## Event Schedule

### Mon, Mar 04, 2024

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00 PM</td>
<td>Registration and Mixer</td>
<td>5:00 PM - 9:00 PM, Mar 4&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832&lt;br&gt;Registration and Social/Mixer</td>
</tr>
</tbody>
</table>

### Tue, Mar 05, 2024

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM</td>
<td>Registration and Coffee</td>
<td>8:00 AM - 9:00 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Welcome and Keynote Speaker (Moderator: Stoeckel)</td>
<td>9:00 AM - 10:00 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832&lt;br&gt;Moderator: Stoeckel</td>
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<tr>
<td></td>
<td>2 Subsessions</td>
<td></td>
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<tr>
<td></td>
<td>Welcome: 2024 Workshop on Ecophysiology &amp; Environmental Tolerance Techniques</td>
<td>9:00 AM - 9:10 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td>Keynote: Title TBA</td>
<td>9:10 AM - 9:50 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Respirometry Techniques (Moderator: Stoeckel)</td>
<td>10:00 AM - 11:00 PM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832&lt;br&gt;Moderator: Stoeckel</td>
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<td>4 Subsessions</td>
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<tr>
<td></td>
<td>General: Acclimation, Intermittent, Closed, Micro-respirometry</td>
<td>10:00 AM - 10:10 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
</tr>
<tr>
<td></td>
<td>Endpoints: SMR, RMR, MMR, DOcrit, RI</td>
<td>10:10 AM - 10:25 PM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<tr>
<td></td>
<td>Respirometry Techniques: Field</td>
<td>10:25 AM - 10:45 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
</tr>
<tr>
<td></td>
<td>Discussion: Respirometry Techniques</td>
<td>10:45 AM - 11:00 AM, Mar 5&lt;br&gt;540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
</tr>
</tbody>
</table>
Sublethal Behavioral Indicators of Stress (Moderator: Stoeckel)

3 Subsessions

- **Behavioral Responses**
  - **Overview**: 11:00 AM - 11:25 AM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Valveometry**
  - **Overview**: 11:25 AM - 11:45 AM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Discussion: Sublethal Behavioral Indicators of Stress**
  - **Overview**: 11:45 AM - 12:00 PM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

Lunch (Provided)

- **Overview**: 12:00 PM - 1:00 PM, Mar 5
- Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
- Lunch will be provided and networking encouraged.

Indicators of Stress: Biomarkers (Moderator: Hazelton)

4 Subsessions

- **Biomarker Overview & History**
  - **Overview**: 1:00 PM - 1:20 PM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Interpretation of Metabolomics in Mussels**
  - **Overview**: 1:20 PM - 1:40 PM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **New Directions in Transcriptomics / Metabolomics**
  - **Overview**: 1:40 PM - 2:00 PM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Discussion: Indicators of Stress: Biomarkers**
  - **Overview**: 2:00 PM - 2:15 PM, Mar 5
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

Break

- **Overview**: 2:15 PM - 2:25 PM, Mar 5
- Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

Energetics Models (Moderator: Hazelton)

- **Overview**: 2:25 PM - 3:40 PM, Mar 5
- Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

(Moderator: Hazelton)
4 Subsessions
- **Cellular Energy Allocation Modeling**
  - 2:25 PM - 2:50 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
- **Discussion: Cellular Energy Allocation Modeling**
  - 2:50 PM - 3:00 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
- **Scope for Growth Modeling**
  - 3:00 PM - 3:30 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
- **Discussion: Scope for Growth Modeling**
  - 3:30 PM - 3:40 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

3 Subsessions
- **Silos & Cages**
  - 3:50 PM - 4:15 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
- **Mussel Growth as an Indicator of Stress in the Field**
  - 4:15 PM - 4:45 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
- **Discussion: Indicators of Stress: Growth and Survival**
  - 4:45 PM - 5:00 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

5:00 PM
**Dinner on Your Own**
- 5:00 PM - 7:00 PM, Mar 5

7:00 PM
**Poster Session and Mixer**
- 7:00 PM - 9:00 PM, Mar 5
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

Wed, Mar 06, 2024
8:00 AM
**Registration and Coffee**
- 8:00 AM - 9:00 AM, Mar 6
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

