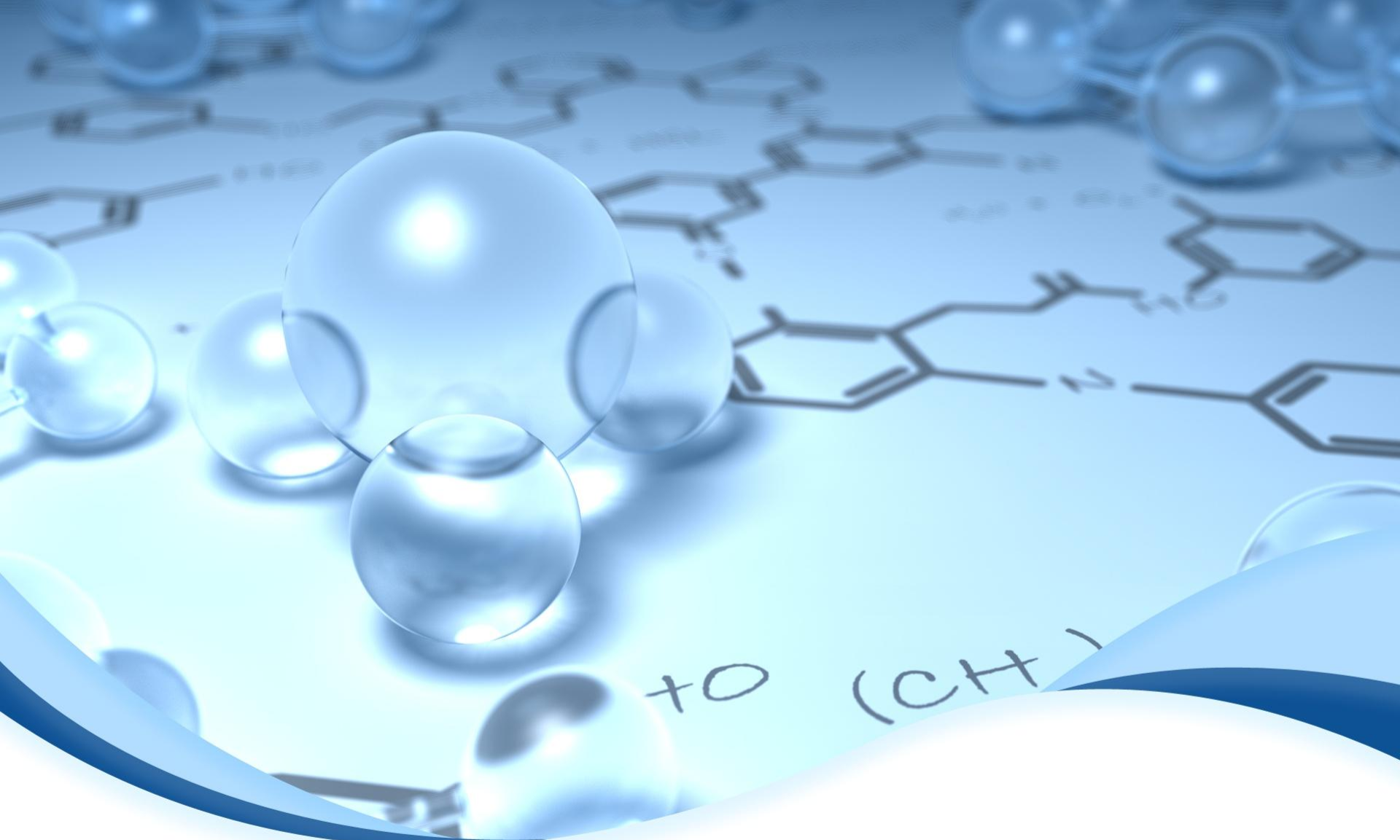




Surface Water Meeting AWOP Update

Aimee White

SWM AWOP Update Outline

What is AWOP?

3 Main Status Components (Goals)

What does AWOP do?

How do I get Involved?

What would the water system need?

Maintaining The Program

Still Developing New Manganese Goals

Developing Corrosion Control Goals

Membrane Optimization Goals

AWOP Impacts

SWM AWOP Update Outline

What's happening in AWOP?

