

CLALLAM MRC MEETING AGENDA

September 16, 2024
5:30 p.m. – 7:00 p.m.
Hybrid Meeting



Zoom Meeting Link: <https://us06web.zoom.us/j/85314804485>

Meeting ID: 853 1480 4485

Passcode: 12345

For more information about the MRC, please contact Rebecca Mahan at (360) 417-2322

Welcome by Chair LaTrisha Suggs / Call to Order / Roll Call

- Determination of quorum

Approval of Minutes

- Review and approval of August minutes

Announcements

- Project leads – work with staff to finalize annual reports
- [Forever Streamfest](#) Saturday, Sept 21st
- [Dungeness River Festival](#) Friday, Sept 27th
- [Northwest Straits Commission conference](#) Nov 15th & 16th, presentation/table
- Informational items:
 - § PNNL micro-grid & Marine Renewable Energy: [PNNL presentation](#), [NODC presentation](#)
 - § [Project Macoma](#)
 - § [Sequim Comp Plan update: Future of Sequim survey](#)
 - § [Port Angeles City Comp Plan update](#)
 - § [Clallam County Comp Plan update](#)
 - § [Clallam County Hazard Mitigation Plan update: Climate Resiliency survey](#) closes Oct 4
 - § Rescue tug / oil spill response – Mike Doherty
 - § Green crab update – Ioana Bociu

Committee and Project Reports if an update is needed

- NWSC monthly meeting – Alan Clark
- Strategic plan 2025 subcommittee – LaTrisha Suggs
 - § [Current strategic plan here](#)
 - § Subcommittee: LaTrisha Suggs, Nancy Stephanz, Ioana Bociu, Ann Soule
- Interns – Tim Cochnauer
- Olympia Oyster – Chris Burns
- Forage Fish – Tim Cochnauer
- Elwha Beach Stewardship – Helle Andersen
- Sound Toxins – Nancy Stephanz
- Shellfish Biotoxins – Bob Vreeland
- Pinto Abalone – Jeff Ward & Alan Clark

2024 Meetings

January 22

April 15

July 15

October 21

February 26

May 20

August 19

November 18

March 18

June 17

September 16

December 16

- Pigeon Guillemot – Ed Bowlby
- Kelp surveys – Alan Clark & Jeff Ward
- Education & outreach
 - § Coasters – Ann Soule
 - § New displays: toxins (done), crab, pigeon guillemots – Ann, Amelia

New business

- Working list of areas of concern for BOCC
- Studium generale presentation

Discussion of next meeting date and agenda

- Next meeting Monday, Oct 21st
- Call for new agenda items

Public Comment *at the discretion of the Chair*

Good of the Order

Presentation by Phil Parisi of user-friendly marine robots: Blue Boat and BlueROV

Adjourn *with on-water demo of robotics technology to follow at Hollywood Beach*

Clallam County DCD is inviting you to a scheduled Zoom meeting.

Topic: MRC

Join Zoom Meeting

<https://us06web.zoom.us/j/85314804485?pwd=N3dMbHRyL3l5TnpKNGtVSGtWYk5VQT09>

Meeting ID: 853 1480 4485

Passcode: 12345

One tap mobile

+12532158782,,85314804485#,,,,*12345# US (Tacoma)

Dial by your location

+1 253 215 8782 US (Tacoma)

2024 Meetings

January 22	April 15	July 15	October 21
February 26	May 20	August 19	November 18
March 18	June 17	September 16	December 16



