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ADEM Water Division Update

**Manufacture Alabama
November 10, 2022**

Jeffery W. Kitchens, Chief
Water Division



adem.alabama.gov

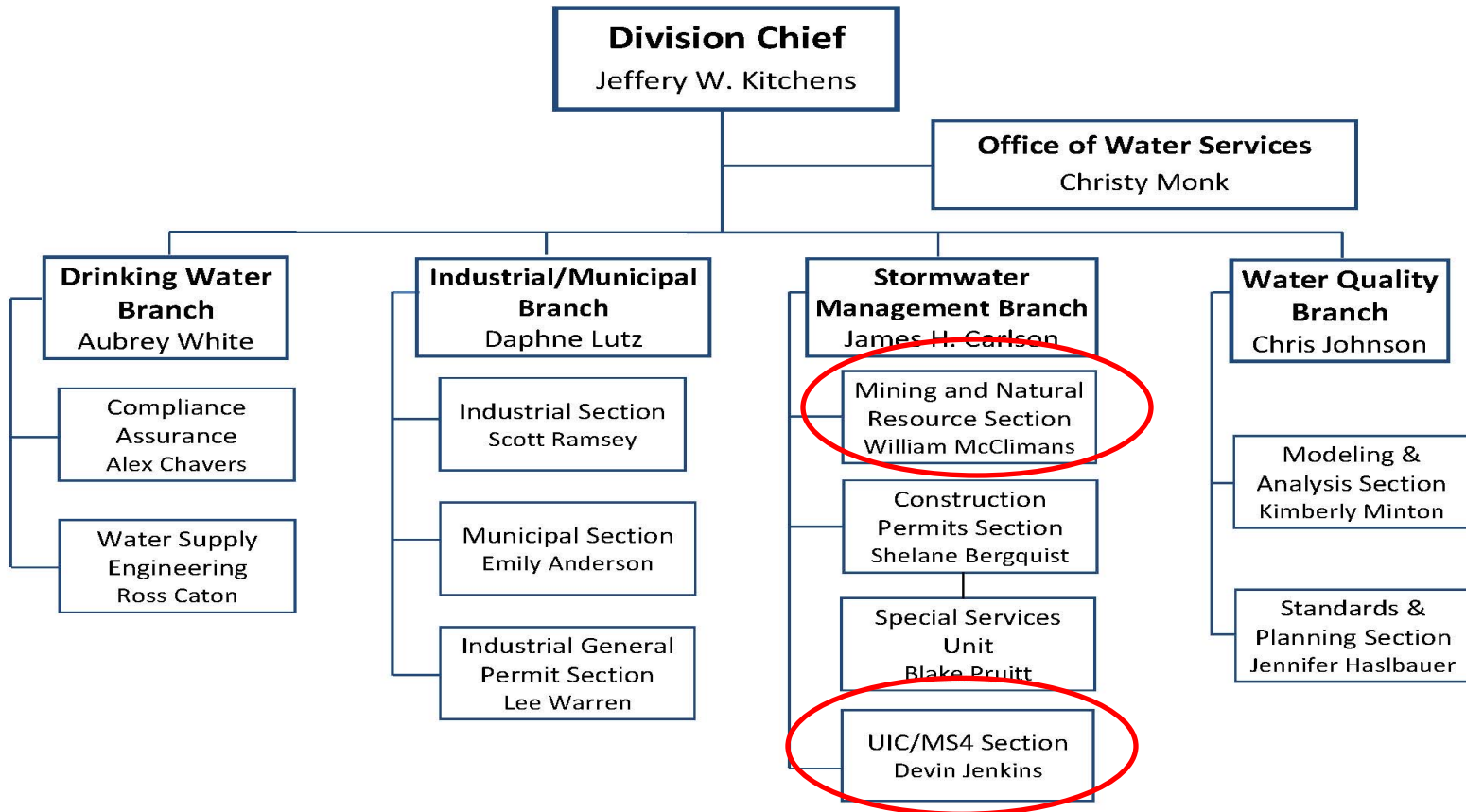
Overview



- Water Division Organization
- Water Quality Update
 - 303(d)
 - Triennial Review
 - Rulemaking
- PFAS
 - Federal Actions
 - State Actions
- Contacts



Water Division Organizational Chart





2022 303(d) List

- 2022 list submitted to EPA on March 30, 2022 as part of the IWQMAR
 - Submitted in even number years
- Approved by EPA on April 28, 2022
- <http://www.adem.alabama.gov/programs/water/303d.cnt>

90 segments added

- 54 Pathogens (E. coli and enterococcus)
- 33 Mercury (fish consumption advisories)
- 1 Nutrients
- 1 Organic Enrichment (BOD)
- 1 Thallium

28 Segments Removed

- 13 Pathogens (E. coli and enterococcus)
- 3 Siltation
- 9 Nutrients
- 1 Lead
- 1 Iron
- 1 Mercury



