

2020 Northern Gulf Coast Regional Contest Information

Hosted by the Dauphin Island Sea Lab
April 24-26, 2020

Registration for the Northern Gulf Coast regional ROV contest will open on January 21, 2020.

Check out the Northern Gulf Coast [regional contest webpage](#). Additional information will be posted in the News & Events tab.

Competition Dates for all classes: April 24-26, 2020

- April 24 (afternoon & evening): Check-in, Welcome, Safety Inspections, Demo overviews
- April 25 (all day): Pool demos (morning and afternoon) & Poster session (evening)
- April 26 (morning - mid afternoon): Presentations, Awards ceremony

Please note that the above general schedule is tentative. A final schedule will be sent out 2 weeks before the competition.

Location: Dauphin Island Sea Lab, Dauphin Island, AL

- Address: 101 Bienville Blvd, Dauphin Island, AL 36528
- Safety Inspections, Presentations, Posters and Award Ceremony will take place at the Dauphin Island Sea Lab.
- Pool missions will take place at Bishop State University, Mobile, AL

For all classes: If you have questions about the product demonstration tasks or product demonstration props, please ask those questions on the [competition forums](#). For questions regarding the Northern Gulf regional competition operations, contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org.

EXPLORER class:

EXPLORER class companies are NOT required to attend the Northern Gulf Coast regional to demonstrate their vehicle. EXPLORER class companies that wish to volunteer at the Northern Gulf Coast regional should contact Rachel McDonald by March 31, 2020.

RANGER class:

Company limit: The Northern Gulf Coast regional contest is limited to 8 RANGER class companies. Registration is limited to one RANGER class company per school. Schools wishing to register a second RANGER class company should contact the regional coordinator, Rachel McDonald, to be put on a waiting list. These schools will be notified by February 28 whether or not space is available.

RANGER class team registration will close on April 3, 2020.

Engineering & Communication requirements:

- **Documentation**
 - **Company spec sheet (pg 70)**
 - **SIDs (pg 45)**
 - **Non-ROV device design document (pg 45)**
 - **Non-ROV device SID (pg 46)**
 - **Company Safety Review (pgs 46-47)**
- **Engineering presentation***
- **Marketing Display**

****The Northern Gulf Coast Regional strongly encourages teams to create an AV slideshow (powerpoint, google slides, prezi, etc.) as part of their engineering presentation.***

Note: The Northern Gulf Coast regional contest will NOT require the technical documentation or JSA.

All documentation (as listed above) components are due by 11:59 PM CST on **Thursday, April 9th**. All documents must be submitted to the regional coordinator, Rachel McDonald, at rmcdonald@disl.org.

See the [RANGER Competition Manual](#) [section 2.2 Safety pre-inspection, section 2.2.1 Safety documentation requirements, Part 5: Engineering & Communication] for more info on the required documentation and how it should be submitted (file size, name, etc).

The NGC regional will use these documents to conduct an **initial safety review** worth 20 points using the [initial safety inspection sheet](#).

NOTE: By submitting your documentation, you are giving the MATE Center permission to publish these documents on its web site.

Engineering presentations will be given in the Shelby Auditorium. Presentations are open to participating teams, parents and other guests as space allows. It is *strongly encouraged* for teams to create an AV slideshow (powerpoint, google slides, prezi, etc.) to use while giving your engineering presentation. While the AV slideshow itself will not be judged, it allows a visual of your engineering design for the judges and others watching.

RANGER companies will have 10 minutes to give their presentation and 5 minutes to answer questions from the judges. Your presentation should describe 1) the engineering behind your vehicle's design; 2) how it operates; and 3) any possible safety issues. It should also highlight any innovations or creative solutions to solving the product demonstration tasks.

All of your team members should participate in the product demonstration and you should have your ROV with you (a table will be provided). Score sheets will be sent to teams a week after the competition and overall scores will be posted on our regional website.

The slideshow will need to be uploaded or shared in advance of the presentation. Companies may upload or share their presentation following the welcome on Friday, April 24.

Companies should set up their **marketing displays** in the Shelby Atrium following the welcome on Friday, April 24. The location to set up your company poster will be marked. Table space will be provided for all teams unless a poster stand is requested. If your team needs a stand for your poster please contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org by April 13th.

A marketing display/ poster session will take place Saturday evening in the Shelby Atrium. Teams will be required to have 2-3 members stationed at their poster/display to answer questions and discuss their poster and/or ROV to other student participants. Remaining team members, mentors and chaperons are encouraged to view and ask questions of other teams posters/displays. ROVs are encouraged but not required to be on display with your posters/ displays. In addition video displays and other accessories are permitted, but will not be judged.

Other important dates:

- The last day to pass the fluid power quiz is March 15th.
- The last day to submit laser specifications is April 1st.