Today's
**User-Friendly
Marine Robots**

Phil Parisi | Robotics Researcher



Introduction



Autonomous Surface Vessel
@ PNNL-Sequim

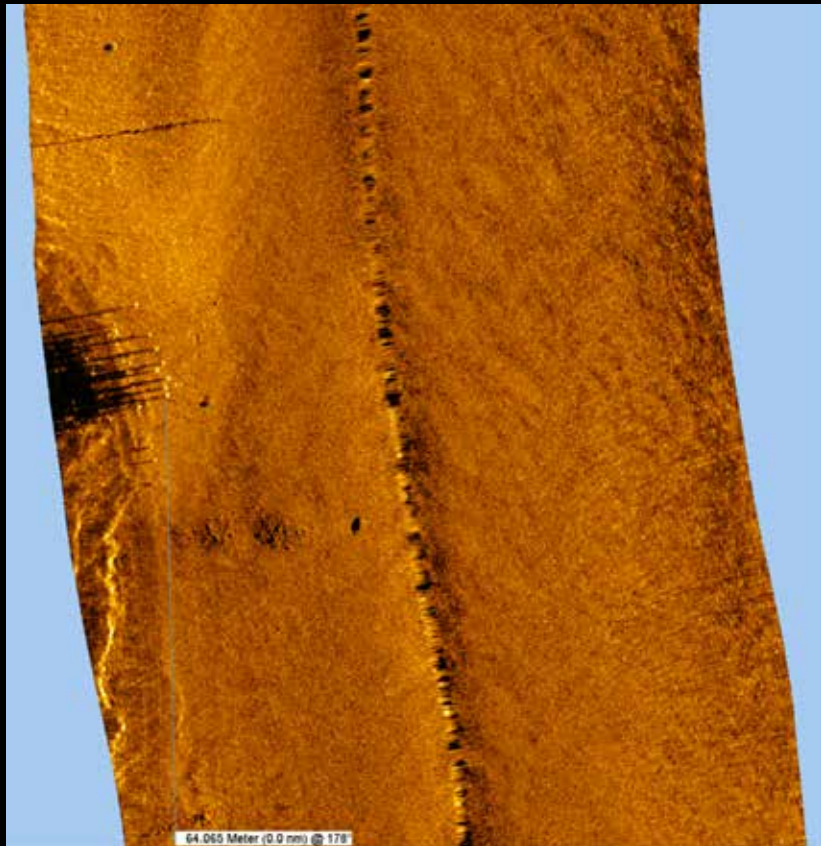


BlueBoat @ Lake Sutherland

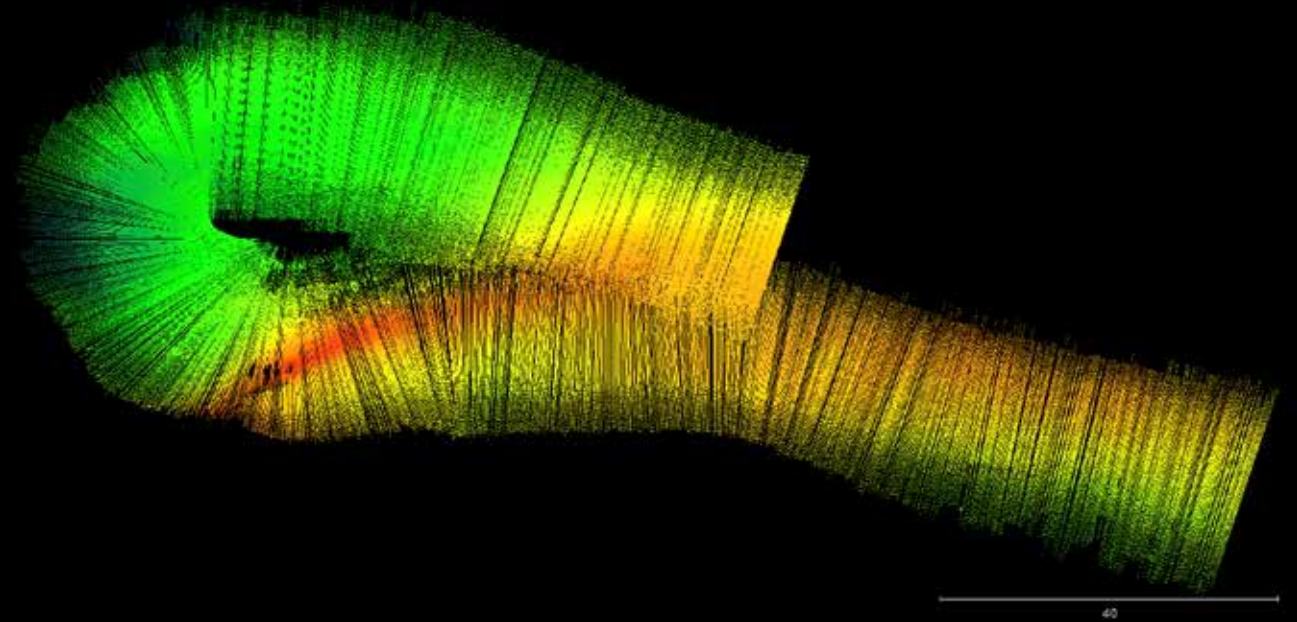


BlueROV STEM Outreach

Introduction



Side Scan Sonar
@ PNNL-Sequim



River Bathymetry
@ University of Rhode Island

Why Do We Bother With Robots?