Region 4 Multi-State AWOP Team

HABS Workshop Cleveland, TN

What special studies were conducted?

How did it go?

What did we learn?

What is **AWOP**?

- Area Wide Optimization Program
- Supplies realistic goals for water treatment plants.
- The goals are set below what the regulations require.
- Water systems go above and beyond to ensure the best quality of water supplied to each customer.

3 Main Status Components

Disinfection Byproducts

- Short Term Goal for distribution's each individual site:
LRAA is ≤ 70 ppb for TTHM and ≤ 50 ppb for HAA5
- Long Term Goal, the average of max LRAA based on 11 quarters of data:
< 60 ppb for TTHM and < 40 ppb for HAA5.
- Plant Effluent Goal:
TTHM RAA 20 ppb or less
HAA5 RAA 15 ppb or less
TOC RAA 1.7 mg/L or less

Microbial (Pathogen Removal) for Traditional WTPs

- Meet sedimentation goals of 1.0 or 2.0 NTU
- < 0.10 NTU, 95% of the time for individual filtered water turbidity
- 0.30 NTU, do not exceed
- < 0.10 NTU, rewash filter and return to service

Chlorine Residual

- Maintain sufficient chlorine residual; report lowest

What does AWOP do?

- Our team sets up training sessions and workshops in which operators can receive CEH's.
- Homework is assigned.
- Provides Operators with tools and the knowledge to achieve optimization.
- Operators can apply their knowledge /skills to their own water systems.

How do I get involved?

The Operator or Management can call me or call your inspector and we can work out a schedule to set it up. My number is 334-271-7779. Or you can email me at abwhite@adem.alabama.gov.

What would the water system need?

- A large enough space to provide room for training sessions.
- Classroom style preferably but can make other conference room styles work.
- Support from Management.
- Operators with a willingness to put forth the effort to learn new skills and gain new knowledge.

Maintaining The Program

AWOP is a voluntary program for ADEM staff.
AWOP is in addition to required duties.

All appropriate water systems are tracked in the status components.

Water system involvement in AWOP activities is voluntary.

More technical staff are becoming involved.

