

STATEMENT OF WORK
United States Department of Commerce
National Oceanic and Atmospheric Administration, National Ocean Service
Center for Operational Oceanographic Products and Services (CO-OPS)
Field Operations Division, Pacific Operations Branch
Diving Operations for the 2023 Columbia River Survey
PR# NC-NT2000-23-00305

1. BACKGROUND

The National Oceanic and Atmospheric Administration (NOAA) is one of several bureaus of the U.S. Department of Commerce, a cabinet level agency of the executive branch of the United States of America. Since the mid-1800's NOAA's National Ocean Service (NOS) Center for Operational Oceanographic Products and Services (CO-OPS), and its predecessors, have been collecting tidal current information to maintain and update the predictions in U.S. Tidal Current Tables. Mariners rely on this information to plan for safe and efficient maritime transportation. Every year CO-OPS deploys dozens of current meters in multiple locations around the country. Starting in May of 2023, CO-OPS will be continuing the measurement of tidal currents in the upper Columbia River, from the mouth of the river to roughly the confluence of the Willamette River. To conduct this current survey, CO-OPS seeks the services of commercial divers to assist with the installation of one (1) station and the removal of up to eight (8) stations within the Columbia and Willamette rivers.

2. LOCATIONS:

Station ID	Station Name	Latitude	Longitude	Depth (ft)	River Mile	Date of Operations
Installation						
CLR 2329	Willamette Light 3	45.64594	-122.76845	22.0	Willamette 0	05/08-26/2023
Removals						
CLR 2206	Astoria, OR Light 36	46.19252	-123.84568	21	Columbia 16	09/05-17/2023
CLR 2211	Rockland Light 27	46.27134	-123.50575	23	Columbia 24	07/17-31/2023
CLR 2214	Hunting Island Light 39	46.22956	-123.42316	26	Columbia 36	07/17-31/2023
CLR 2216	Bugby Hole Light 46	46.18246	-123.43147	60	Columbia 40	07/17-31/2023
CLR 2217	Cathlamet, WA	46.20091	-123.38637	18	Columbia 40	09/05-17/2023
CLR 2322	Lewis and Clark Bridge	46.1058	-122.96067	48	Columbia 66	09/05-17/2023
CLR 2223	Cottonwood Island Light 35	46.07864	-122.89335	30	Columbia 70	07/17-31/2023
CLR 2329	Willamette Light 3	45.64594	-122.76845	22.0	Willamette 0	09/05-17/2023

Table 1: Location details

Columbia River Survey Stations 2023



Figure 1: Map of stations

Area of Operations: Conditions in the area of operations in which work shall be performed include river flows and tidal currents up to four (4) knots, wind speeds up to ten (10) knots, and sea states up to two (2) feet.

3. REQUIREMENTS

3.1. Diving Requirements

All dive operations must be performed to Federal OSHA dive regulations. Dive operations shall not exceed 50 feet depth. NOAA reserves the right to be onsite during dive operations to verify installation/removal.

3.2. Vessel Requirements

Vendor shall utilize a vessel of sufficient size and construction to be able to work efficiently and safely in the area of operations. The vessel utilized shall be United States Coast Guard (USCG) safety inspected. The vessel type, size and USCG requirements shall be submitted along with the quote.

3.3. Equipment Requirements

Required equipment shall include:

- Camera capable of underwater video/still photos of all dive operations.
- Means of verifying depth (pneumo/dive computer) during all dive operations.
- Pneumatic impact driver with appropriate size drivers for installing/removing hardware.
- A means of cutting or removing seized/galled hardware during removal.
- A means of verifying sensor orientation - compass heading and pitch/roll/yaw of sensor (i.e. inclinometer, compass, or spirit leveling device).

3.4. Installation Requirements: Station CLR 2329 (Willamette Light number 3):

Vendor shall assist with the installation of an aluminum I-beam, approximately thirty (30.0) feet long, around one of the pilings of the specified pile dike ATON. Prior to dive operations, NOAA will secure the I-beam to the piling above the water line. Vendor shall then install two (2) to three (3) stainless steel brackets securing the I-beam to the piling using ½” stainless steel hardware. See Section 6 for photos and diagrams of the station and components.

The brackets, I-beam, and hardware will be Government Furnished Equipment (GFE).