Why Do We Bother With Robots?

DIRTY



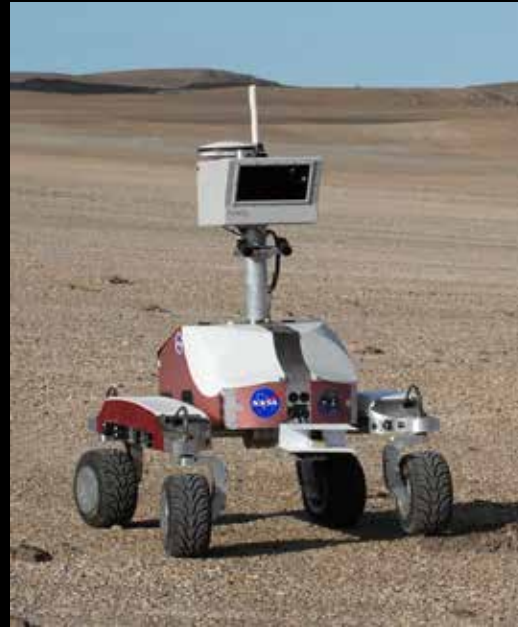
Sewer Cleaning Robot

DULL



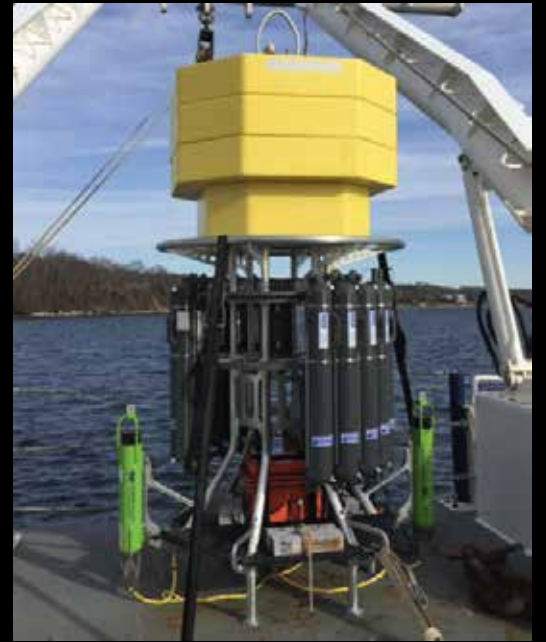
Vacuum Roomba

DANGEROUS



NASA Planetary Rover

DEPLOY



Ocean Depth Water Sampler

What's Changing in the Maritime Industry?

What's Changing in the Maritime Industry?



\$2M Commercial ROV

COST



\$8K ROV

What's Changing in the Maritime Industry?