Competition set-up:

RANGER companies will complete all three tasks in one product demonstration run. On competition day, RANGER companies will receive two attempts at the product demonstration. Each product demonstration time will consist of:

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

The higher of the two product demonstration scores will be added to your ENGINEERING & COMMUNICATION and SAFETY score to determine the total, overall score for the competition.

An event schedule will be released 2 weeks before the contest. If companies have any time constraints that they wish the MATE Center to consider, please contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org, by Friday, April 3rd (3 weeks prior to the competition).

Operational:

Size and Weight: The Northern Gulf Coast regional contest will be conducting size and weight measurements. A station will be set-up for teams to check their ROV size and weight BEFORE each pool demo.

Pool: The Bishop State pool has a flat bottom in the shallow end where the product demonstrations will be held. The depth for the RANGER class product demonstrations is approximately 1.2 meters (4 feet).

Product Demonstration Station: A table and two chairs will be provided at each product demonstration station.

The Northern Gulf Coast regional will NOT provide video monitors for RANGER class companies. Companies must provide their own video displays. See Vehicle Design & Building Specifications (3.8.2) in the Ranger Competition Manual for number of video displays allowed.

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

Personal Flotation Devices: Companies are not required to wear PFDs at the pool edge. The Bishop State pool will NOT have PFDs available for use.

Power: RANGER class companies will use a dedicated power supply that will provide the nominal 12 volts.

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

Companies are responsible for bringing their own device to retrieve the sediment sample from inside the drain pipe and their own quadrat to count mussels. The Northern Gulf Coast regional will not provide this equipment for you.

Safety inspection:

RANGER class companies will visit a safety inspection station in the company workstation area. During check-in, RANGER class companies will receive their safety inspection score sheet. After check-in, RANGER class companies are required to take their vehicle to a safety inspection table for inspection. A safety inspector will conduct the safety inspection.

Companies that pass their safety inspection will turn in their score sheet to the safety inspection judge. Companies must pass their safety inspection in order to use the practice pool on Friday and BEFORE they are allowed to compete in the product demos on Saturday. Companies that fail their safety inspection must address the issue and return to the safety inspection station for another inspection. A safety inspection table will be set-up at the Bishop State Pool for teams who did not pass their safety inspection on Friday, April 24.

The Northern Gulf Coast regional will not be offering points for a job site safety analysis (JSA).

The Northern Gulf Coast regional will not be offering points for Corporate Responsibility.

NAVIGATOR class:

Company limit: The Northern Gulf Coast regional contest is limited to 14 NAVIGATOR class companies. Registration is limited to one NAVIGATOR class company per school. Schools wishing to register a second NAVIGATOR class company should contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org, to be put on a waiting list. These schools will be notified by February 28th whether or not space is available. **PLEASE DO NOT REGISTER A SECOND NAVIGATOR CLASS COMPANY UNTIL THE REGIONAL COORDINATOR OPENS UP REGISTRATION TO WAIT LIST COMPANIES.**

NAVIGATOR class registration for the NGC regional contest will close on April 3, 2020.

Engineering & Communication requirements:

- **Documentation**
 - **Company Spec Sheet**
- **Engineering presentation**

The company spec sheet is due by 11:59 PM CST on **Friday, April 9th**. All documents must be submitted to the regional coordinator, Rachel McDonald at rmcdonald@disl.org.

Note: Navigator companies will NOT be required to bring a marketing display.

Engineering presentations will be given in the Shelby Auditorium. Presentations are open to participating teams, parents and other guests as space allows. It is *strongly encouraged* for teams to create an AV slideshow (powerpoint, google slides, prezi, etc.) to use while giving your engineering presentation. While the AV slideshow itself will not be judged, it allows a visual of your engineering design for the judges and others watching.

NAVIGATOR companies will have 10 minutes to give their presentation and may or may not have time to answer questions from the judges depending on time. Your presentation should describe 1) the engineering behind your vehicle's design; 2) how it operates; and 3) any possible safety issues. It should also highlight any innovations or creative solutions to solving the product demonstration tasks.

All of your team members should participate in the product demonstration and you should have your ROV with you (a table will be provided). Score sheets will be sent to teams a week after the competition and overall scores will be posted on our regional website.

The slideshow will need to be uploaded or shared in advance of the presentation. Companies may upload or share their presentation following the welcome on Friday, April 24

Competition set-up:

NAVIGATOR companies will complete all three tasks in one product demonstration run. On competition day, NAVIGATOR companies will get two attempts at the product demonstration. Each product demonstration time will consist of:

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

The higher of the two scores will be added to your ENGINEERING & COMMUNICATION and SAFETY score to determine the total, overall score for the competition.