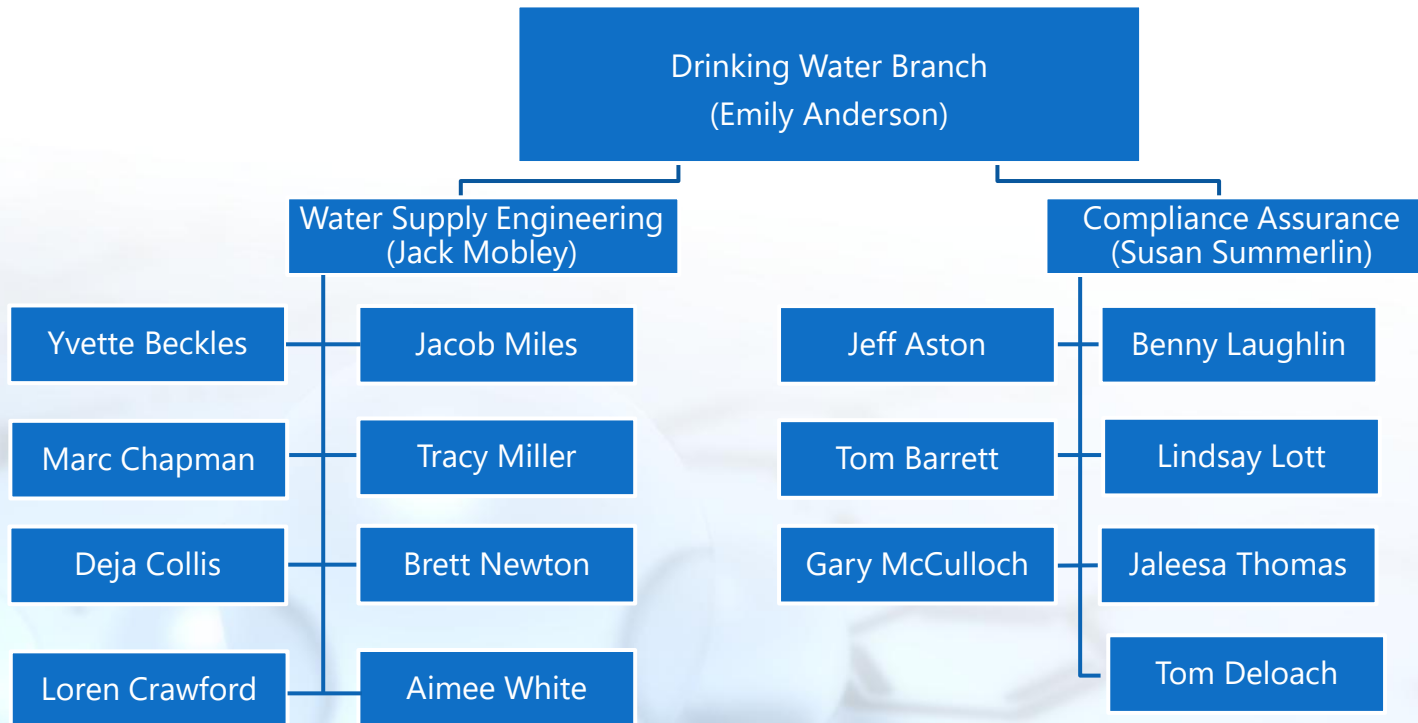
Maintaining The Program

2025 Team Structure

Core Team

- Aimee White
- Brett Newton
- Chris Soileau
- Deja Collis
- Lindsay Lott
- Jacob Miles
- Tracy Miller

Drinking Water Organization



New Manganese Optimization Goals

- We are working with the EPA in developing new Manganese goals.
- The goal could be 0.02 ppm or 0.03 ppm in finished water.
- Currently there are 3 different tests approved to measure manganese with each having differing minimum levels of detection/accuracy.
- Minimizes manganese loading in the distribution system.

New Corrosion Control Optimization Goals

- We are working with the EPA to develop corrosion control goals.
- Maintain minimum levels of corrosion inhibitor in the distribution system.
- 1.0 ppm, suggestion for the current minimum level of corrosion inhibitor in the distribution system at maximum physical locations.

Membrane Optimization Goals

- Meet sedimentation goals of 1.0 or 2.0 NTU
- 0.050 NTU 95% of time from individual membranes (IFE)
- Not to exceed 0.15 NTU.
- 95% of PDTs below limit.
- Hybrid WTPs will have to meet goals appropriate to treatment units.
- Goals Were implemented in 2020

Status Components

Distribution (DBPs)

Optimization Goals Achieved	4th QTR 2020	1st QTR 2021	2nd QTR 2021	3rd QTR 2021	4th QTR 2021	1st QTR 2022	2nd QTR 2022	3rd QTR 2022	4th QTR 2022	1st QTR 2023	2nd QTR 2023	3rd QTR 2023	4th QTR 2023	1st QTR 2024	2nd QTR 2024	3rd QTR 2024	4th QTR 2024
Systems Optimized	179	179	170	175	168	169	170	161	159	157	170	165	170	165	172	176	170
Met TTHM LRAA Goal	221	221	213	222	224	225	222	218	224	221	217	220	215	218	217	218	218
Met TTHM Long Term Goal	204	204	200	209	204	207	206	204	205	198	206	203	205	203	204	205	202
Met TTHM Short- and Long-Term Goals	203	204	199	209	204	207	199	198	203	196	198	200	196	200	202	203	199
Met HAA5 LRAA Goal	214	221	209	217	213	213	218	218	220	219	218	218	215	217	216	216	217
Met HAA5 Long Term Goal	197	197	191	195	191	189	194	187	189	189	190	190	189	195	201	200	200
Met HAA5 Short- and Long-Term Goals	196	195	186	193	187	186	186	185	185	185	186	186	181	189	193	195	193
Met Both Short-Term Goals	209	217	203	210	208	208	206	206	214	210	208	210	207	209	207	207	208
Met Both Long-Term Goals	185	181	181	181	174	175	171	171	170	163	174	172	171	176	183	183	179
Not Meeting Any Goals	3	2	3	4	2	1	0	0	2	1	2	3	2	4	4	3	2

