

MATE Great Lakes Regional ROV Competition
May 16, 2020
Contest Information

New website: <https://materovcompetition.org/greatlakes>

Registration for the Great Lakes Regional event in Alpena, MI opens: January 2020

First, your coach registers your TEAM for the regional event, then all of your student team members and any additional coaches must individually register as a part of that team.

DEADLINE FOR TEAM registration: March 16, 2020

DEADLINE FOR INDIVIDUALS to register as part of that team: April 16, 2020

Any changes to this information will be posted to the *MATE Great Lakes Regional ROV Competition page*.

Location: NOAA's Thunder Bay National Marine Sanctuary visitor center and marine technology test tank: all on the visitor center campus (the Great Lakes Maritime Heritage Center), 500 W. Fletcher Street, Alpena, MI. 989-884-6200, thunderbay@noaa.gov

This is partially an outdoor event, rain or shine. In case of rain, there will be some tented areas, but it will be necessary for students to walk outdoors between different areas of the campus throughout the day.

EXPLORER class:

EXPLORER class companies are not required to attend a regional event, they should register directly for the International event at www.materovcompetition.org. However, EXPLORER teams near our Regional event are invited to come and practice and/or volunteer. Please contact us in advance if you are coming so we can sort out power arrangements for your vehicle! Thunderbay@noaa.gov



(r. 12/16/19)

RANGER class:

Company limit: One coach may register up to two RANGER class teams.

RANGER class team requirements for Great Lakes regional event:

Engineering and communication

1. Technical Documentation **Due: APRIL 28, 2020** submit here:
<https://forms.gle/RrkAuzdm3iuTox4u9>
2. SID & company spec sheet **Due: APRIL 28, 2020** submit here:
<https://forms.gle/RrkAuzdm3iuTox4u9>
 - ALSO, make sure to provide a printed copy of the SID to both the safety and engineering/product sales presentation judges at the competition. Make sure to update your original SID if you made changes to your vehicle between submitting SID online and the actual competition day – alert judges to any of those changes you made.
3. Marketing display poster **Due: May 5, 2020** submit here:
<https://forms.gle/RrkAuzdm3iuTox4u9>
 - ALSO, the printed marketing display poster must be shown for the public at the competition or the score will be disqualified.
4. Engineering/product sales presentation (performed in person at the competition)

See the [Ranger Competition Manual](https://materovcompetition.org) (<https://materovcompetition.org>) for more info on document specifications and any information you don't see here in this Regional event information document.

Engineering/product sales presentations will be given indoors at the Thunder Bay National Marine Sanctuary visitor center, in the office spaces. Companies will set up Marketing poster displays in the exhibit area of the visitor center – tables or easels will be provided.

RANGER class team Product demonstration mission set up for Great Lakes regional event:

Throughout competition day, RANGER companies will receive two different time slots to demonstrate their product (ROV) in the tank/pool. Companies should try and complete as many tasks as possible during each demonstration mission attempt. Each product demonstration mission attempt will consist of:

- 5 minute set-up period
- 15 minute product demonstration period
- 5 minute demobilization period

During each attempt, task points will be tallied. Of the two attempts, the one with the



highest score will be added towards your overall point total for the competition.

Number of team members allowed on the tank/pool deck: Maximum of **six** RANGER class team members are allowed on the tank/pool deck for each of the two product demonstration mission attempts. Teams may swap out different team members of the same team on the tank/pool deck for the second attempt. Coaches and parents are **not allowed** to accompany the team onto the tank/pool deck Product demonstration mission competition area.

RANGER class Product demonstration mission operational details for Great Lakes regional event:

Tank/pool: The circular tank/pool is open to the outdoors and the bottom is rough concrete and sloped towards the center. The depth for RANGER class product demonstrations is approximately 10 - 12 feet.

Tank deck: a table and two chairs will be provided for the team. Companies must provide their own video displays. See the Ranger class competition manual for rules about number of displays.

