water.permits@tn.gov](mailto:water.permits@tn.gov)
- ARP
  - [tdec.arp@tn.gov](mailto:tdec.arp@tn.gov)



**Public Resources**

# TDEC Public Dataviewer

- <https://www.tn.gov/environment/about-tdec/tdec-dataviewers.html>

## DATA

- [Department Enforcement Database](#)
- [Air Pollution Control Permits & Inspections Data Viewer](#)
- [Certified Asbestos Professionals in Tennessee](#)
- [Division of Remediation Sites Viewer](#)
- [Exceptional Tennessee Waters](#)
- [Fleming Training Center Data Viewers](#)
- [Groundwater Protection \(Septic\) Permits Data Viewer](#)
- [Oil & Gas Well Data Viewer](#)
- [Rare Species Data Viewer](#)
- [Solid Waste Management Data Viewer](#)
- [Division of Water Resources Data Viewer](#)
- [Water Resources Well Data Viewer](#)
- [Water Resources Drinking Water Watch](#)

## MAPS

- [Oil & Gas Well Map Viewer](#)
- [Division of Remediation Map Viewer](#)
- [Underground Storage Tanks Map Viewer](#)
- [Water Resources Map Viewer \(Water Quality Assessment & Permits\)](#)
- [Division of Water Resources Construction Stormwater Permitting Map Viewer](#)
- [Division of Water Resources Hydrologic Determinations Map Viewer](#)
- [Water Well Map Viewer](#)
- [Mobile Version](#)

# TDEC Public Dataviewer

The screenshot shows the top navigation bar of the TDEC Public Dataviewer website. The header is blue with the TDEC logo on the left and a user profile icon labeled 'guest' on the right. Below the header is a dark blue navigation menu with the following items: Home, Permits (with a dropdown arrow), Documents, Complaints, Inspections, Engineering Plans (with a dropdown arrow), Hydrologic Determinations, Exceptional Waters, Ambient Monitoring (with a dropdown arrow), QLP Data, Oil & Gas Wells, Water Wells (with a dropdown arrow), and Certified Operators. Below the navigation menu are three content boxes: 'DWR DataViewer', 'Key to Remember', and 'Navigation Help'. The 'DWR DataViewer' box contains a paragraph about the department's use of active databases for transparency. The 'Key to Remember' box explains that DataViewers reflect overnight updates to consolidated state databases. The 'Navigation Help' box provides instructions on how to use the help function, including clicking on a question mark icon in the navigation bar or on individual items, and provides contact information for the TDEC Help Desk.

**Home** Permits ▾ Documents Complaints Inspections Engineering Plans ▾ Hydrologic Determinations Exceptional Waters Ambient Monitoring ▾ QLP Data Oil & Gas Wells Water Wells ▾ Certified Operators

**DWR DataViewer**

The department manages a variety of critical work through active databases. To promote greater transparency, accountability, and wider access to public information, the department makes interfaces, called DataViewers, available to the public on our website. DataViewers pull information from the same consolidated databases TDEC staff use to keep track of environmental regulatory activities, rosters and status.

**Key to Remember**

DataViewers reflect (at a minimum) overnight updates to our agency's consolidated state databases. Information in this dynamic database is constantly changing as records are updated daily. Any change made to the database should be available to the DataViewer the next day, if not immediately (documents).

**Navigation Help**

DataViewers feature a detailed Help function to assist site users. Click on the  icon located in the top right corner of the navigation bar or on the same icon associated with items displayed on individual pages.

You may also email the TDEC Help Desk at [BG-Help\\_Desk@tn.gov](mailto:BG-Help_Desk@tn.gov) or call (615) 532-0287.

# TDEC Public Dataviewer



## DataViewer - Division of Water Resources (DWR)

[Home](#)

[Permits](#) ▾

[Documents](#)

[Complaints](#)

[Inspections](#)

[Engineering Plans](#) ▾

# TDEC Public Dataviewer



## DataViewer - Division of Water Resources (DWR)

[Home](#)

[Permits](#) ▼

[Documents](#)

[Complaints](#)

[Inspections](#)

[Engineering Plans](#) ▼

# TDEC Public Dataviewer

The screenshot shows the TDEC Public Dataviewer interface. At the top, there is a blue header with the TN Department of Environment & Conservation logo and the text "DataViewer - Division of Water Resources (DWR)". Below the header is a navigation menu with options: Home, Permits (selected), Documents, Complaints, Inspections, and Eng. Below the navigation menu is a breadcrumb trail: Home \ DWR Permits \. The main content area features a search bar with a magnifying glass icon, a text input field, and a "Go" button. To the right of the search bar are icons for a grid view and a list view, and a "Rows" dropdown menu set to 50. Below the search bar is a filter section with a dropdown arrow, a checked checkbox, a green funnel icon, and the text "Status not in 'Inactive, Withdrawn'". At the bottom left, there is a pagination indicator showing "1 - 50 of 26,483" with a right arrow.

