Company CEO: ____________________________
Product demonstration station officials: ____________________________

Check here if the company has their PASSED safety inspection card

Companies without their safety inspection PASSED card cannot participate in the product demonstration.

---

### Organizational and Operational Effectiveness (up to 10 points)

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2 points – Organization</td>
</tr>
<tr>
<td>Chain of command evident</td>
</tr>
<tr>
<td>Roles clear and executed well</td>
</tr>
<tr>
<td>Up to 2 points – Task Plan</td>
</tr>
<tr>
<td>Task plan is well thought out to maximize score</td>
</tr>
<tr>
<td>Alternate plans available and all team members are aware of the plan</td>
</tr>
<tr>
<td>Up to 2 points – Time Management</td>
</tr>
<tr>
<td>Awareness of time</td>
</tr>
<tr>
<td>Adjusting timeline to adapt to situations</td>
</tr>
<tr>
<td>Up to 2 points – Team Cooperation</td>
</tr>
<tr>
<td>Composure under pressure</td>
</tr>
<tr>
<td>Supportive of each other and communicate well with each other</td>
</tr>
<tr>
<td>Up to 2 points – ROV Deployment and Control</td>
</tr>
<tr>
<td>ROV deployed by the end of the 5-minute set-up period</td>
</tr>
<tr>
<td>ROV is under control of pilot and prepared to perform tasks</td>
</tr>
</tbody>
</table>

Total Organizational and Operational Effectiveness (out of 10)

---

### Bonus points for size

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size bonus (up to 10 points)</td>
</tr>
<tr>
<td>ROV is less than 48 cm – 10 bonus points</td>
</tr>
<tr>
<td>ROV is within 48.1 cm and 60 cm – 5 bonus points</td>
</tr>
<tr>
<td>ROV is greater than 60.1 cm – 0 bonus points</td>
</tr>
</tbody>
</table>

Judge initials: ____________________________
CEO initials: ____________________________

---

Fuses: ROV systems are allowed one replacement fuse during the product demonstration. In the event that the ROV system blows the second fuse during the demonstration, time will stop, the demonstration run will be over, and no additional points will be earned. Companies should have adequate replacement fuses on hand, MATE will not provide replacements.

---

### Task #1: The Ubiquitous Problem of Plastic Pollution (up to 80 points)

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judges’ Notes: Companies must complete the steps of task 1.1 “Seabin - Cleaning up our ocean one marina at a time” in order. The other tasks may be done in any order.</td>
</tr>
<tr>
<td>1.1 up to 35 points – Seabin - Cleaning up our ocean one marina at a time</td>
</tr>
<tr>
<td>5 points – disconnecting the older power connector to the Seabin</td>
</tr>
<tr>
<td>10 points – removing a previously installed Seabin's mesh catch bag</td>
</tr>
<tr>
<td>10 points – installing a new mesh catch bag into the Seabin</td>
</tr>
<tr>
<td>10 points – reconnecting the power connector to the Seabin</td>
</tr>
</tbody>
</table>
### Task # 1: Removing Plastic Pollution from Top to Bottom (up to 45 points)

<table>
<thead>
<tr>
<th>Subtask Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.2 up to 45 points - Remediation:</strong> Removing plastic pollution from top to bottom</td>
<td></td>
</tr>
<tr>
<td>o up to 15 points – removing floating plastic debris from the surface</td>
<td></td>
</tr>
<tr>
<td>15 points – remove all 6 pieces of debris</td>
<td>0</td>
</tr>
<tr>
<td>10 points – remove 3 to 5 pieces of debris</td>
<td>5</td>
</tr>
<tr>
<td>5 points – remove 1 to 2 pieces of debris</td>
<td>10</td>
</tr>
<tr>
<td>0 points – remove 0 pieces of debris</td>
<td>15</td>
</tr>
<tr>
<td>o up to 20 points – removing a ghost net from midwater</td>
<td></td>
</tr>
<tr>
<td>10 points – pulling a pin to simulate cutting the ghost net free</td>
<td>0</td>
</tr>
<tr>
<td>5 points – removing the ghost net (and pin) from the water</td>
<td>5</td>
</tr>
<tr>
<td>5 points – removing the ghost net (and pin) from the water</td>
<td>5</td>
</tr>
<tr>
<td>o up to 10 points – removing plastic debris from the bottom</td>
<td></td>
</tr>
<tr>
<td>5 points each, 10 points total – removing plastic debris from the bottom</td>
<td>0</td>
</tr>
</tbody>
</table>