Diver Support: Diver support may be available during the product demonstration runs, but any diver assistance will constitute a penalty.

PFDs: Companies are not required to wear PFDs at the tank/pool edge. The Great Lakes regional competition will NOT have PFDs available for use. Teams may bring their own PFDs if they wish.

Power:

Anderson Powerpole connections are required for RANGER class. Companies will not be able to connect to the competition power supply without Anderson Powerpole connectors. RANGER class companies will be provided a dedicated power supply that will provide the nominal 12 volts via the Powerpole connectors.

One GFI-protected outlet with a nominal 115 Volts AC (60 Hertz) and 15 amps maximum will be provided for power for a team's video monitor. This AC power source cannot be used to directly or indirectly power the vehicle.

Pressurized cylinders: All pressurized cylinders must be approved by the US DOT.

Safety inspection at the competition:



(r. 12/16/19)

After registration, RANGER class companies must pass a safety inspection before being allowed to perform their Product demonstration mission attempts in the tank/pool. After the team has completed registration, they should take their vehicle to be inspected by the safety judge in the “maker space” area of the regional event (see map of campus). Safety inspection is pass/fail with associated score towards the overall competition point total.

Companies that pass their safety inspection will be given a green card. Companies must present the green card to the Product demonstration station mission judge each time on the tank deck, in order to compete in the tank.

Please Note: The Great Lakes regional competition will not be requiring or offering points for Corporate Responsibility or for Job Safety Analysis (JSA)



NAVIGATOR class:

Please see the [MATE ROV Competition Navigator Class Manual](https://materovcompetition.org) for any details not listed out here.
<https://materovcompetition.org>

Engineering and communication

1. **NEW THIS YEAR:** SID & company spec sheet **Due: APRIL 28, 2020** submit here:
<https://forms.gle/RrkAuzdm3iuTox4u9>
 - ALSO, make sure to provide a printed copy of the SID to both the safety and engineering/product sales presentation judges at the competition. Make sure to update your original SID if you made changes to your vehicle between submitting SID online and the actual competition day – alert judges to any of those changes you made.
2. Marketing display poster **Due: May 5, 2020** submit here:
<https://forms.gle/RrkAuzdm3iuTox4u9>
 - ALSO, the printed marketing display poster must be shown for the public at the competition or the score will be disqualified.
3. Engineering/product sales presentation (performed in person at the competition)
4. **NO TECHNICAL DOCUMENT IS REQUIRED FOR NAVIGATOR**

Engineering/product sales presentations will be given indoors at the Thunder Bay National Marine Sanctuary visitor center, in the office spaces. Companies will set up Marketing poster displays in the exhibit area of the visitor center – tables or easels will be provided.

NAVIGATOR class team Product demonstration mission set up for Great Lakes regional event:

Companies will get two different attempts throughout the day to try and complete as many tasks as possible on each attempt. Each attempt will consist of:

- 5-minute set-up period
- 15-minute product demonstration period
- 5-minute demobilization period

Whichever attempt yields a higher total score: only that score counts, and will be added towards your total competition score.

Number of team members allowed on the tank/pool deck: Maximum of **six** NAVIGATOR class team members are allowed on the tank/pool deck for each of the two product demonstration mission attempts. Teams may swap out different team members of the same team on the tank/pool deck for the second attempt. Coaches and parents are not allowed to accompany the team onto the tank/pool deck Product demonstration mission competition area. **Please note the number of team members allowed on deck for this event is more than is listed in the *MATE ROV Competition Navigator Class Manual* – our regional event allows for more team members on the deck.**



NAVIGATOR class Product demonstration mission operational details for Great Lakes regional event:

Tank/pool: The circular tank/pool is open to the outdoors and the bottom is rough concrete and sloped towards the center. The depth for NAVIGATOR class product demonstrations is approximately 10 - 12 feet.

Tank deck: a table and two chairs will be provided for the team. Companies must provide their own video displays. See the Navigator class competition manual for rules about number of displays.

