

Emerging Contaminants in Alabama

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CIFA

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Emerging Contaminants in Alabama

- Testing is continually ongoing
- All finished water required testing
- Many different compounds of emerging contaminants
 - “Genx” and short chain
 - Long chain
- 163 systems above method reporting limit (MRL)
- Results are available on ADEM’s website
 - [Adem.alabama.gov](http://adem.alabama.gov)



Emerging Contaminants in Alabama

- Overall approach
 - Discovery (Sampling)
 - Regionalized Solutions

- Goals
 - Cost-effectiveness
 - Meeting the proposed rule
 - Reach as many communities as possible

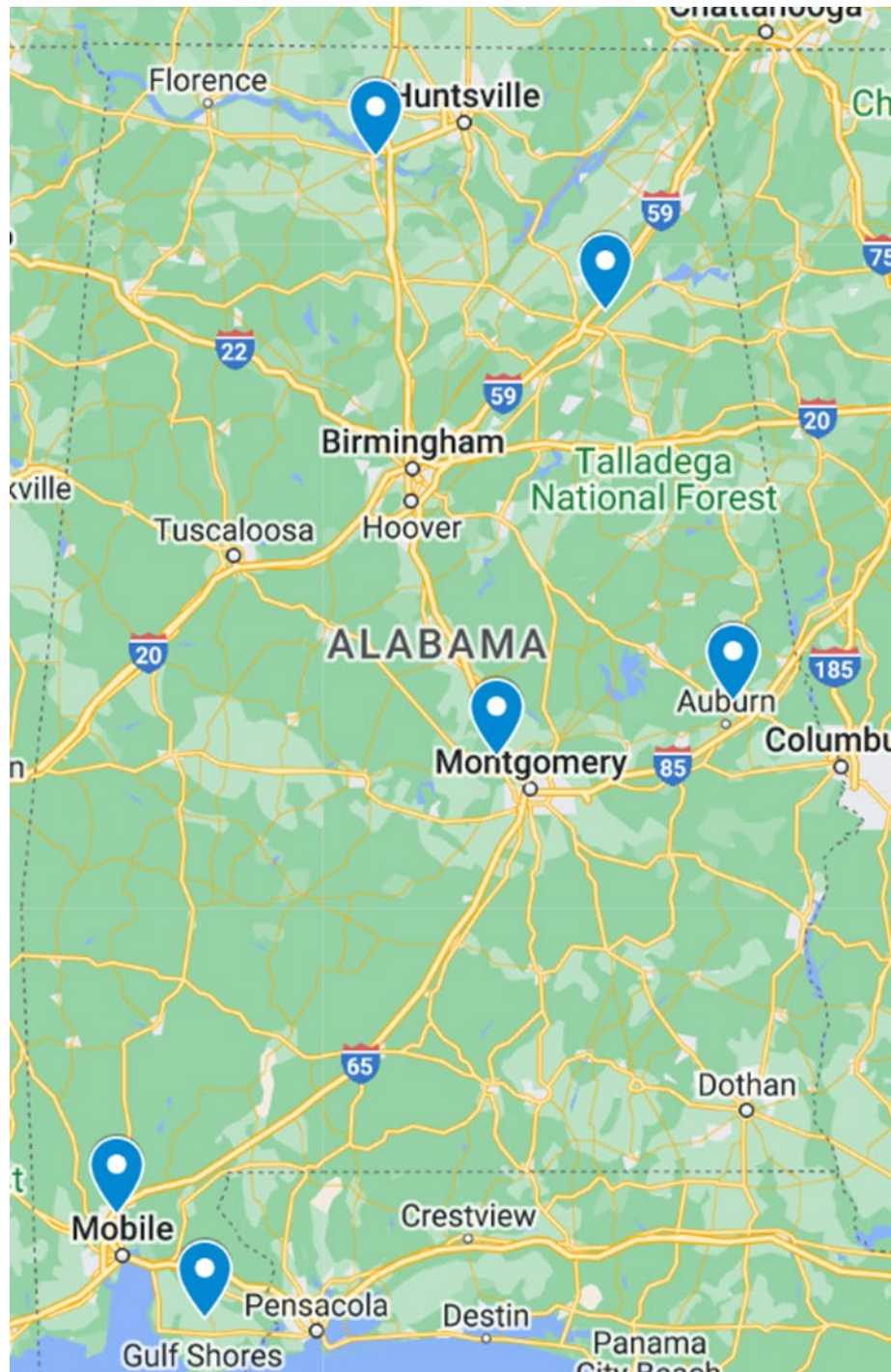


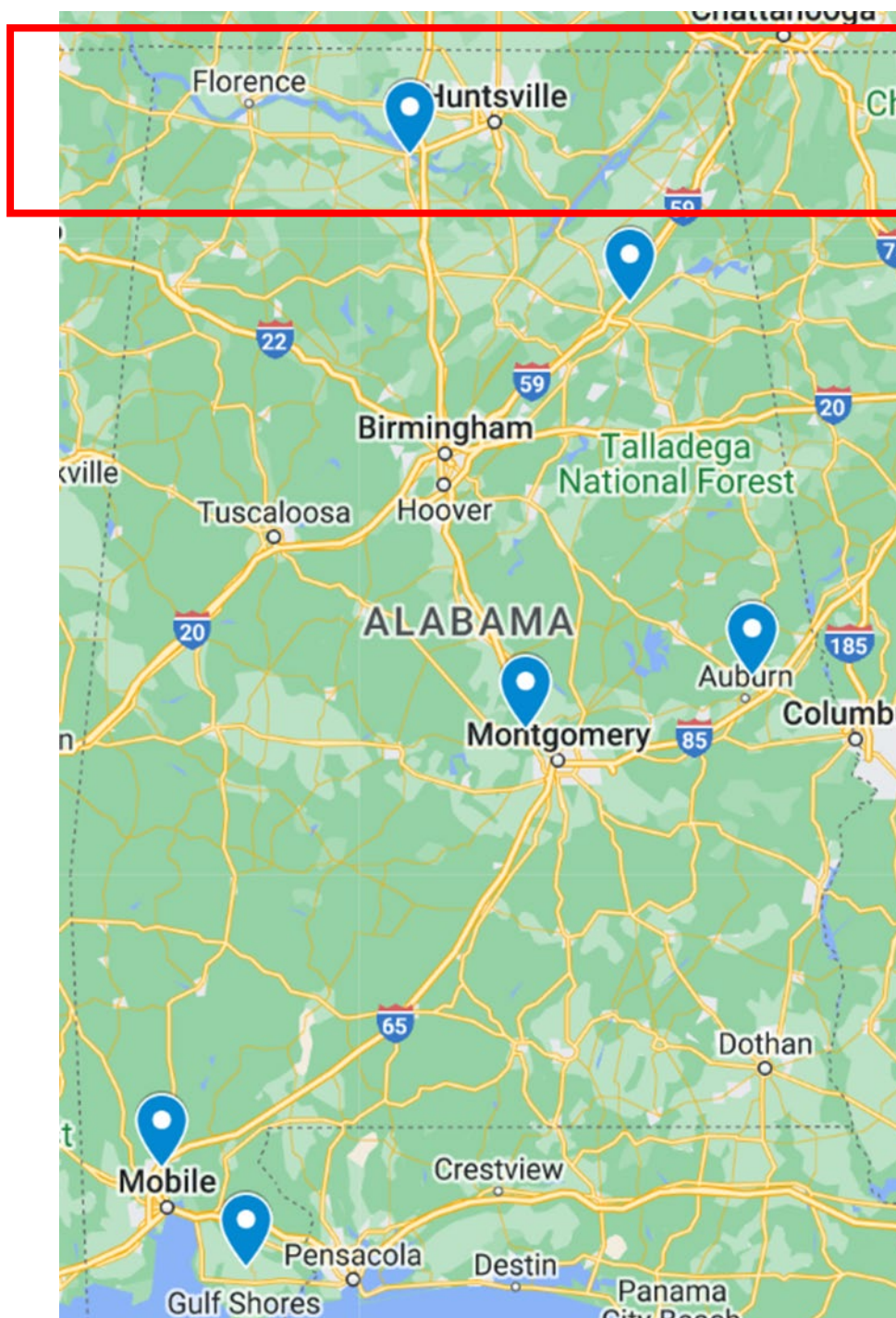
Emerging Contaminant Funding

- DWSRF Bipartisan Infrastructure Legislation (BIL)
 - \$15 million per year
- CWSRF BIL
 - \$1 - 4 million per year
- Emerging Contaminants in Small and Disadvantaged Communities
 - \$53 million