- Permit Number
- Site Name
- Permittee Name
- Project Name
- Permit Type
- Location
- EFO...

# TDEC Public Dataviewer



## DataViewer - Division of Water Resources (DWR)

[Home](#)

[Permits](#) ▾

[Documents](#)

[Complaints](#)

[Inspections](#)

[Engineering Plans](#) ▾

# TDEC Public Dataviewer



## DataViewer - Division of Water Resources (DWR)

[Home](#)

[Permits](#) ▾

[Documents](#)

[Complaints](#)

[Inspections](#)

[Engineering Plans](#) ▾

# TDEC Public Dataviewer

Sewage Works Construction Plans and Documents

Track Sewer Plans

Plans Review and Approval of Sewage Works Construction Plans and Documents

Plans Review and Approval for Public Water Systems

Track Water Plans

Plans Review and Approval for Public Water Systems

▶ Engineering Plans - Project and Submittal Types Legend for Sewage Works



Go

Rows

50



Actions

1 - 50 of 34,175 >

Plan Type	Project No	Project	Project Type	Submittal Type	System
-----------	------------	---------	--------------	----------------	--------



**MyTDEC Forms**

# MyTDEC Forms

- Created to meet compliance with EPA's NPDES E-Reporting Rules
- Expanded to include common forms used by several other Divisions and Units
- NOT THE SAME AS NetDMR
- [forms.tdec.tn.gov](http://forms.tdec.tn.gov)

# MyTDEC Forms



[Home](#) [Finder](#) [Reports](#) [Dashboard](#) [My Submissions](#) [Help](#)

## Organizations

Select the organization from which you would like to submit a form.

Select Organization ▾

- TDEC
  - Division of Solid Waste Management
  - Division of Water Resources
  - Tennessee State Parks
- Engineering Services
- Land Based Unit
- Stormwater Program
- Water Supply Program

## Frequently Asked Questions

- ? [DWR and MyTDEC Forms Background](#)
- ? [Who must use this portal?](#)
- ? [Can I just fill out paper forms instead of submitting online?](#)

- NPDES General Permits
- WW and DW Plans
- Overflow/Release Report
- Pretreatment SAR
- And many more and more to come

# MyTDEC Forms that are in the works

- **State Operating Permit Application**
- **Drinking Water and Wastewater certified operator in charge notification (the August Letter)**
- MS4 Annual Report
- **Modifications to Overflow Report**
- **Water Use Reporting for Public Water Systems**
- **24-hr Notification of Non-Compliance**
- **Small Monthly project approval Engineering Form**
- **Drinking Water Laboratory PT Certifications**
- Minor Acreage Addition to Existing NPDES Construction General Permit

# MyTDEC Forms – Future Plans

- **eMOR**
- **Infrastructure Scorecard**
- **Water Pumpage Data Report**
- CGP NOT Contractor
- CGP NOI Contractor

# MyTDEC Forms Documents Available to Public

- <https://tdec.tn.gov/document-viewer/>

SITE ID

PERMIT TYPE

PERMIT NUMBER

DOCUMENT DATE (YYYYMMDD)

[Search Documents](#)

[Clear Search](#)

Site ID	Permit Type	Permit Number	Document Date	Actions
5671	Individual	TN0062626	20221223	<a href="#">Download</a>
5174	Individual	TN0025038	20220308	<a href="#">Download</a>
5024	Individual	TN0021229	20221017	<a href="#">Download</a>



# Tennessee Plant Optimization Program

- Acronym: TNPOP
- Merger of energy and nutrient optimization programs
- Free technical resources:
  - Training
  - Materials
  - Equipment Loans
  - Live technical assistance

<https://www.tn.gov/environment/program-areas/wr-water-resources/tn-plant-optimization-programs/tnpop.html>

## Tennessee Plant Optimization Program (TNPOP)

---

Professional Training Materials

---

Case Studies

---

Technical Assistance and Peer Support

---

Funding Resources

---

Additional Resources

# Tennessee Plant Optimization Program (TNPOP)

*Welcome to the Tennessee Plant Optimization Program (TNPOP) website!*

TN POP is a free program operated by the Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources (DWR).

The program provides resources to support water and wastewater operators in achieving optimization in energy use and nutrient removal for their facilities through low-and-no-cost measures.

