Region 4
Air Monitoring Quality Assurance

Laura Ackerman, Chief
Quality Assurance Section
Region 4
706-355-8776
ackerman.laura@epa.gov
EPA REGION 4 ORGANIZATIONAL STRUCTURE
LSASD

As of October 1, 2020

Laboratory Services & Applied Science Division
Danny France, Acting Director
Hunter Johnson, Acting Deputy Director

Laboratory Services Branch
Sandra Aker, Chief

Quality Assurance and Program Services Branch
Denisse Diaz, Chief

Applied Science Branch
John Deatrick, Chief

Organic Chemistry Section
Jeffrey Hendel, Chief

Inorganic Chemistry Section
Floyd Wellborn, Chief

Quality Assurance (QA) Section
Laura Akerman, Chief

Superfund Section
Liza Montalvo, Acting Chief

Environmental Sampling Section
Stacy Box, Chief
ARD

August 31, 2020

Air and Radiation Division
Caroline Freeman, Director
Ken Mitchell, Deputy Director

Air Analysis & Support Branch
Gregg Worley, Chief

Air Data & Analysis Section
Todd Rinck, Chief

Air Planning & Implementation Branch
Scott Davis, Chief
Lynorae Benjamin, Acting Chief

Communities & Air Toxics Section
Amber Davis, Chief

Air Regulatory Management Section
Jane Spann, Acting Chief

Air Permits Section
Kelly Fortin, Acting Chief

Grants Management & Strategic Planning Office
Stuart Perry, Chief
## Roles and Responsibilities

<table>
<thead>
<tr>
<th>ARD</th>
<th>LSASD</th>
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<tbody>
<tr>
<td>• Network plan &amp; assessment reviews &amp; approvals</td>
<td>• TSAs</td>
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<tr>
<td>• Monitoring site approval</td>
<td>• QAPP reviews &amp; approvals</td>
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<td>• Data certification reviews</td>
<td>• SRP verifications</td>
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<tr>
<td>• Data analyses</td>
<td>• Training</td>
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<tr>
<td>• Grant reviews</td>
<td>• Technical support to state/local/tribal air monitoring agencies</td>
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<tr>
<td>• Training</td>
<td>• NPEP audit coordination</td>
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<td>• Annual PM filter order</td>
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<td>• Toxics program support</td>
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<td>• New site reviews</td>
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Region 4
Ambient Air Monitoring Network

<table>
<thead>
<tr>
<th>Total # of Sites</th>
<th>Total # of Criteria Monitors</th>
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<tbody>
<tr>
<td>Region 1: 87</td>
<td>Region 1: 307</td>
</tr>
<tr>
<td>Region 2: 83</td>
<td>Region 2: 231</td>
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<tr>
<td>Region 3: 191</td>
<td>Region 3: 560</td>
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<td><strong>Region 4: 338</strong></td>
<td><strong>Region 4: 856</strong></td>
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<td><strong>Region 5: 372</strong></td>
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<td>Region 6: 242</td>
<td>Region 6: 630</td>
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<td>Region 7: 114</td>
<td>Region 7: 341</td>
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<td>Region 8: 232</td>
<td>Region 8: 669</td>
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<td><strong>Region 9: 368</strong></td>
<td><strong>Region 9: 1160</strong></td>
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<td>Region 10: 84</td>
<td>Region 10: 179</td>
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</tbody>
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Region 4 Air Monitoring Agencies

- 28 Monitoring Agencies
- 18 Primary Quality Assurance Organizations

- Florida
  - 7 locals
- North Carolina
  - 3 locals
- Tennessee
- Memphis, TN
- Chattanooga, TN
- Nashville, TN
- Knoxville, TN

- Mississippi
- Alabama
- Birmingham, AL
- Huntsville, AL
- Kentucky
- Louisville, KY
- Georgia
- South Carolina
- 3 Tribes
Region 4 Air Monitoring QA

- Technical Systems Audits
  - ~9 audits per fiscal year (FY)
- QAPP Reviews/Approvals
- Standard Reference Photometer
  - ~50 Ozone instrument certifications per FY
- National Performance Evaluation Program Audits
  - ESAT Contractors
  - ~200 NPAP & PEP per FY
- National PM$_{2.5}$ Laboratory
  - ESAT Contractors
  - Weigh ~7000 filters per FY
- Training & Workshops
- Special studies
- Hurricane responses
R4 Air Monitoring QA Staff
Current Challenges

• Loss of trained, experienced staff
• Many new, inexperienced air monitoring personnel
• Lack of training resources
• Budget difficulties
  ▫ Difficult to replace staff as they retire or leave
  ▫ Difficult to replace aging equipment
  ▫ In some cases, difficult to obtain standards and QA certifications in a timely manner
Common Technical Systems Audit

Findings

- Loss of knowledge, trained personnel
- Inadequate or lack of data validation
  - Not validating contract lab data packages
- Issues with QAPPs and SOPs
  - New SOPS needed for: Data Validation, Document Control, Records Management
- Poor documentation practices
- Aged monitoring equipment
- Not following instrumentation FEM requirements
National Contributions

- APTI 470 Course – Stephanie McCarthy
- Ozone TAD Update – Keith Harris
- Air Monitoring QAPP Guide (Workgroup) – Stephanie McCarthy
- Data Validation Guidance (Workgroup) – Stephanie McCarthy