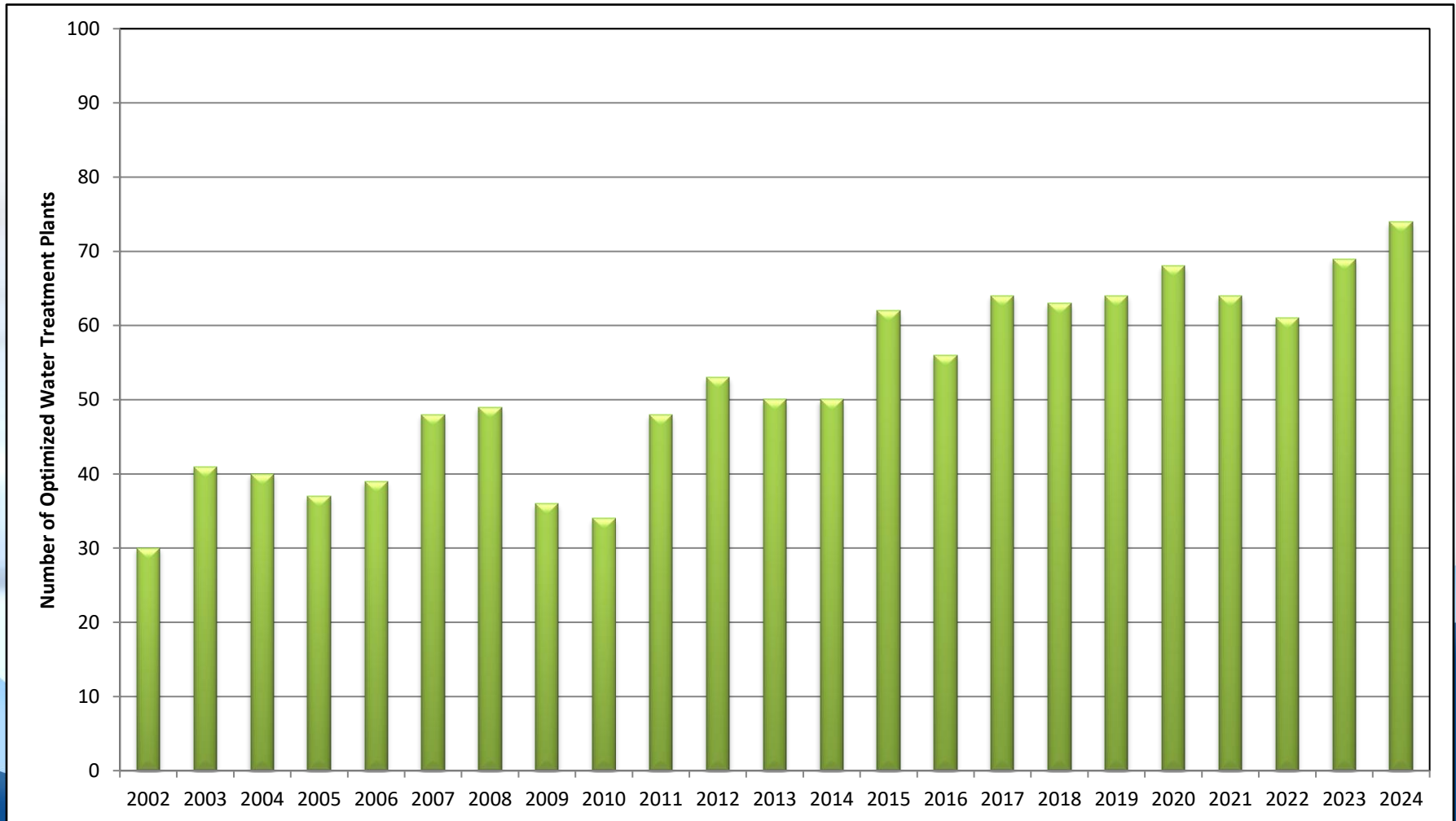
Status Components

Microbial (Conventional)

Goal	Number of WTPs	Percent
Optimized	74	76.3%
Settled Water	81	83.5%
Filtered Water	84	86.6%
Neither Goal	8	8.3%