 [Program Information & Requirements](#)

Shout out to Dewayne Culpepper and Team for their involvement in the program

**Nutrient and Energy Optimization Study**  
Cowan, Tennessee  
Wastewater Treatment Plant  
July 2021



Tennessee Association of Utility Districts  
with funding from the Tennessee Department of Environmental Conservation  
and support from CleanWaterOps, UT- Municipal Technical Advisory Service  
and the City of Cowan

**Nutrient and Energy Optimization Study**  
Harriman Wastewater Treatment Plant  
Harriman, Tennessee

June 2021



Tennessee Association of Utility Districts  
with funding from the Tennessee Department of Environmental Conservation  
and support from the Municipal Technical Advisory Service,  
CleanWaterOps and the City of Harriman

## **Energy Efficiency Partnership Case Studies**

The partnership conducted assessments of 41 water and wastewater facilities in Tennessee over a 5 year period.

### ***For wastewater facilities implementing TDEC's low-to-no-cost recommendations:***

- Average 19% reduction in annual energy costs
- Average 40% reduction in average nutrient discharge

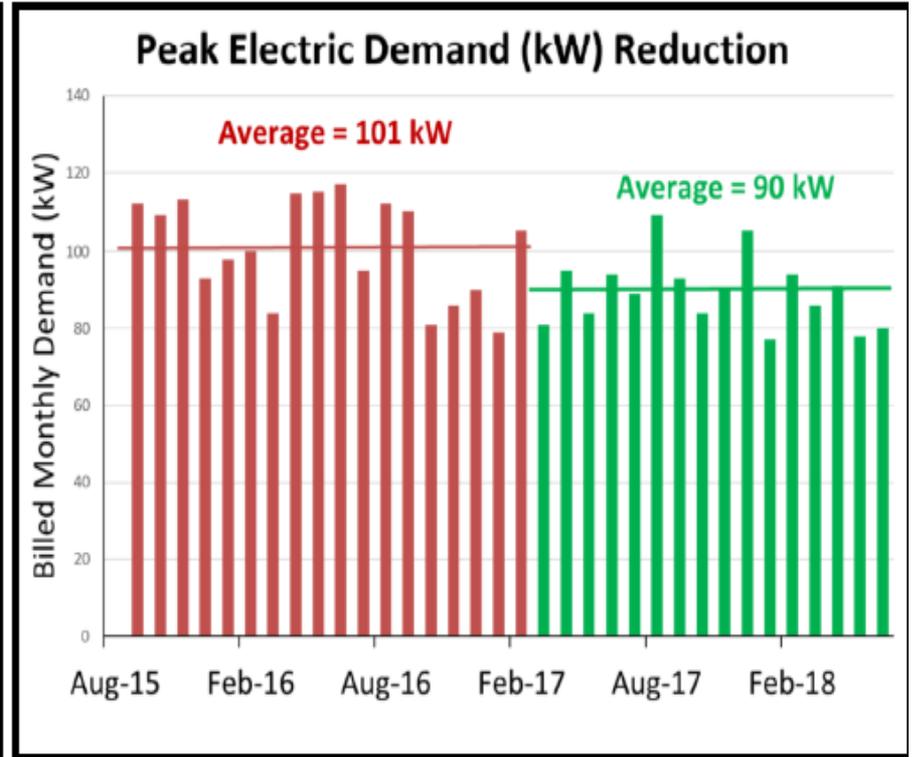
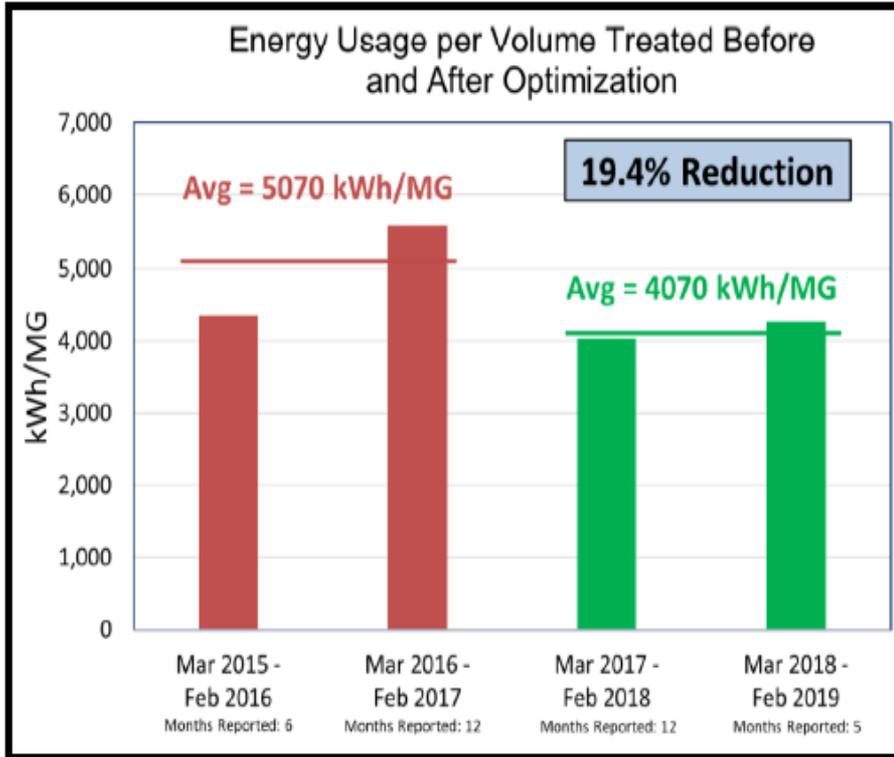
### ***Measured annual savings through 2015:***