\$2M Commercial ROV

COST



Deployability

Size/Weight

Software

Maintenance

Customizable



\$8K ROV

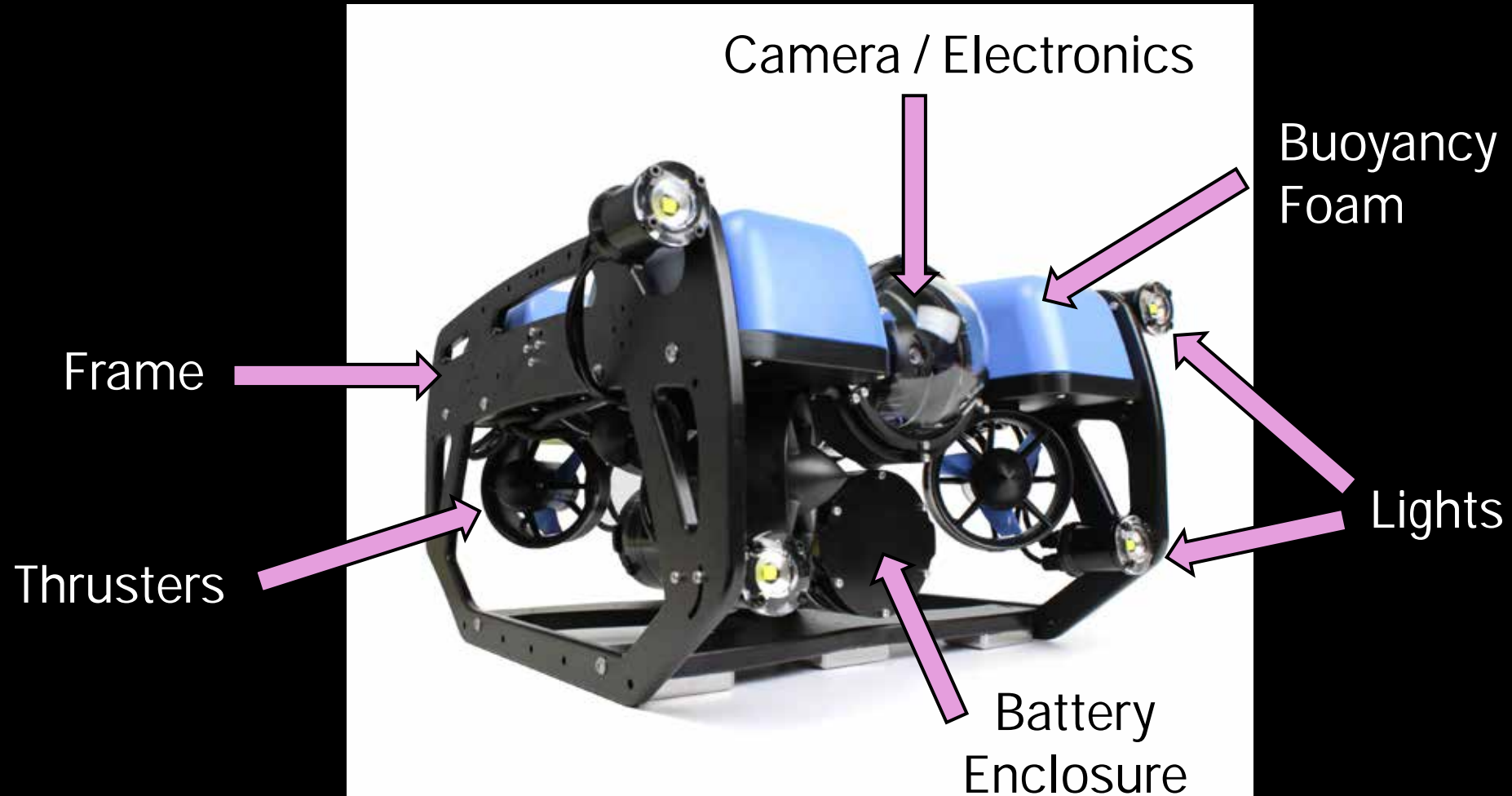
BlueROV2: Overview



- ROV = Remotely Operated Vehicle
- User at Surface, tethered robot submerges to 300m
- Live video feed while 'diving'
- 8 thrusters, on-board lights
- Built-in Control System
- Onboard battery

