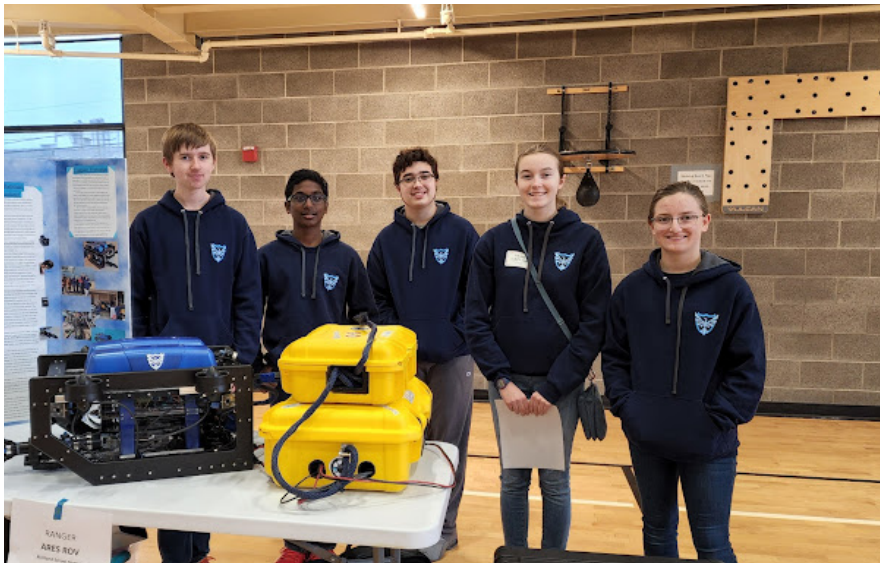
ARES Marine Robotics
Company Spec Sheet

Company/Club Name: ARES Marine Robotics
Home State: Washington
Distance To Competition: 1,073 miles to Longmont, Colorado

This is our third year competing in MATE ROV competitions and our second year competing in Ranger class. We competed in and won the Navigator class at the Lincoln City MATE Competition in 2021 and placed second in the Ranger class at the Lincoln City MATE Competition in 2022. We have also taken part in various outreach events throughout the Tri-cities. This includes volunteering twice to video CBDR's (Columbia Basin Diver Rescue) training sessions to allow them to train new recruits with said video. We have also designed and built a Scout-class ROV ("Rusty") for outreach events to allow people of all ages to have hands-on experience operating an ROV while completing simple missions in a small pool. We have brought Rusty & the pool to the Polar Plunge Special Olympics Fundraisers (2022 & 2023), Law Enforcement National Night Out (2022), and the STEM night at Tapteal Elementary (2022). We also brought our primary ROV and marketing display board to all of these outreach events to share more information about marine robotics and ROVs.



Sydney West (Second from Right**):** 10th Grade at Hanford High School
Role: CEO and Lead Systems Integration Engineer

Emmett Van Mason (Far Left**):** 10th Grade at Richland High School
Role: Chief Fabrication Engineer and VP of Systems Engineering

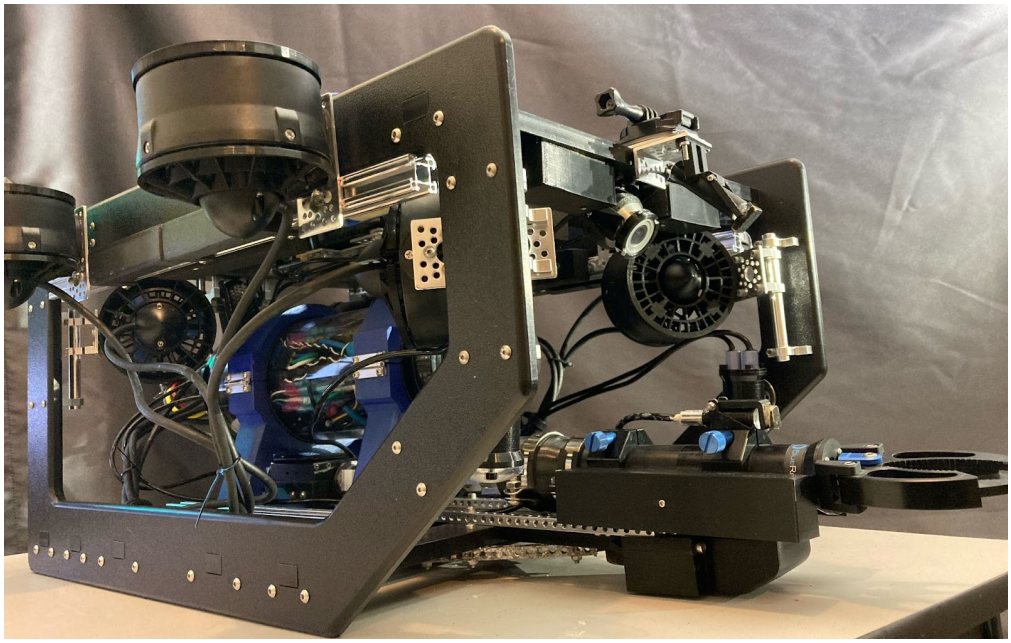
Cadence Picker (Far Right**):** 9th Grade at Three Rivers Homelink
Role: Project/Task manager

Navaj Nune (Second from Left**):** 10th Grade at Hanford High School
Role: Lead Programmer and VP of Software Engineering

Mason Rose (Center**):** 10th Grade at Delta High School
Role: Chief Pilot and VP of Fabrication Engineering

Grade Range: 9th-10th grade

ROV Specs



ROV Name: Whitewater
Total Cost: $8190.74
Size and weight: Appx 70cm x 59cm x 30cm; ~16.45kg
Total Hours: 2200 Man-hours, spread over a period of about four years.

Safety Features:

- Tension hooks attached to both the topside control box and ROV keep the tether secure and prevent it from pulling on connections.
- Top side electronics are enclosed in a custom designed and fabricated powerbox.
- No sharp edges are exposed as they have been filed down or covered.
- Both enclosures are tightly waterproofed, with all wires entering through sealed penetrators.
- All wiring and connections are crimped or soldered and covered with heat shrink wrap for an extra layer of protection.

Special Features:

- Three optimally placed HD underwater cameras provide the best underwater view.
- Our “Talon” - 180-degree rotatable Newton Subsea Gripper (from Blue Robotics) claw when paired with many custom designed attachments specialized for different MATE demonstration tasks allow us to perform various tasks and manipulate a variety of objects effectively underwater.
- Numerous custom-designed 3D printed parts which have collectively taken around 120 hours of print time
- Custom designed frame cut from marine grade HDPE (high-density polyethylene) plastic