- Over 15,000,000 kWh saved Over
- \$1,500,000 annual savings
- Over 13,000 tons annual CO2

### ***Reduction Identified savings since 2016 (verification underway):***

- \$390,468 annual cost savings
- 4,358,200 kWh/year savings
- 95 tons/year nutrient reduction

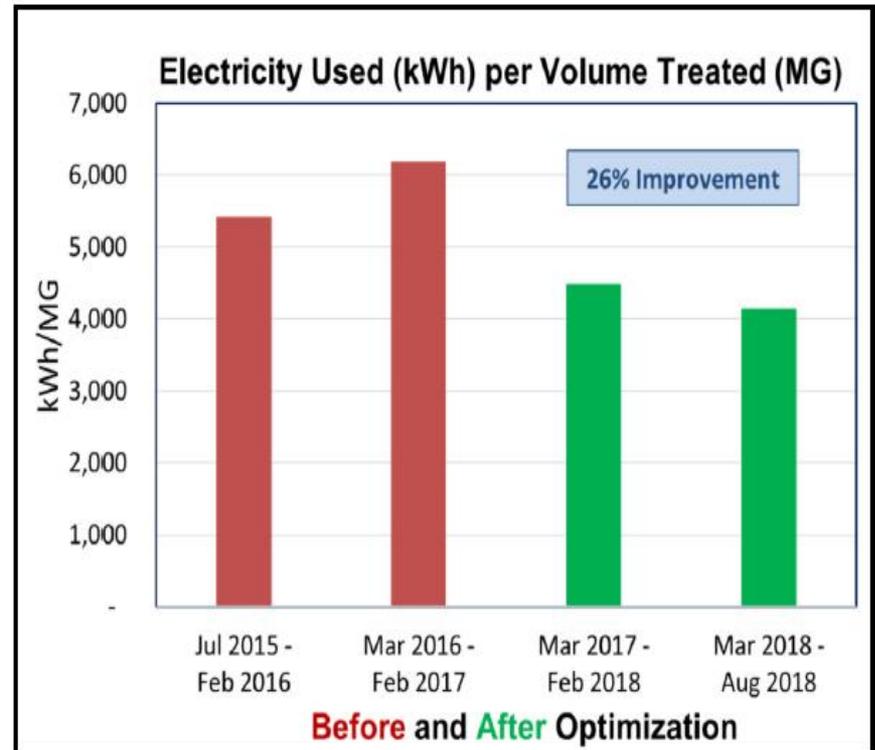
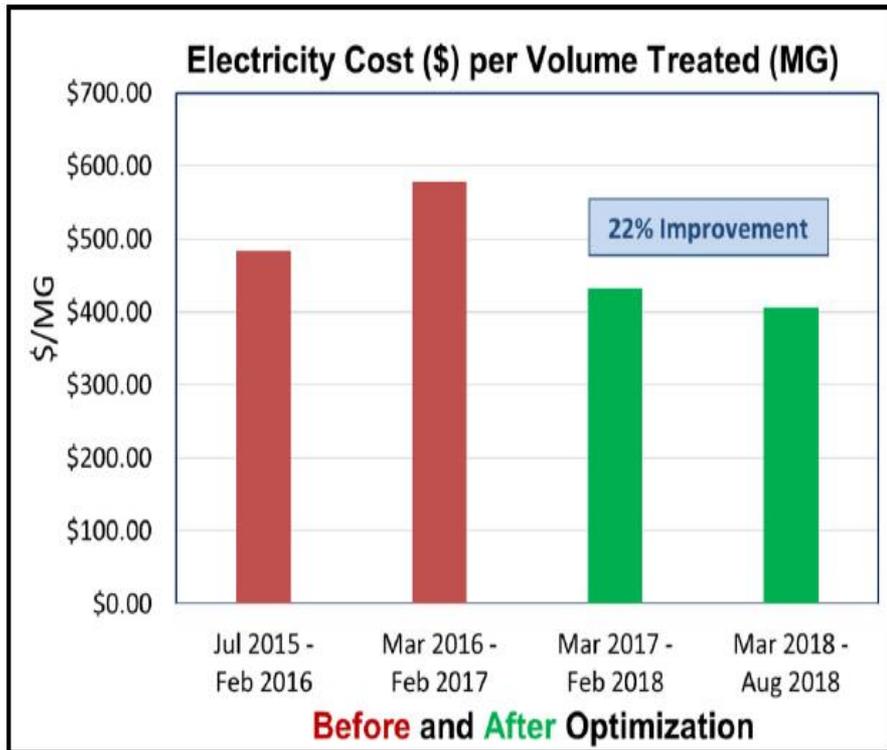
# TNPOP- Carthage