An event schedule will be released 2 weeks before the contest. If companies have any time constraints that they wish the MATE Center to consider, please contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org, by Friday, April 3rd (3 weeks prior to the competition).

Operational:

Size: The Northern Gulf Coast regional contest will be conducting size measurements. A station will be set-up for teams to check their ROV size BEFORE each pool demo.

Anderson Powerpole connections are required for NAVIGATOR class. NAVIGATOR companies will not be able to connect to the MATE power supply without Anderson Powerpole connectors. See the Navigator Competition Manual for more information.

Pool: The Bishop State pool has a flat bottom in the shallow end where the product demonstrations will be held. The depth for the NAVIGATOR class product demonstrations is approximately 1.2 meters (4 feet).

Product Demonstration Station: A table and two chairs will be provided at each product demonstration station.

The Northern Gulf Coast regional will NOT provide video monitors for NAVIGATOR class companies. Companies must provide their own video displays. See Vehicle Design & Building Specifications (3.8) in the NAVIGATOR Competition Manual for number of video displays allowed.

Diver Support: Diver support will 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 pool edge. The Bishop State pool will NOT have PFDs available for use.

Power: NAVIGATOR class companies will use a dedicated power supply that will provide the nominal 12 volts.

Companies are responsible for bringing their own quadrat to count mussels. The Northern Gulf regional will not provide this equipment for you.

Companies planning to use a compressor MUST pass the Fluid Power Quiz (see the [NAVIGATOR competition manual](#) for more information).

Safety inspection:

NAVIGATOR class companies will visit a safety inspection station in the company workstation area. During registration, NAVIGATOR class companies will receive their safety inspection score sheet. After registration, NAVIGATOR class companies are required to take their vehicle to a safety inspection table for inspection. A safety inspector will conduct the safety inspection.

Companies that pass their safety inspection will turn in their score sheet to the safety inspection judge. Companies must pass their safety inspection in order to use the practice pool on Friday and BEFORE they are allowed to compete in the product demos on Saturday. Companies that fail their safety inspection must address the issue and return to the safety inspection station for another inspection. A safety inspection table will be set-up at the Bishop State Pool for teams who did not pass their safety inspection on Friday, April 24.

Companies MUST bring a copy of their SID to the safety inspection. Companies using fluid power must also provide a fluid power SID. See the NAVIGATOR Competition Manual, section 2.1.1, for more information on the SID, and Part 6, DOC-004 for more information on the fluid power SID.

The Northern Gulf Coast regional will not offer points for Corporate Responsibility to NAVIGATOR class companies.

SCOUT class:

Company limit: The Northern Gulf Coast regional contest is limited to 16 SCOUT class companies. Registration is limited to one SCOUT class companies per school. Schools wishing to register a second SCOUT class company should contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org, to be put on a waiting list. These schools will be notified by February 28th whether or not space is available. **PLEASE DO NOT REGISTER A SECOND SCOUT CLASS COMPANY UNTIL THE REGIONAL COORDINATOR OPENS UP REGISTRATION TO WAIT LIST COMPANIES.**

SCOUT class team registration for the NGC regional contest will close on April 3, 2019.

Engineering & Communication requirements:

- **Documentation**
 - **Company spec sheet**
- **Marketing display**

NOTE: Companies will NOT be required to prepare an engineering presentation.

The company spec sheet is due by 11:59 PM CST on **Friday, April 9th**. All documents must be submitted to the regional coordinator, Rachel McDonald at rmcdonald@disl.org.

Companies should set up their **marketing displays** in the Shelby Atrium following the welcome on Friday, April 24. The location to set up your company poster will be marked. Table space will be provided for all teams unless a poster stand is requested. If your team needs a stand for your poster please contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org by April 13th.

A marketing display/ poster session will take place Saturday evening in the Shelby Atrium. Teams will be required to have 2-3 members stationed at their poster/display to answer questions and discuss their poster and/or ROV to other student participants. Remaining team members, mentors and chaperons are encouraged to view and ask questions of other teams posters/displays. ROVs are encouraged but not required to be on display with your posters/ displays. In addition video displays and other accessories are permitted, but will not be judged.

Competition setup:

SCOUT companies will complete all three tasks in one product demonstration run. On competition day, SCOUT companies will get two attempts at the product demonstration. The product demonstration time will consist of:

- 3 minute set-up period
- 10 minute product demonstration period
- 2 minute demobilization period

The higher of the two product demonstration scores will be combined with the Engineering & Communication and Safety score to get the company's total score.

An event schedule will be released 2 weeks before the contest. If companies have any time constraints that they wish the MATE Center to consider, please contact the regional coordinator, Rachel McDonald at rmcdonald@disl.org by Friday, April 3 (3 weeks prior to the competition).