### Task # 2: The Catastrophic Impact of Climate Change on Coral Reefs (up to 70 points)

<table>
<thead>
<tr>
<th>Subtask Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1 up to 20 points – flying a transect line over a coral reef and mapping points of interest</strong></td>
<td></td>
</tr>
<tr>
<td>15 points – flying a transect over a coral reef</td>
<td>0</td>
</tr>
<tr>
<td>5 points – mapping points of interest on the reef</td>
<td>15</td>
</tr>
<tr>
<td><strong>2.2 10 points – determining the health of a coral colony by comparing its current condition to past data</strong></td>
<td></td>
</tr>
<tr>
<td>0 points – mapping points of interest on the reef</td>
<td>0</td>
</tr>
<tr>
<td>5 points – removing the ghost net (and pin) from the water</td>
<td>10</td>
</tr>
<tr>
<td><strong>2.3 up to 20 points – propagating corals onto the reef</strong></td>
<td></td>
</tr>
<tr>
<td>5 points each, 10 points total – removing coral fragments from the nursery structure</td>
<td>0</td>
</tr>
<tr>
<td>5 points each, 10 points total – outplanting coral fragments to designated locations on the reef</td>
<td>5</td>
</tr>
<tr>
<td><strong>2.4 5 points each, 10 points total – culling an outbreak of Crown of Thorn sea stars</strong></td>
<td></td>
</tr>
<tr>
<td>0 points – mapping points of interest on the reef</td>
<td>0</td>
</tr>
<tr>
<td>5 points – returning the sample to the surface</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Total Task # 1 (out of 80)  
#### Total Task # 2 (out of 70)
### Task #3: Maintaining Healthy Waterways II: Delaware River and Bay (up to 50 points)

**Judges’ Notes:** Companies may complete the steps of this task in any order.

#### 3.1 up to 20 points – retrieving a sediment sample from inside a drain pipe to analyze for contaminants

- **10 points** – returning the sediment sample to the surface
- **5 points each, 10 points total** – determining the type of contaminant(s) present in the sediment sample

<table>
<thead>
<tr>
<th>Points</th>
<th>0</th>
<th>10</th>
</tr>
</thead>
</table>

#### 3.2 up to 10 points – estimating the number of mussels in a mussel bed

- **5 points** – deploying a quadrat and counting the number of mussels in the quadrat
- **5 points** – estimating the number of mussels and the total water filtered by the mussel bed

<table>
<thead>
<tr>
<th>Points</th>
<th>0</th>
<th>5</th>
</tr>
</thead>
</table>

#### 3.3 up to 20 points – eel restoration

- **10 points** – removing a trap full of eels from the designated area
- **10 points** – placing an empty eel trap in a designated area

<table>
<thead>
<tr>
<th>Points</th>
<th>0</th>
<th>10</th>
</tr>
</thead>
</table>

**Total Task #3 (out of 50)**

---

### Penalty Points (deduct 5 points for each infraction)

<table>
<thead>
<tr>
<th>Infraction</th>
<th>No. of Infractions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety: Product demonstration officials may deduct points for safety violations. Minor violations are a 5 point penalty. Major violations may be 10 or more points. Product demonstration officials may also disqualify a company for extreme safety violations. <strong>Note:</strong> An official’s decision to disqualify a company due to safety concerns is final. If there is a safety concern, please contact the lead safety inspector or competition coordinator.</td>
<td></td>
</tr>
</tbody>
</table>

| Tether Pulling | a |
| Illegal communication | b |
| Debris | c |
| Diver Assistance | d |

**Total Penalty Points**

\[
\text{Total Penalty Points} = (a + b + c + d) + \text{Safety violations}
\]

<table>
<thead>
<tr>
<th>Total</th>
<th></th>
<th>5</th>
</tr>
</thead>
</table>

---

**2021: Excite, Educate, Empower**

**NAVIGATOR CLASS SCORE SHEET**

Page 3 of 4
## TIME BONUS (1 point for every minute and 0.01 point for every second under 15 minutes)

| Duration of Product Demonstration: |  
| Minutes under 15 remaining: | ________ X 1 point = __________|
| Seconds remaining: | __________ X 0.01 point = __________|
| **Total** |  
| **Time bonus** |  

## TOTAL PRODUCT DEMONSTRATION SCORE

|  
| **Official’s initials:** | ________ |
| **Company CEO’s initials:** | ________ |