- ◆ Annual Energy Savings: >85,000 kWh/year
- ◆ Energy Reduction: 19% kWh/MG
- ◆ Peak Electrical Demand: 11% reduction

- ◆ Annual Cost Savings: >\$7,000/year
- ◆ Cost Reduction: 19% \$/MG
- ◆ Cost to Implement: \$0

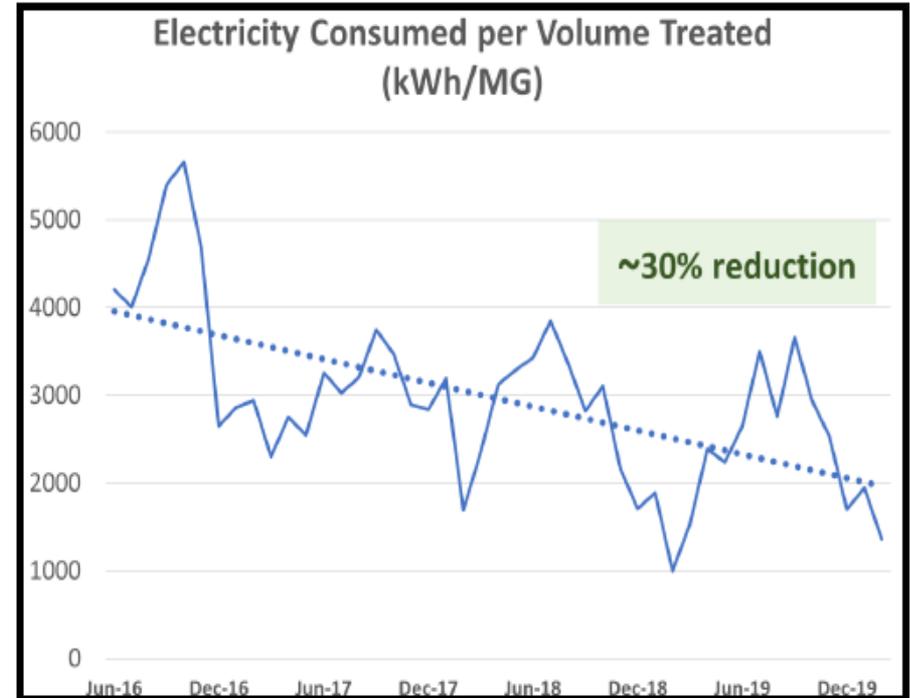
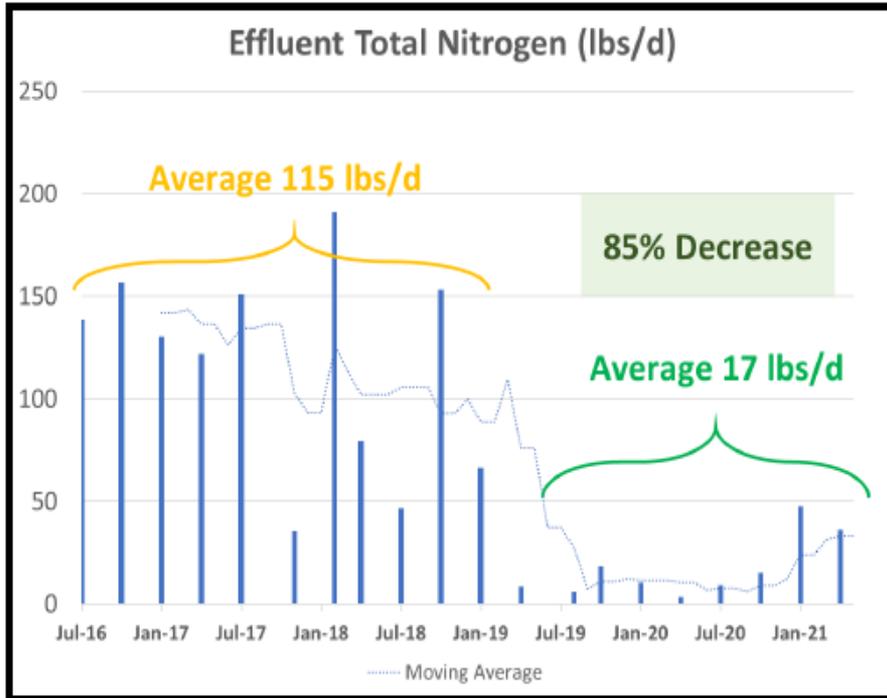
# TNPOP- Lawrenceburg