ADEM



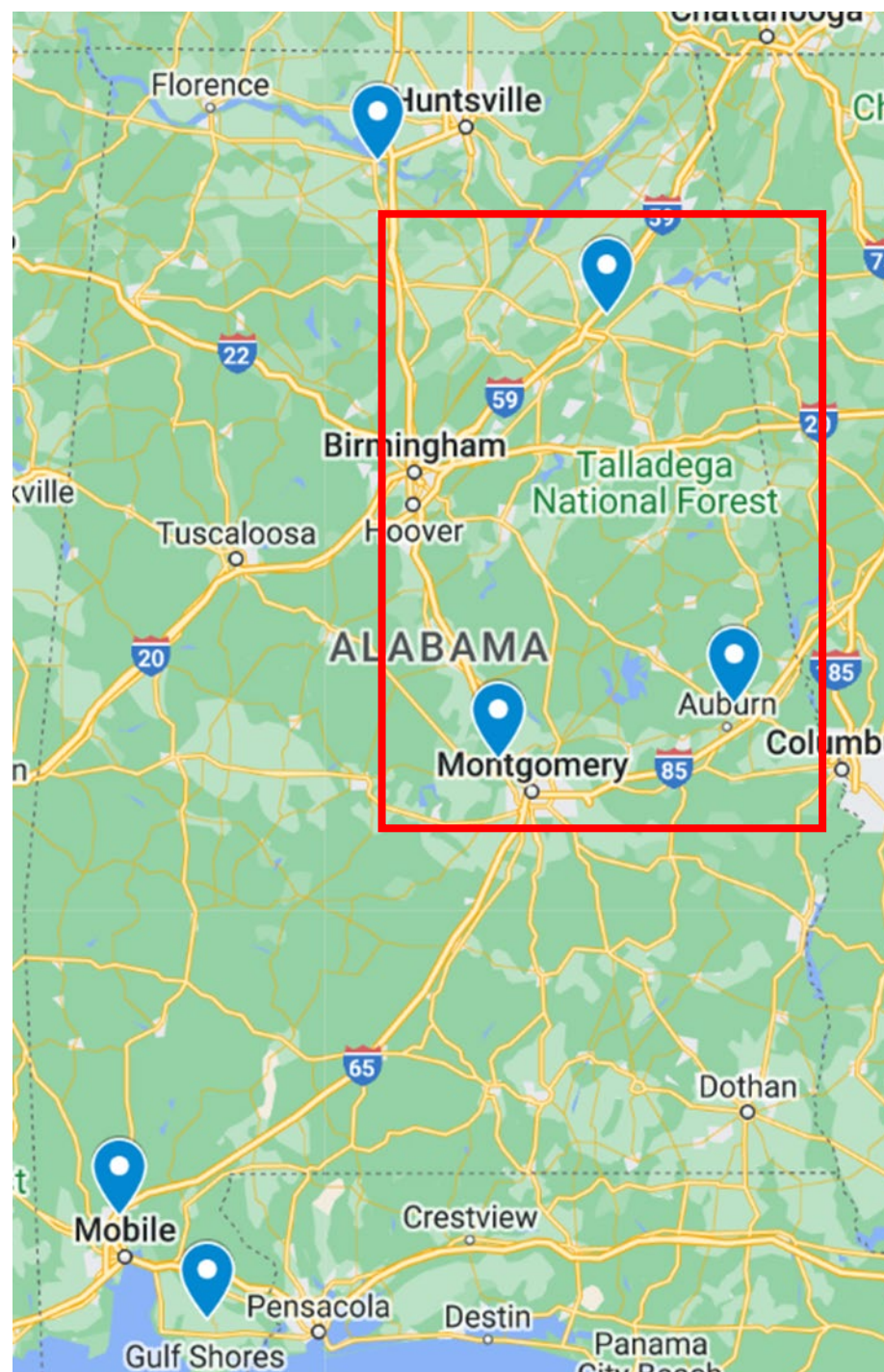


Decatur Utilities

- 68 Million Gallons Per Day (MGD)
- Serves 60,000 residences
- Source: Tennessee River

<u>Analyte Name</u>	<u>Collection Date</u>	<u>PPT</u>
PFBS	1/19/2022	3.0
PFOS	1/19/2022	2.1
PFOA	1/19/2022	2.0
PFHpA	1/19/2022	0.9
PFHxA	1/19/2022	1.4
PFBS	4/4/2022	3.9
PFOS	4/4/2022	8.3
PFOA	4/4/2022	9.3
PFHpA	4/4/2022	3.3
PFHxA	4/4/2022	3.3