9:00 AM
**Functional Death and Lethal Stress Assays (Moderator: Fogelman)**
- 9:00 AM - 9:55 AM, Mar 6
  - 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832
  (Moderator: Fogelman)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>9:00 AM</td>
<td><strong>Ctmax</strong></td>
<td>9:20 AM</td>
<td><strong>Lethal Tolerances and Application</strong></td>
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<td><img src="#" alt="9:00 AM - 9:20 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="9:20 AM - 9:45 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td><strong>Discussion: Functional Death and Lethal Stress Assays</strong></td>
<td>9:45 AM</td>
<td><strong>Discussion</strong></td>
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<td><img src="#" alt="9:45 AM - 9:55 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="9:45 AM - 9:55 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td><strong>Break</strong></td>
<td>9:55 AM</td>
<td><strong>Interpretation of Thermal Performance Curves (Moderator: Fogelman)</strong></td>
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<td><img src="#" alt="9:55 AM - 10:05 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="10:05 AM - 11:00 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><strong>1 Subsessions</strong></td>
<td>10:05 AM</td>
<td><strong>Scaling-up: Community Effect Modeling (Moderator: Fogelman)</strong></td>
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<td><img src="#" alt="10:05 AM - 10:30 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="11:00 AM - 12:00 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td><strong>1 Subsessions</strong></td>
<td>11:00 AM</td>
<td><strong>Excretion and Biodeposits</strong></td>
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<td><img src="#" alt="11:00 AM - 11:20 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="11:20 AM - 11:45 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td><strong>Scaling Community to Ecosystem (Guilds)</strong></td>
<td>11:20 AM</td>
<td><strong>Discussion: Scaling-up: Community Effects Modeling</strong></td>
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<td><img src="#" alt="11:20 AM - 11:45 AM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="11:45 AM - 12:00 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td><strong>Discussion</strong></td>
<td>11:45 AM</td>
<td><strong>Management Needs: Species Recovery Planning (Moderator: Kearny)</strong></td>
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<td><img src="#" alt="11:45 AM - 12:00 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="1:00 PM - 2:35 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td></td>
<td><strong>Break</strong></td>
<td>12:00 PM</td>
<td><strong>Lunch (Provided)</strong></td>
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<td><img src="#" alt="12:00 PM - 1:00 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="1:00 PM - 2:35 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><strong>Management Needs: Species Recovery Planning (Moderator: Kearny)</strong></td>
<td>1:00 PM</td>
<td><strong>Discussion</strong></td>
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<td><img src="#" alt="1:00 PM - 2:35 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="1:00 PM - 2:35 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<tr>
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<td><strong>Discussion</strong></td>
<td>1:00 PM</td>
<td><strong>Management Needs: Species Recovery Planning (Moderator: Kearny)</strong></td>
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<td><img src="#" alt="1:00 PM - 2:35 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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<td><img src="#" alt="1:00 PM - 2:35 PM, Mar 6" /> 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832</td>
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(Moderator: Fogelman)
### 2:40 PM

**Management Needs: Habitat Suitability Modeling (Moderator: Kearny)**

- **Date & Time:** 02/04 PM - 03:50 PM, Mar 06
- **Location:** 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

4 Subsessions

- **How We Do It Now: Side-scan Sonar**
  - Date & Time: 02:40 PM - 03:00 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **HWDIN: Land Use/Watershed Assessment**
  - Date & Time: 03:00 PM - 03:20 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **HWDIN: Stream Restoration**
  - Date & Time: 03:20 PM - 03:35 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Discussion: Management Needs - Habitat Suitability Modeling (add speaker)**
  - Date & Time: 03:35 PM - 03:50 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

### 3:55 PM

**Management Needs: Contaminants and Die-offs (Moderator: Kearny)**

- **Date & Time:** 03:55 PM - 05:05 PM, Mar 06
- **Location:** 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

4 Subsessions

- **Assessing / Mitigating Die-offs**
  - Date & Time: 03:55 PM - 04:15 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Contaminants of Emerging Concern**
  - Date & Time: 04:15 PM - 04:35 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Chemical Runoff: Mussels and Hosts**
  - Date & Time: 04:35 PM - 04:50 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

- **Discussion: Management Needs - Contaminants and Die-offs (add speaker)**
  - Date & Time: 04:50 PM - 05:05 PM, Mar 06
  - Location: 540 at The Park 570 Devall Drive, Suite 101 Auburn, AL 36832

### 6:00 PM

**Fish Fry Mixer at North Auburn Pavilion**
Thu, Mar 07, 2024

8:00 AM

Coffee

9:00 AM

9 am Concurrent Hands-on Sessions (Tentative; Assigned at Registration Check-In)