- ◆ Annual Energy Savings: >360,000 kWh/year
- ◆ Annual Cost Savings: >\$21,000/year
- ◆ Cost to Implement: \$0

- ◆ Energy Usage and Cost Reduction: 13% and 8%
- ◆ Influent Loading: 13% Increase
- ◆ Peak Electrical Demand: 3.5% Reduction

# TNPOP- Church Hill



- ◆ Annual Energy Savings: 310,000 kWh/year
- ◆ Energy Savings: ▼ 30% kWh/MG
- ◆ Effluent Nitrogen: ▼ 85% lbs TN/yr

- ◆ Annual Cost Savings: \$26,000/year
- ◆ Cost Efficiency: ▲ 30% (MG/\$)
- ◆ Implementation Cost: <\$1000

## Tennessee Plant Optimization Program (TNPOP)

---

Professional Training Materials

---

Case Studies

---

Technical Assistance and Peer Support

---

Funding Resources

---

**Additional Resources**

## TNPOP Additional Resources

*Welcome to the resource page for the Tn POP website!*

*This page provides links to supporting resources such as planning resources, checklists of low-to-no-cost measures for achieving plant optimization, best practices, and audit checklists.*

---

> [Planning Resources-Wastewater](#)

---

> [Planning Resources-Water](#)

---

> [BMP & Audit Resources-Energy For Water & Wastewater Facilities](#)

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> [BMP & Audit Resources-Wastewater](#)

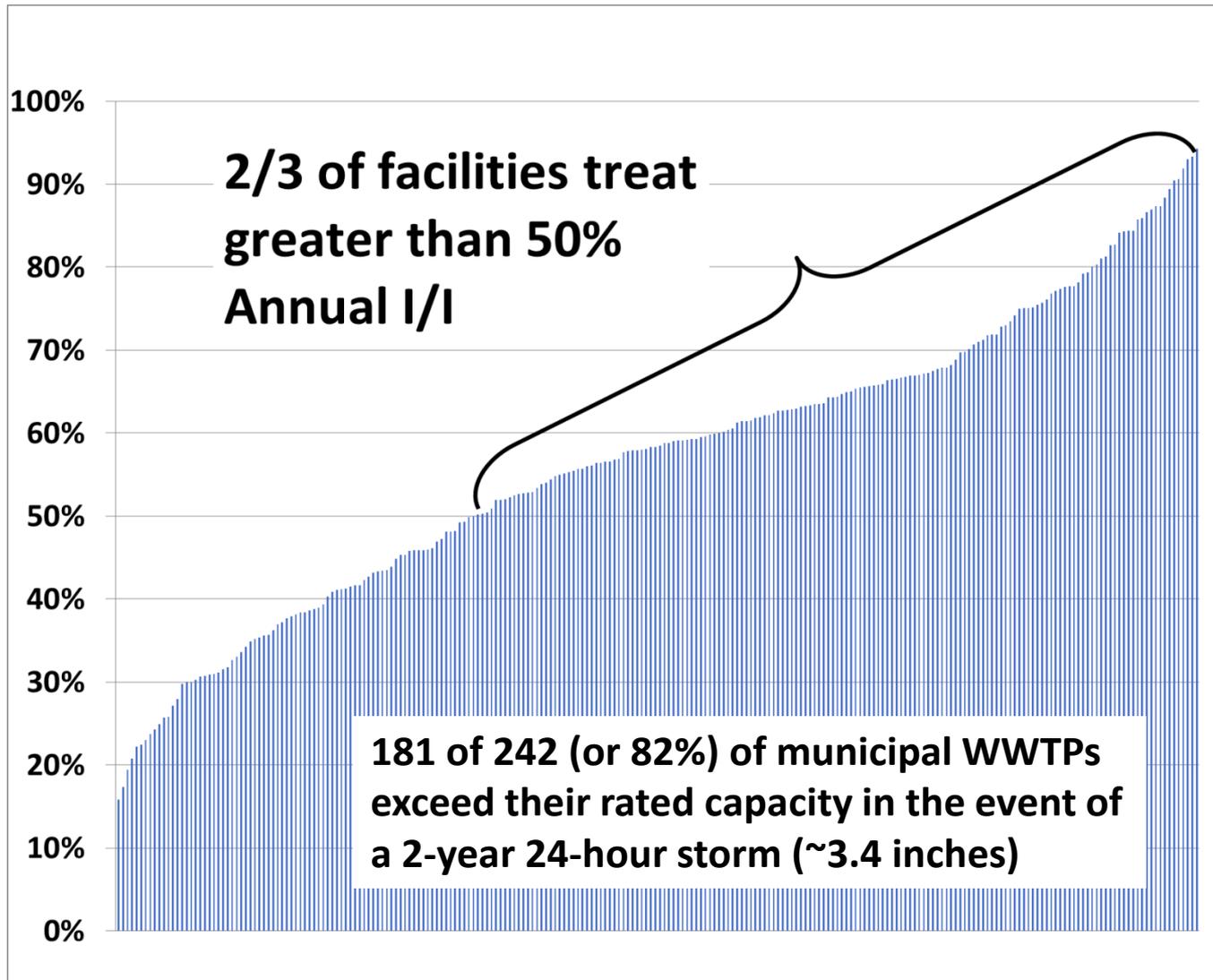
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> [Academic Resources](#)