Operational:

Size: The Northern Gulf Coast regional contest will be conducting size measurements. A station will be set-up for teams to check their ROV size BEFORE each pool demo.

SCOUT class companies MUST use Anderson Powerpole connectors to connect to the MATE power supply. See the SCOUT Competition Manual for more information.

Pool: The Bishop State pool has a flat bottom in the shallow end where the product demonstrations will be held. The depth for the SCOUT class product demonstrations is approximately 1.2 meters (4 feet).

Product Demonstration Station: A table and two chairs will be provided at each product demonstration station.

Diver Support: Diver support will 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 pool edge. The Bishop State pool will NOT have PFDs available for use.

Power: SCOUT class companies will use a dedicated power supply that will provide the nominal 12 volts.

Safety inspection:

A SCOUT safety inspection table will be located near the check-in area. During check-in SCOUT class companies will receive their safety inspection score sheet. After check-in, SCOUT class companies are required to take their vehicle to a safety inspection table for inspection. SCOUT class companies are required to provide an electrical **SID** (and a fluid power SID if applicable) to the safety inspection judge when they arrive at the safety inspection table. See the Vehicle Design & Building Specifications [Section 2.0 Safety] in the SCOUT Competition Manual for more information.

Companies that pass their safety inspection will turn in their score sheet to the safety inspection judge. Companies must pass their safety inspection in order to use the practice pool on Friday and BEFORE they are allowed to compete in the product demos on Saturday. Companies that fail their safety inspection must address the issue and return to the safety inspection station for another inspection. A safety inspection table will be set-up at the Bishop State Pool for teams who did not pass their safety inspection on Friday, April 24.

The Northern Gulf Coast regional will not be offering points for Corporate Responsibility to SCOUT class companies.

Northern Gulf Coast Regional Scoring Overview

RANGER Total pts = 520

Product demonstrations (300 pts)

- 270 points (max), plus a time bonus
- Size and weight restrictions
 - 20 points (max)
- Product demonstration safety and organizational effectiveness
 - 10 points (max)

Engineering & Communication (170 pts)

- Engineering presentations
 - 100 points (max)
- Marketing displays
 - 50 points (max)
- Company Spec Sheet
 - 20 points (max)

Safety (50 pts)

- Initial Safety and Documentation Review
 - 20 points (max)
- Safety Inspection
 - 30 points (max)

NAVIGATOR Total pts =300

Product demonstrations (220 pts)

- 200 points (max), plus a time bonus
- Size restrictions
 - 10 points (max)
- Product demonstration safety and organizational effectiveness
 - 10 points (max)

Engineering & Communication (70 pts)

- Engineering presentations – 50 points (max)
- Company Spec Sheet – 20 points (max)

Safety – 10 points (max)

SCOUT Total pts = 300

Product demonstrations (220 pts)

- 200 points (max), plus a time bonus
- Size restrictions
 - 10 points (max)
- Product demonstration safety and organizational effectiveness
 - 10 points (max)

Engineering & Communication (70 pts)

- Marketing displays – 50 points (max)
- Company Spec Sheet – 20 points (max)

Safety Inspection – 10 points (max)

Northern Gulf Coast Regional AWARDS

- **First, Second and Third Place** (Overall, for each class)
Awards will be given to the teams with the highest combined scores for Product Demonstrations, Engineering & Communication and Safety.
- **Tethered Together Award**
This award will be given to the team that shows exceptional teamwork throughout the entire competition
- **Buoyancy Award**
This award will be given to the team displaying the best attitude when faced with hardship during the competition
- **Emerging Star Award**
This award is given to a team showing exceptional commitment and a bright future in STEM
- **SCOUT Poster People's Choice Award**
This award will be given to the top voted SCOUT poster. Each team will receive a ballot and vote for their favorite SCOUT poster during the poster session.

Northern Gulf Coast Regional 2020 Important Dates

January 21 – Registration opens (team and student)

February 18 – Dorm registration opens for registered teams

(first-come, first-served; max 5 rooms per team)

March 2 – Meal requests open

March 15 – LAST DAY for Fluid Power Quiz

March 31 – T-shirt orders due

April 1 – LAST DAY to submit laser specification (RANGER only)

April 3 – Registration closes (team), student closes April 15

April 9 – Company spec sheets due for all teams

All documentation due for RANGER teams

April 13 – Event schedule released (team demos and presentations)

Marketing display type emailed to regional coordinator

April 15 – Student/ Additional Mentor registration closes

Last day for meal reservations

April 21 – Last day to update meal reservation numbers

April 24-26 – Competition Weekend!!!

SID due at safety inspection (SCOUT & NAV)

DISL waivers due at check-in (medical and photo)

Engineering pres. ppt due after welcome (NAV & RANGER)

Marketing displays due after welcome (SCOUT & RANGER)