Diver Support: Diver support may be available during the product demonstration runs, but any diver assistance will constitute a penalty.

PFDs: Companies are not required to wear PFDs at the tank/pool edge. The Great Lakes regional competition will NOT have PFDs available for use. Teams may bring their own PFDs if they wish.

Power:

Anderson Powerpole connections are required for RANGER class. Companies will not be able to connect to the competition power supply without Anderson Powerpole connectors. NAVIGATOR class companies will be provided a dedicated power supply that will provide the nominal 12 volts via the Powerpole connectors.

One GFI-protected outlet with a nominal 115 Volts AC (60 Hertz) and 15 amps maximum will be provided for power for a team's video monitor. This AC power source cannot be used to directly or indirectly power the vehicle.

Safety inspection:

After registration, NAVIGATOR class companies must pass a safety inspection before being allowed to perform their Product demonstration mission attempts in the tank/pool. After the team has completed registration, they should take their vehicle to be inspected by the safety judge in the "maker space" area of the regional event (see map of campus).

Companies that pass their safety inspection will be given a green card. Companies must present the green card to the Product demonstration station mission judge each time on the tank deck, in order to compete in the tank.

Please Note: The Great Lakes regional will not be offering points for Corporate Responsibility.





SCOUT class:

Please see the [MATE ROV Competition Scout Class Manual](https://materovcompetition.org) for any details not listed out here.
<https://materovcompetition.org>

Engineering and communication

1. Marketing display poster **Due: May 5, 2020** submit here:
<https://forms.gle/RrkAuzdm3iuTox4u9>
 - ALSO, the printed marketing display poster must be shown for the public at the competition or the score will be disqualified.
2. Engineering/product sales presentation (performed in person at the competition)
3. SID (the “System Interconnection Diagram” shown to safety and engineering/product presentation judges in-person at the competition – you must have one to pass safety inspection)
4. **No Company spec sheet or Tech Report Required**

Engineering/product sales presentations will be given indoors at the Thunder Bay National Marine Sanctuary visitor center, in the office spaces. Companies will set up Marketing poster displays in the exhibit area of the visitor center – tables or easels will be provided.

SCOUT class team Product demonstration mission set up for Great Lakes regional event:

Companies will get two different attempts throughout the day to try and complete as many tasks as possible on each attempt. Each attempt will consist of:

- **5-minute*** set-up period
- **15-minute*** product demonstration period
- **5-minute*** demobilization period

Whichever attempt yields a higher total score: only that score counts, and will be added to the Marketing display/poster, Engineering/Product Sales, etc. for your total competition score.

***our regional event allows long times here than you will see listed in the MATE ROV Competition Scout Manual.**

Number of team members allowed on the tank/pool deck: Maximum of **six** SCOUT class team members are allowed on the tank/pool deck for each of the two product demonstration mission attempts. Teams may swap out different team members of the same team on the tank/pool deck for the second attempt. Coaches and parents are not allowed to accompany the team onto the tank/pool deck Product demonstration mission competition area. **Please note the number of team members allowed on deck for this event is more than is listed in the MATE ROV Competition Scout Class Manual – our regional event allows for more team members on the deck.**

SCOUT class Product demonstration mission operational details for Great Lakes regional event:

Power:



SCOUT class companies MUST use Anderson Powerpole connectors to connect to the Great Lakes regional competition power supply. NO OTHER POWER SUPPLY IS AVAILABLE FOR SCOUT Class = just the one nominal 12 volt power supply source is provided via Anderson Powerpole connectors.

Pool/tank: The depth for the SCOUT class product demonstrations will be 4 feet deep. Tasks are laid out on flat, 8' x 8' metal platforms attached to the side of the competition tank/pool. Tank/pool deck: station(s) will be identified by a laminated card on the tank deck area. SCOUT class stations will **not have tables, chairs, video monitors, or access to AC power.**

Diver Support: Diver support may be available during the product demonstration runs, but any diver assistance will constitute a penalty.