Interested in the program? Contact Karina Bynum (karina.bynum@tn.gov)



# State-Wide Data (circa~2016)



# Cost of Inflow and Infiltration (~2016)

- Total I/I Treated: 120,000,000,000 gal/year
- Average I/I Treated: 330,000,000 gal/day

**Cost to Treat I/I\*:  
\$200,000,000/year**

\*Based on \$1.80/1,000 gallons



# I&I Implications

- **Higher Sewer Rates**
  - \$\$\$\$ to pump and treat clean I&I water
  - Higher maintenance costs
  - Higher operational costs
- **Loss of WWTP Capacity**
- **Degradation of Receiving Waters**
  - Algae → Harmful Algal Blooms (HABs)
  - Increasing treatment challenges
  - Diminishment of recreational opportunities and quality of life
- **WWTP Upgrade**
  - LARGER AND SOONER than necessary
- **Overflows and Releases**
  - Public Health hazard



# I/I Metrics

- Metrics can be found in the Design Criteria for Review and Approval of Sewage Works Chapter 2 Appendix 2-C
  - Average Daily Dry Weather Flow/person; if greater than 120 gallons per person per day excessive infiltration could be indicated.
  - Average Daily Wet Weather Flow/person; if greater than 275 [gpd] then excessive inflow could be indicated
  - Average Daily Flows/per inch diameter mile per day (idm): if less than 1500 [gpd/idm] is acceptable and greater than 4000 [gpd/idm] should definitely be “considered for TV inspection program.”

Annual I/I Rate (aQ-I/I) [gpd] = ADF[gpd] – ADDWF [gpd]

Annual I/I Volume (aV-I/I) [gal per annum] = (aQ-I/I) [gpd] x 365 [days/year]

Annual O&M Cost I/I (a\$-I/I) [\$ per annum] = (aV-I/I)[gal per annum] x (Treatment & Conveyance O&M Cost [\$ /1000 gallons]) x 1000 [gallons]



**Other Misc.  
Updates/Reminders**

# Low Pressure Systems

- The permittee shall properly operate and maintain all facilities and systems of treatment and control
- Low pressure pumps and tanks are part of the public sewerage system
- These pumps and tanks shall be owned or under the control of public utilities rather than private landowners.
- While direct ownership is encouraged, operational control without direct asset ownership may suffice and is described in the response to comments.

# Proper Operation and Maintenance & Low Pressure Systems

(c) Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances, including but not limited to collection and conveyance systems) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Low pressure pumps and tanks are integral to the treatment and conveyance of sewage in a low pressure system design, and shall be owned or under control of the municipality, other body of government, public utility district, or a privately-owned public utility demonstrating lawful jurisdiction over the service area. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

# Low Pressure Systems (Permit Rationale)

- *Legal mechanism e.g. local regulations, ordinance, plumbing codes, resolution etc. that provides the authority to:*
  - **Deny the use of low pressure pumps and tanks**
  - **Establish and enforce design standards**
  - **Access the site and equipment (including inspection)**
  - **Obtain remedies for non-compliance**
  - **Conduct an emergency response**
- *Plans review process to ensure compliance with the locally established design standards (including inspection of installation)*
- *Construction, inspection, and approval process*
- *Preventative and emergency maintenance program*
  - *In addition, all components of the sewerage system must be owned by a municipality, other body of government, public utility district, or a privately-owned public utility demonstrating lawful jurisdiction over the service area in accordance with Rule 0400-40-16-.02(8).*