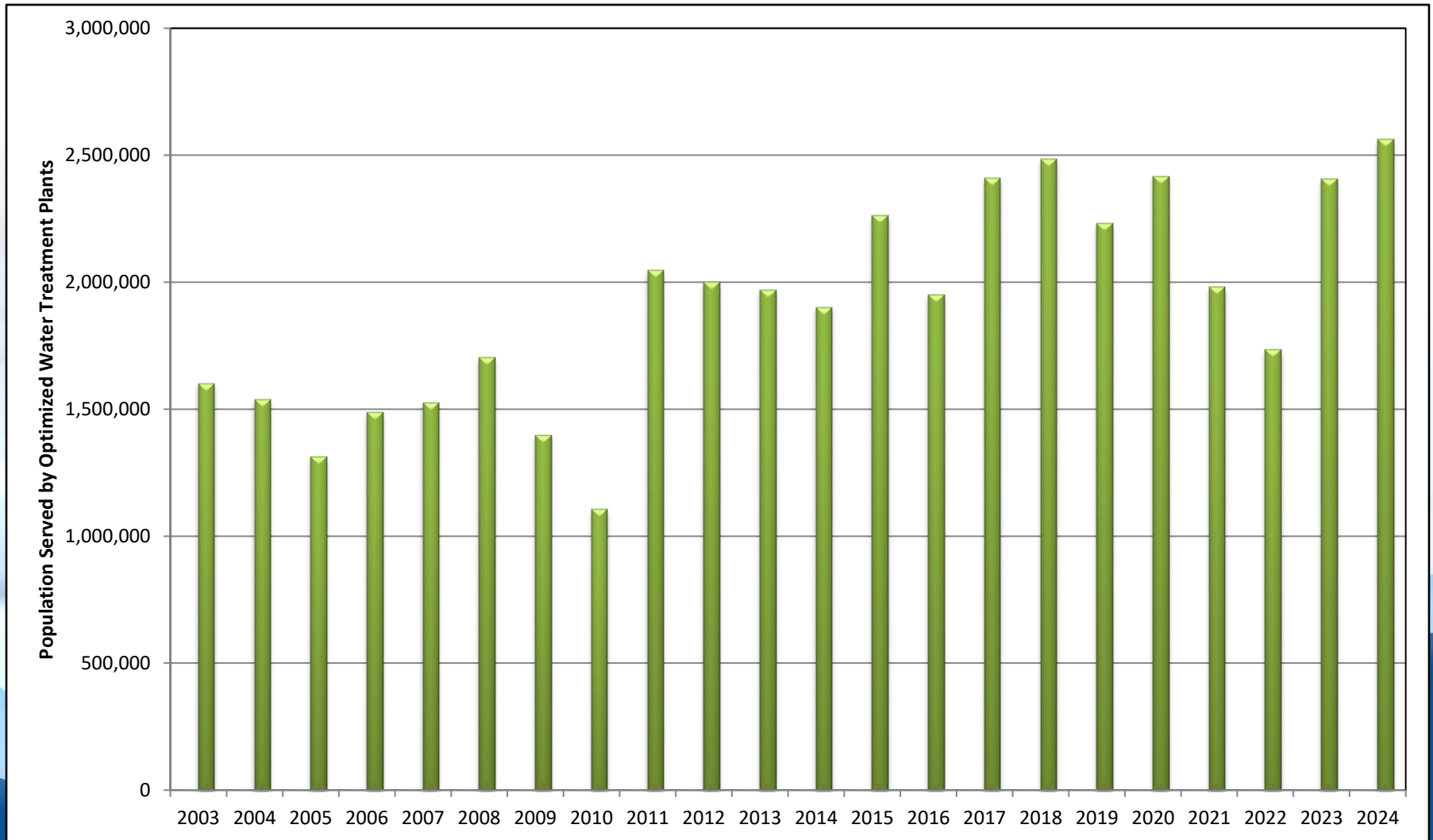
AWOP Impacts

Optimized Water Treatment Plants



AWOP Impacts

Population Receiving Optimized Water



What's been happening in AWOP?

- This year Tennessee hosted the Region 4 and More Multi-State AWOP Team Meeting and Training Workshop in April with a focus on HABs.
- In August, we had the National AWOP Meeting in Ohio.
- Next, the Region 4 and More Multi-State AWOP Team is meeting in Kentucky in November 2025.

Region 4 and More– Multi-State Workshop on HABs in Cleveland, TN

- Included Region 4 EPA and several states.
- We focused on HABs, because of the hosting state preference. We pick topics based on relevance to the hosting state.
- Cleveland was picked because they had an algal bloom event previously. We reviewed their public communication procedures and strategies to combat algae.