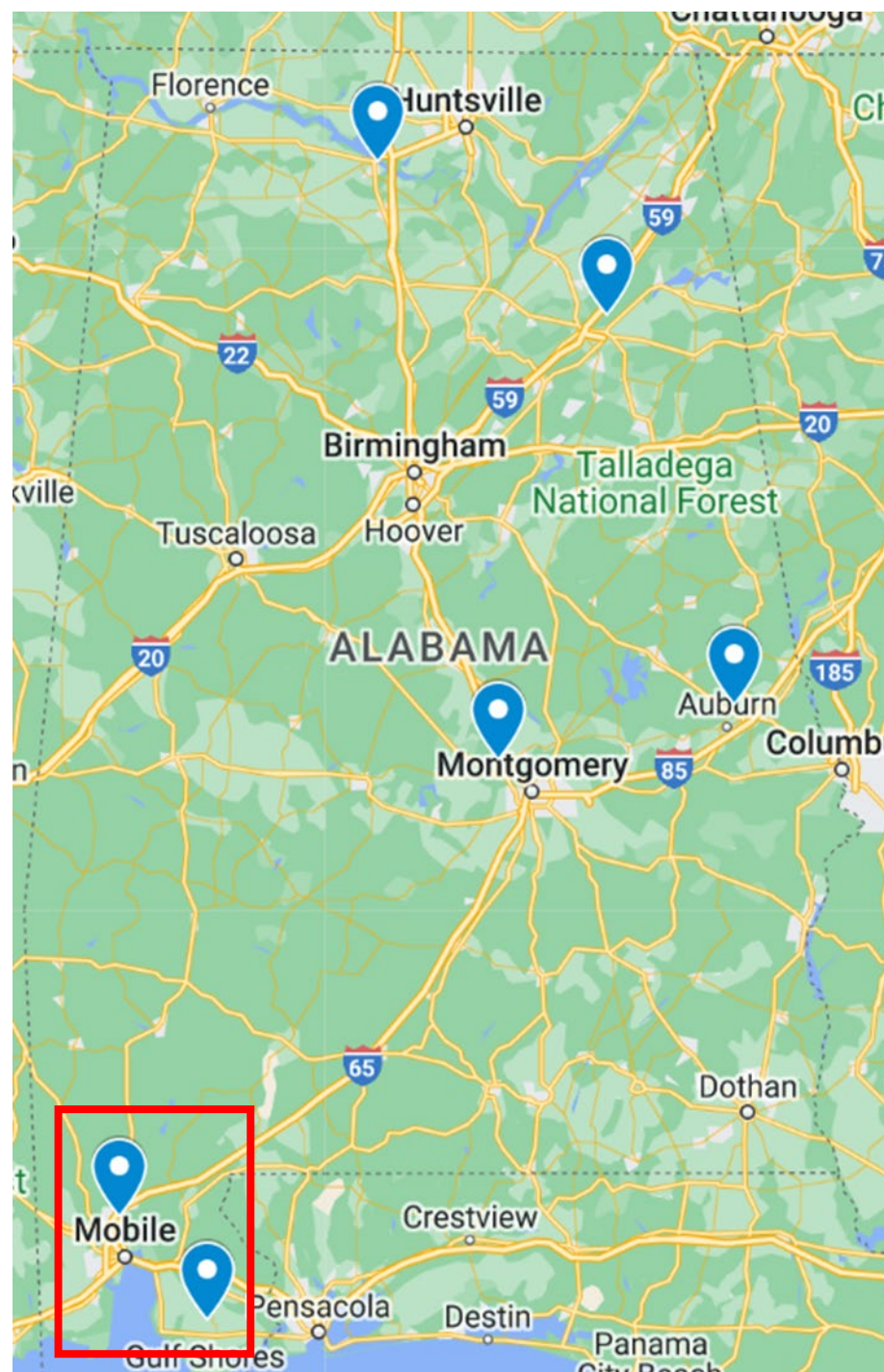


Gadsden Water Works

- 30 MGD
- Serves 15,000 residences
- Source: Coosa River

<u>Analyte Name</u>	<u>Collection Date</u>	<u>PPT</u>
PFBS	1/8/2020	95.0
PFOS	1/8/2020	15.0
PFOA	1/8/2020	14.0
PFDA	1/8/2020	6.8
PFDoA	1/8/2020	13.0
PFHpA	1/8/2020	11.0
PFHxS	1/8/2020	6.0
PFHxA	1/8/2020	31.0
PFNA	1/8/2020	6.5
PFTA	1/8/2020	13.0
PFTTrDA	1/8/2020	15.0
PFUnA	1/8/2020	6.0





Town of Loxley

- 3.8 MGD
- Serves 3,700 Residences
- Source: Groundwater Wells

<u>Analyte Name</u>	<u>Collection Date</u>	<u>PPT</u>
PFBS	6/17/2020	4.0
PFOS	6/17/2020	32.0
PFOA	6/17/2020	3.8
PFHxS	6/17/2020	20.0
PFHxA	6/17/2020	3.8
PFOS	9/23/2020	14.0
PFHxS	9/23/2020	9.1



DWSRF Possible Solutions

- Reverse Osmosis
- Granulated Activated Carbon
- New Source Development
- Consolidation



Reverse Osmosis

Advantages

- Best Treatment Option

Disadvantages

- Expensive to construct and operate
- Expertise from operator(s)
- Waste generated



Granulated Activated Carbon (GAC)

Advantages

- Cheaper solution to construct and operate than reverse osmosis
- Will eliminate long chain

Disadvantages

- Expensive to operate
- Waste generated
- Does eliminate Genx and short chain but more difficult



New Source Development/Consolidation

Advantages

- Cheapest option *Sometimes**
- Can eliminate emerging contaminants for multiple communities in one project
- No additional filtering needed

Disadvantages

- Lose control of water system
- Must be within reasonable distance to be cost-effective
- Stifling Future Growth/Development



CWSRF Emerging Contaminants

- Focus on waste generated from DWSRF solutions
- Emerging contaminants are being concentrated
- Changing media from water to land or back into water
- Goal is to eliminate completely



Current Funding Initiatives

DWSRF

- Reverse Osmosis Unit
 - West Morgan/East Lawrence (Tennessee River)
- New Groundwater Wells
 - Thomasville
 - Pine Hill

CWSRF

- Carbon filtration on waste stream of RO Unit
 - West Morgan/East Lawrence
 - Currently undergoing pilot testing



Thank you!

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