FY2022 TMDL Schedule

- ✓ Cottondale Creek – Tuscaloosa County – Pathogens (*E. coli*)
- ✓ Ihagee Creek – Russell County – Pathogens (*E. coli*)
- Brushy Creek – Escambia County – Metals (Lead)
- ✓ Boggy Branch – Escambia County – Pathogens (*E. coli*) and Metals (Lead)
- Line Creek – Macon and Montgomery Counties – Siltation
- ✓ Cubahatchee Creek – Macon and Bullock Counties – Siltation (delisted)
- ✓ Chase Creek – Madison County – Pathogens (*E. coli*)
- ✓ Indian Creek – Madison County – Pathogens (*E. coli*)



FY2023 TMDL Schedule

- Bennett Mill Creek – Henry County – Pathogens (*E. coli*)
- Cowarts Creek – Houston County – Pathogens (*E. coli*)
- Webb Creek – Houston County – Metals (Lead)
- Cooper Creek – Houston County – Pathogens (*E. coli*)
- Rocky Creek – Houston County – Pathogens (*E. coli*)
- Bruners Gin Creek – Houston County – Pathogens (*E. coli*)
- Flat Creek – Coffee and Covington Counties – Pathogens (*E. coli*)
- Wrights Creek – Geneva County – Pathogens (*E. coli*)
- Shirtee Creek – Talladega County – Pathogens (*E. coli*)
- Tallaseehatchee Creek – Talladega County – Pathogens (*E. coli*)
- Weewoka Creek – Talladega County – Pathogens (*E. coli*)
- Clear Creek – Jackson County – Pathogens (*E. coli*)
- Chandelower Creek – Colbert County – Pathogens (*E. coli*)
- Rock Creek – Colbert County – Pathogens (*E. coli*)
- Bodka Creek – Sumter County – Pathogens (*E. coli*)
- Noxubee River – Sumter County – Pathogens (*E. coli*)
- Clear Creek – Choctaw and Sumter Counties – Pathogens (*E. coli*)



Triennial Review

- Section 303(c)(1) of the CWA and the EPA's implementing regulations at 40 CFR 131.20 require that states and authorized tribes, from time to time, but **at least once every three years**, hold public hearings to review applicable WQS and, as appropriate, modify and adopt WQS
 - Use Classifications
 - Water Quality Criteria
 - Antidegradation Policy
- Triennial Review comment hearing held August 19, 2021
 - 176 comments received
 - Use Classifications, Adoption of EPA Human Health Criteria
 - Response to comments recently posted to website
 - First rulemaking later this year



WQ Rulemaking

- Purpose
 - Revise/Clarify Definitions
 - Include CWA Methods Update Rule
 - Clarifications
 - Use Classification Changes
- Public Comment Period Began October 23, 2022
- Public Hearing December 12, 2022



Future WQ Rulemaking

- Likely early next year to address human health criteria
- January 20, 2022 letter from Environmental Defense Alliance, Waterkeepers Alabama, and Alabama Rivers Alliance to EPA
 - Requests EPA to make a determination that new or revised WQC are necessary to meet the CWA
 - Supplement dated July 11, 2022

➤ In General:

- >9,000 compounds
- We currently test for <1% of these compounds
- These compounds have been around since the 1940's but we call them “emerging”
- LHA values decreased substantially (600 to 70 & falling)

➤ In Alabama there are currently:

- No In-stream numeric water quality criteria
- No drinking water regulatory standards (MCL)

- PFAS Action Plan – February 2019
- PFAS Action Act
 - Introduced April 2021 (Upton and Dingell - MI)
 - H.R. 2467 passed July 2021
 - Senate Action?
- EPA Council on PFAS – April 2021



EPA Council on PFAS

- Headed by AA for Water Radhika Fox and Acting Region 1 RA Deb Szaro
- **PFAS Strategic Roadmap – October 2021**
 - Whole-of-Agency Approach
 - Research, Restrict, Remediate
 - <https://www.epa.gov/pfas/>



PFAS Strategic Roadmap

Office of Water Actions

- **Nationwide Monitoring for PFAS in Drinking Water**
 - UCMR 5 - December 2021
 - 29 PFAS + Lithium
 - Testing 2023-2025
- **PFOA and PFOS Drinking Water MCL**
 - Proposed rule at OMB and expected by end of 2022
 - Final rule Fall 2023
- **Publish Toxicity Assessments for GenX and 5 additional PFAS (PFBA, PFHxA, PFHxS, PFNA, PFDA)**
 - PFBS – April 2021
 - GenX October 2021
 - Ongoing
- **Publish Health Advisories for GenX and PFBS**
 - June 15, 2022

Chemical	Lifetime Health Advisory Level parts per trillion or ppt
PFOA	0.004 (interim)
PFOS	0.02 (interim)
GenX Chemicals	10 (final)
PFBS	2,000 (final)