What did this Workshop cover?

- One group did a special study on the different types of tests available and their costs.
- One group did a special study on cost of treatments available.
- One group did a special study on treating geosmin and MIB, where to concentrate treatment for before cell death.
- One group did a special study on the differing types of chemical treatments available and their effectiveness.

How did it go?

- The results were mixed.
- At the end of the studies, we learned when the issue of algae started and what steps they took to inform the public on multiple forums. Keep the message consistent.
- They also implemented background monitoring of existing geosmin and MIB levels and determined that below 10 ppb the odor was not detectable.

What did we learn?

- We learned about the additional cost and steps required for HABs.
- If everything was perfect, how would we learn to identify problems?
- The goal was to learn more about HABs, treatment, prevention, and testing.

**NOW PRESENTING THE AWOP
AWARDS FOR THE 2024
MICROBIAL (TURBIDITY)
AWARD WINNERS**

1 YEAR AWARDS

Attalla WTP (City of)

Clanton WTP

Heflin WTP

Limestone County WTP

Oneonta Utilities WTP

Opelika – Betts WTP

Tuscaloosa (City of) – Ed Love WTP

West Morgan East Lawrence WTP

2 YEAR AWARDS

Central Elmore Water & Sewer

Guin Water Department

Huntsville Utilities – Southwest Plant

Mobile Area Water Works and Sewer Board –
Myers WTP

Piedmont WTP

Tallassee Water

Tuscaloosa – Jerry Plott WTP

3 YEAR AWARDS

Central Alabama Water Sys– Western WTP

Coosa Valley WSD

Fort Payne (The WWB of the City of)

Franklin County Water Service Authority

Jackson WWSB (Clarke County)

Mobile Area Water Works and Sewer
Board – Stickney WTP

4 YEAR AWARDS

Bessemer (G.U.S.C.)

Central Alabama Water Sys – Carson
WTP

Roanoke Water

Warrior River Water

5 YEAR AWARDS

Alexander City Water

Athens Utilities

Cherokee Water and Gas Board

Clay County Water Authority

Constellium – Wise Alloys – WTP

Oxford Water Works and Sewer Board – Quarry
WTP

6 YEAR AWARDS

Alabaster Water

Bridgeport Utilities

Sheffield Utilities

Shelby County Water

Winfield Water Works

7 YEAR AWARDS

Albertville Utilities Board – 9 MGD WTP

Anniston – Knowlton WTP

Arab Water Works

Huntsville Utilities – Southeast WTP

North Marshall Utilities

Smiths Water and Sewer Board

8 YEAR AWARDS

Arley Water Works

Berry Water Department

Jasper Water Works

Northeast Alabama WSD – Monsanto
WTP

10 YEAR AWARDS

Harvest-Monrovia WSFP – Zion WTP
Thomasville Water Works WTP

11 YEAR AWARDS

Colbert County Rural Water System
Cullman Utilities Board

12 YEAR AWARDS

Decatur Utilities

Guntersville Water Works – Sunset WTP

Northeast Alabama – Highpoint WTP

13 YEAR AWARDS

Scottsboro Water Works – Skinny Jones
WTP

Talladega (City of) Water Department

14 YEAR AWARDS

Central Alabama Water Sys – Putnam WTP

Central Alabama Water Sys – Shades Mtn WTP

Hawk Pride Mountain WS WTP

US Army Aviation & Missile Command WTP

16 YEAR AWARDS

Russellville WWSB

18 YEAR AWARDS

Blount County Water

Calera Water Works – Central WTP

Tuscumbia Water

19 YEAR AWARDS

Florence Water Department – Wilson Lake WTP
Harvest-Monrovia WSFP – Burwell WTP
Red Bay WTP

20 YEAR AWARDS

Scottsboro Water Works – North Sauty WTP

21 YEAR AWARDS

Centre Water and Sewer – Centre WTP

Florence Water Department – Cypress Creek WTP

22 YEAR AWARDS

Anniston WWSB – Krebs WTP

Fayette Water

Montgomery Water Works

Northeast Alabama WSD – Waterloo
WTP

Section Dutton Water