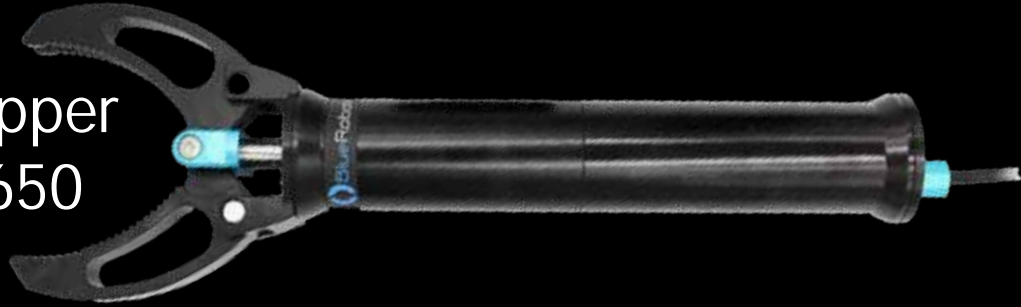
\$8,000

BlueROV2: Overview



BlueROV2: Add-On's

Gripper
\$650



- Gripper à grasping
- Ping360 à radial object detection
- Sediment Sampler à grab contents for science

Ping360 Scanning
Sonar \$2650



Sediment
Sampler
\$300



BlueROV2: Add-On's

Doppler Velocity Log
\$7500

Enables autonomous, repeatable missions



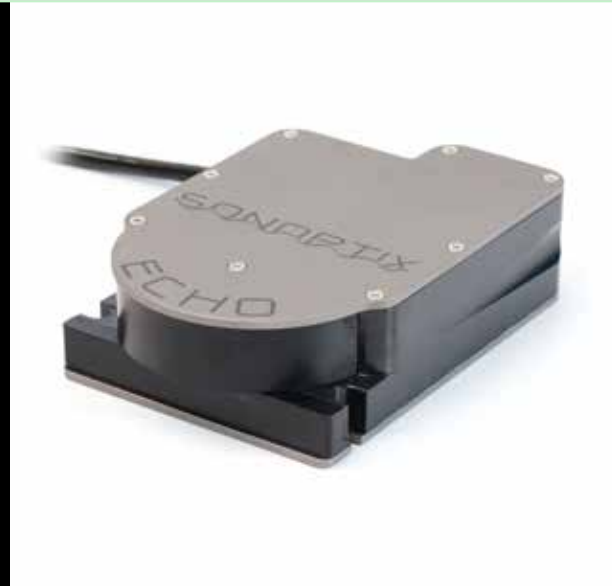
Forward-Looking Sonar
\$9000

'See clearly' underwater objects nearby



BlueROV2: Add-On's

Customize to add different
Payloads/Sensors to meet
project needs!



BlueROV2: Use Cases

Doppler Velocity Log

\$7500

Enables autonomous, repeatable missions

Forward-Looking Sonar

\$9000

'See clearly' underwater objects nearby

BlueBoat USV: Overview



- USV = Unmanned Surface Vessel
- User at Surface, tethered robot submerges to 300m
- Live video feed while 'diving'
- 8 thrusters, on-board lights
- Built-in Control System
- Onboard battery

\$8,000

Clallam County Marine Resources Committee
Draft Areas of Concern
August 2024

This list is an in progress DRAFT and working document. It represents initial ideas shared by members for areas of concern. Nothing on this list should be taken to represent the opinion of the Committee at large.

- No net loss as a policy principle
- Shoreline armoring: seawalls, berms
 - Unpermitted shoreline armoring
 - Intersection with treaty rights
 - Shoreline design assistance, Shore Friendly program
- Tsunami preparation
- Growth Management Act: shoreline and climate elements
- Shoreline management: emphasis on future development
- Notice to title for nearshore environments
- Kelp beds
- Eelgrass beds
- Tide gates
- Culverts
- Tires/6PPD
- Chemical pollution
- Forage fish
- Reducing emissions in the face of climate change
- Air quality
- Water quality
- Tanker traffic and potential accidents
 - First responder training/planning in the face of oil spills
 - Ships carrying unknown, potentially harmful substances such as mineral oil
- Biotxin sampling for safe shellfish harvest (County DOH)
- Chemical pollution pertaining to safe crab harvest
 - Particularly in Port Angeles Harbor
- Invasive species
- Aquaculture
- Sea level rise / flooding
- Derelict gear removal
- Private ownership of the nearshore
- County GIS capabilities
 - Integration with DCD and Planning
 - Working real-time maps that MRC and staff can interact with
- Need for education to address many of these concerns