PFAS Strategic Roadmap

Office of Water Actions

- **Restrict PFAS discharges from industrial sources through ELG program**
 - OCPSF ELG Revision – Summer 2023
 - Metal Finishing (Chromium electroplating) ELG Revision - Summer 2024
 - Continued studies for [Textiles/Carpets](#), [Electrical/Electronic Components](#), [Landfills](#), [Leather Tanning](#), [Plastics Molding/Forming](#), [Paint Formulating](#) – [Fall 2022](#) to [Winter 2023](#)
- **Leverage NPDES permitting to reduce PFAS discharges to waterways**
 - [Memo April 28, 2022](#)
 - [Effluent Monitoring at least quarterly](#)
 - [BMPs for PFAS including product substitution](#)
 - [Notification of draft permits to downstream DW systems](#)
- **Publish improved analytical methods**
 - [EPA Methods 537.1 \(14\) and 533 for Drinking Water \(25\)](#)
 - [Draft Method 1633 \(40\) for Non-Potable Water and other Environmental Media](#)
 - [SW-846 Method 8327 \(24\) for Non-Drinking Water Aqueous Samples](#)
 - [Draft Method 1621 for AOF in Aqueous Matrices](#)



PFAS Strategic Roadmap

Office of Water Actions

➤ Publish recommended ambient water quality criteria for PFAS

➤ Aquatic life PCP ended July 5, 2022

Table 1. Draft Recommended Freshwater Aquatic Life Water Quality Criteria for PFOA and PFOS

Criteria Component	Acute Water Column (CMC) ¹	Chronic Water Column (CCC) ²	Invertebrate Whole-Body	Fish Whole-Body	Fish Muscle
PFOA Magnitude	49 mg/L	0.094 mg/L	1.11 mg/kg ww	6.10 mg/kg ww	0.125 mg/kg ww
PFOS Magnitude	3.0 mg/L	0.0084 mg/L	0.937 mg/kg ww	6.75 mg/kg ww	2.91 mg/kg ww
Duration	1-hour average	4-day average	Instantaneous ³		
Frequency	Not to be exceeded more than once in three years, on average	Not to be exceeded more than once in three years, on average	Not to be exceeded more than once in ten years, on average		

¹ Criterion Maximum Concentration.

² Criterion Continuous Concentration.

³ Tissue data provide instantaneous point measurements that reflect integrative accumulation of PFOA or PFOS over time and space in aquatic life population(s) at a given site.

➤ Human Health Criteria - Fall 2024



PFAS Strategic Roadmap

Office of Water Actions

- **Enhance data availability on PFAS in fish tissue**
 - National Lakes Assessment Program
 - Summer 2022 and Spring 2023
- **Finalize risk assessment for PFOA and PFOS in Biosolids**
 - Expected Winter 2024

- In-Stream Monitoring
- NPDES Permit Requirements
- Public Drinking Water Testing
- 3M ICO

- Tennessee River
 - ADEM and 3M Activities
 - Fish Consumption Advisory for PFAS
- Coosa River
 - ADEM and EPA Activities
 - No Fish Consumption Advisory for PFAS
- Alabama River
 - Samples Collected June 2021



PFAS Monitoring and Minimization

- Facilities in certain industrial categories will be required to monitor/report PFAS concentrations.

OCPSF	Metal Finishing
Electroplating	Electrical/Electronic Components
Textile Mills	Leather Tanning/Finishing
Plastic Molding/Forming	Paint Formulating
CWT	Landfill Leachate

- At least semi-annual sampling
- Draft EPA Method 1633, 1621, or other approved method



PFAS Monitoring and Minimization

- Based on results, some facilities required to develop and implement a PFAS Minimization Plan to reduce the levels of PFAS in the discharge.
 1. Good Housekeeping Practices
 2. Equipment, associated with production and/or wastewater treatment system, decontamination and/or replacement
 3. Product elimination or substitution when a reasonable alternative to using PFAS is available
 4. Immediate clean-up of any AFFF releases
 5. Source Identification
 6. Pilot Studies on treatability of wastewater
 7. Installation and operation of appropriate PFAS treatment technology(ies)



PFAS - Drinking Water

Public drinking water treatment sources tested during 2020 and 2022

- Approximately 400 systems tested
- 89 systems with reportable detections of PFOA/PFOS
- Results can be found at <http://adem.alabama.gov/newsEvents/reports/PFASDrinkingWaterSystemReport.pdf>
- Many systems have notified customers of the presence of PFOA/PFOS in their drinking water

Bipartisan Infrastructure Law (BIL)

- 5-Year Program
- Year One(1) is 2022
- Alabama will receive \$137MM in Year 1
- Alabama expects to receive \$765MM Total
- Three tranches of funds:
 - SRF Capital Grant
 - **Contaminants of Emerging Concern(CEC)**
 - Lead Service Line Replacement

Program	2022 Funding Amount (\$MM)	Principal Forgiveness (%)
CW SRF	20	49
DW SRF	39	49
CW CEC	1	100
DW CEC	16	100
DW LSL	61	49

Applicable Websites

- <https://alabamawaterprojects.com>
- <http://adem.alabama.gov/programs/water/srfupdates.cnt>

SRF Contact

Brian Espy

Bespy@adem.Alabama.gov

334-271-7711



Interim Consent Order

- Wastewater Requirements
- Land/Groundwater Requirements
- Air Requirements
- Other Requirements

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