9:00 AM - 10:00 AM, Mar 7

E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830

4 Subsessions

- **9 am 1: Mussel Silos (Maynard)**
  9:00 AM - 9:50 AM, Mar 7
  Campus Ponds

- **9 am 2: Laboratory Respirometry (Stoeckel)**
  9:00 AM - 9:50 AM, Mar 7
  Counting Shed

- **9 am 3: Nothing Scheduled**
  9:00 AM - 9:50 AM, Mar 7
  E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830

- **9 am 4: Nothing Scheduled**
  9:00 AM - 9:50 AM, Mar 7
  E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830

10:00 AM

10 am Concurrent Hands-on Sessions (Tentative; Assigned at Registration Check-In)

10:00 AM - 11:00 AM, Mar 7

E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830

4 Subsessions

- **10 am 1: Field Respiration 1 (Lopez)**
  10:00 AM - 10:50 AM, Mar 7
  Campus Ponds

- **10 am 2: Micro-Respirometry (Fogelman)**
  10:00 AM - 10:50 AM, Mar 7
  Teaching Classroom

- **10 am 3: Hemolymph and Swabs (Polera)**
  10:00 AM - 10:50 AM, Mar 7
  ETS Teaching Lab

- **10 am 4: Mussel Silo Placement (Haag)**
  10:00 AM - 11:00 AM, Mar 7
  Field Trip - Location TBA

11:00 AM

11 am Concurrent Hands-on Sessions (Tentative; Assigned at Registration Check-In)

11:00 AM - 12:00 PM, Mar 7

E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
</tr>
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<tbody>
<tr>
<td>11 am</td>
<td><strong>1: Field Excretion (Lodata)</strong></td>
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<tr>
<td></td>
<td>11:00 AM - 11:50 AM, Mar 7</td>
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<tr>
<td></td>
<td>Campus Ponds</td>
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<tr>
<td>11 am</td>
<td><strong>2: Valveometry (Stoeckel)</strong></td>
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<td>11:00 AM - 11:50 AM, Mar 7</td>
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<td>Counting Shed</td>
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<td>11 am</td>
<td><strong>3: Field Respirometry Data (Lopez)</strong></td>
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<td>11:00 AM - 11:50 AM, Mar 7</td>
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<td></td>
<td>Conference Room</td>
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<tr>
<td>11 am</td>
<td><strong>4: Mussel Silo Placement (Haag) - Continuation of 10 am 4</strong></td>
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<td>11:00 AM - 11:50 AM, Mar 7</td>
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<tr>
<td></td>
<td>Field Trip - Location TBA</td>
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<tr>
<td>12:00 PM</td>
<td>Pizza Lunch (Provided)</td>
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<td></td>
<td>12:00 PM - 1:00 PM, Mar 7</td>
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<td>E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830</td>
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<tr>
<td>1:00 PM</td>
<td><strong>Concurrent Hands-on Sessions (Tentative; Assigned at Registration Check-In)</strong></td>
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<td>1:00 PM - 2:00 PM, Mar 7</td>
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<td>E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830</td>
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<tr>
<td>2:00 PM</td>
<td><strong>Concurrent Hands-on Sessions (Tentative; Assigned at Registration Check-In)</strong></td>
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<td>2:00 PM - 3:00 PM, Mar 7</td>
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<td>E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830</td>
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<tr>
<td>3:00 PM</td>
<td><strong>Concurrent Hands-on Sessions (Tentative; Assigned at Registration Check-In)</strong></td>
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<td>3:00 PM - 4:00 PM, Mar 7</td>
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</tbody>
</table>
4 Subsessions

- **3 pm 1: Field Excretion (Lodata)**
  - 3:00 PM - 3:50 PM, Mar 7
  - Campus Ponds

- **3 pm 2: Valveometry (Stoeckel)**
  - 3:00 PM - 3:50 PM, Mar 7
  - Counting Shed

- **3 pm 3: Field Respirometry Data (Lopez)**
  - 3:00 PM - 3:50 PM, Mar 7
  - Conference Room

- **3 pm 4: Mussel Silo Placement (Haag) - Continuation of 2 pm 4**
  - 3:00 PM - 4:00 PM, Mar 7
  - Field Trip - Location TBA

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4:00 PM

**2024 FMCS Workshop Ends**

- 4:00 PM - 4:00 PM, Mar 7
- E.W. Shell Fisheries Center 2101 N. College St. Auburn, AL 36830

Thanks and safe travels.