PFDs: Companies are not required to wear PFDs at the tank edge. The Great Lakes regional competition event will NOT have PFDs available for use.

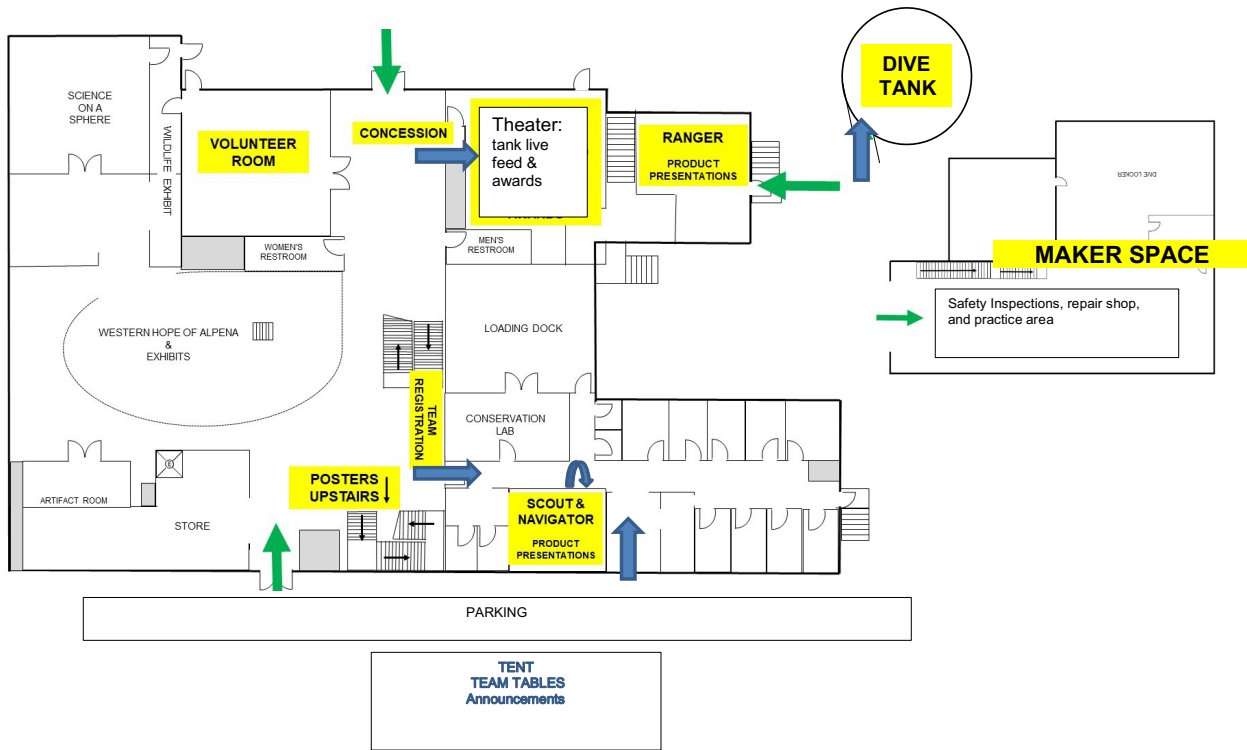
Safety inspection:

After registration, SCOUT class companies must pass a safety inspection before being allowed to perform their Product demonstration mission attempts in the tank/pool. After the team has completed registration, they should take their vehicle to be inspected by the safety judge in the “maker space” area of the regional event (see map of campus).

Companies that pass their safety inspection will be given a green card. Companies must present the green card to the Product demonstration station mission judge each time on the tank deck, in order to compete in the tank.

Please Note: The Great Lakes regional will not be offering points for Corporate Responsibility to SCOUT class companies.





*Please note: depending on the number of teams participating each year, there may be a small spectator area set aside on the tank/pool deck for coaches, friends & family to observe the product demonstration missions from the tank/pool deck. There will also be a live stream video available on YouTube from underwater in the tank, this video feed will also be streamed in the visitor center theater.