# Non-Potable Reuse

- Rule 0400-40-06-.10 (State Operating Permits)
- Beneficial reuse under this rule does not include:
  - Plant onsite water system
  - Potable reuse
  - Industrial reuse on the same property
  - Filling residential or public pools, hot tubs, splash pads
  - Use for food preparation or incorporation as an ingredient in food or beverages for human consumption
  - Agricultural reuse for food crops

# Non-Potable Reuse

- Requires Engineering Reports, Plans and Specifications following Rule 0400-40-02
- Reclaimed Wastewater Management Plan
  - Storage and distribution
  - Processes for system expansion
  - Metering
  - Monitoring and reporting
  - Public education
  - Contingency plans
- End User Agreements

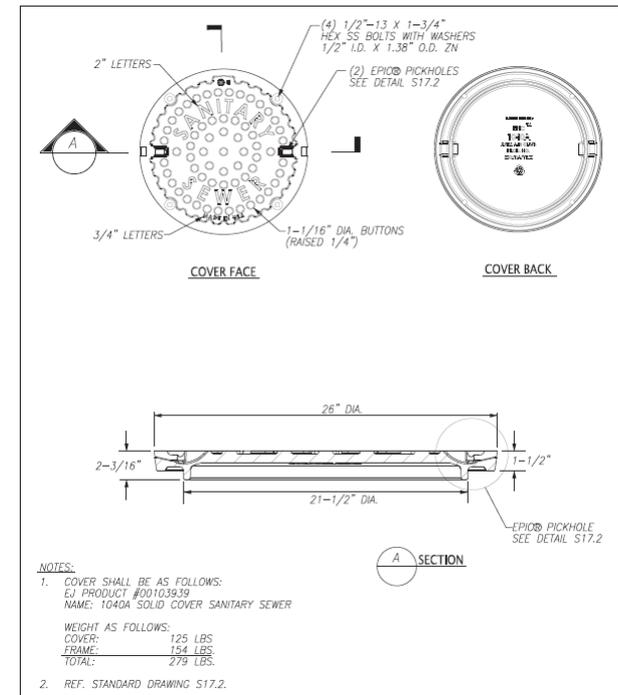
# Non-Potable Reuse

- Minimum Standards

Parameter	Unrestricted Urban Reuse		Restricted Urban Reuse	
	Daily Limit	Monitoring Frequency See Note 1	Daily Limit	Monitoring Frequency See Note 1
pH	6.0-9.0	Weekly See Note 2	6.0-9.0	Weekly See Note 2
CBOD <sub>5</sub> or NH <sub>3</sub> -N	10 mg/L CBOD <sub>5</sub> or 5 mg/L NH <sub>3</sub> -N	Weekly See Note 2	30 mg/L CBOD <sub>5</sub> or 10 mg/L NH <sub>3</sub> -N	Weekly See Note 2
NTU or TSS	5 NTU or 5 mg/L TSS	Continuous Daily See Note 2	30 mg/L TSS	Weekly See Note 2

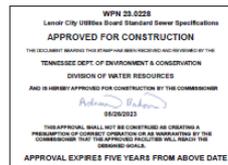
# Standard Specifications

- What are they?
  - Details/Reference for all aspects of the project
  - Include, but not limited to:
    - Materials
    - Methods of installation
    - Quality and Testing requirements
- Why use them?
  - Consistency
  - Efficiency
  - Set expectations



# Standard Specifications

- Who needs them?
  - Not required, but recommended
- How to use them?
  - TDEC review and approval every 5 years



**Lenoir City Utilities Board**

**Standard Sewer Specifications**

Submitted to: Tennessee Department of Environment and Conservation

Original Date Submitted: September 28, 2012

Date Revised: August 10, 2016 (Rev1)  
 August 7, 2019 (Rev2)  
 September 14, 2020 (Rev3)

July 30, 2021 (Rev4)  
 April 11, 2023 (Rev5)

Lenoir City Utilities Board

Standard Sewer Specifications

**SECTION 00001  
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01500 Construction Facilities and Temporary Controls.....	3
01560 Erosion and Pollution Control.....	2
01570 Work Zone Traffic Control.....	2
01600 Material and Equipment.....	4
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01710 Cleaning .....	2
01720 Project Record Documents .....	2

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Department of  
**Environment &  
Conservation**

**Thank You**

[Timothy.Hill@tn.gov](mailto:Timothy.Hill@tn.gov)