3.5. Removal Requirements - Pile dike stations

- Station CLR 2211 (July)
- Station CLR 2214 (July)
- Station CLR 2216 (July)
- Station CLR 2223 (July)
- Station CLR 2329 (September)

For the above stations, vendor shall:

- Coordinate with NOAA personnel for timing of removal operations.
- Remove up to three (3) underwater stainless steel brackets (per station) attaching the I-beam to the pile.
- Be prepared to cut the ½” bolts on the bracket if seized/galled.
- Tie a line using bowlines from the lowest bracket of the I-beam to the uppermost bracket (above the waterline) to facilitate removal at a later date by NOAA. Line shall be a minimum ¾” diameter and capable of lifting 1000 lbs.

3.6. Removal Requirements - Shore stations

- Station CLR 2217 (September)
- Station CLR 2206 (September - option)

For the above stations, vendor shall:

- Coordinate with NOAA prior to removal.
- Remove one (1) underwater galvanized I-beam bracket secured with (4) ½” X 6” stainless steel lag bolts driven into a wood piling.
- Fill in the holes vacated by the underwater brackets with an epoxy to be provided as GFE.
- Perform this operation in September, 2023

3.7. Removal Requirements - Bridge station

- Station CLR 2322 (September)

For the above station, vendor shall:

- Coordinate with NOAA prior to removal.
- Remove six (6) ¾” X 3” lag bolts which are securing the ADCP mount to the Lewis and Clark Bridge.
- Bring the mount consisting of a stainless steel strut frame and instrument, which weighs less than 80 lbs. in air, to the surface.
- Fill in the holes vacated by the underwater brackets with an epoxy to be provided as GFE.

Note: See Section 6 for photos of all stations and brackets installed.

4. PERIOD OF PERFORMANCE

NOAA will be conducting operations during three time periods between May 8, 2023 and September 30, 2023. These operations are expected to be at the following times:

Trip 1: May 8 - 26, 2023

Trip 2: July 17 - August 1, 2023

Trip 3: September 5 - 17, 2023

- The contracted vendor shall be available to install the diver mounted side looking ADCP at Station 2329 (Willamette Light 3) during Trip 1.
- Stations CLR 2211 (Rockland Light 27), CLR 2214 (Hunting Island Light 39), CLR 2216 (Bugby Hole Light 45) and CLR 2223 (Cottonwood Island Light 37) will be removed during Trip 2.
- Stations CLR 2329 (Willamette Light 3), CLR 2322 (Lewis and Clark Bridge), CLR 2217 (Cathlamet, WA) will be removed and CLR 2206 (Astoria Light 36) will potentially be removed during Trip 3.

NOAA reserves the right to adjust the timing of stations at any time during the project due to inclement weather, station failures, and changing mission requirements.

ACCREDITATION

The C&A requirements of clause 73 do not apply and a Security Accreditation Package is not required.

5. PHOTOS AND DIAGRAMS

5.1. Station Hardware at Pile Dike stations:

Example images of station hardware at daymarker stations:



Figure 2 Bracket front section mounted on I-Beam - this would remain attached to the I-beam

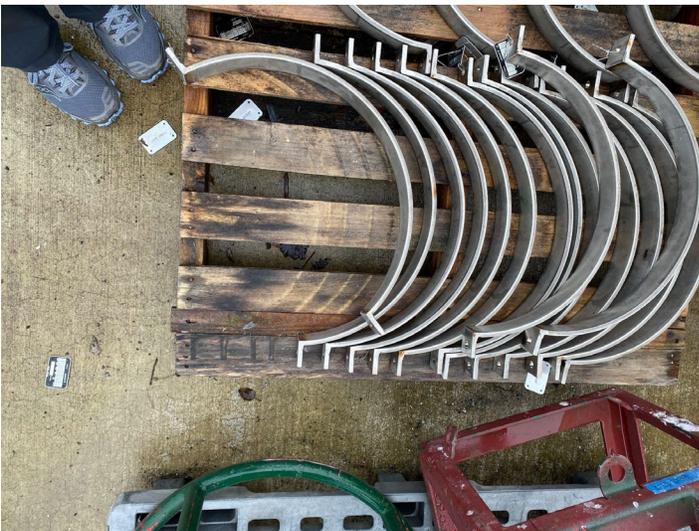


Figure 3 Brackets (rear section). There will be 1-3 brackets below the water line at each station, this section must be removed

5.2. Pile Dike Station Photos



Figure 4 CLR 2329 USCG Daymarker in the Willamette River



Figure 5 CLR 2211 Rockland Light 27 with I-Beam installed. Brackets are visible at the waterline and behind the ladder. Third bracket is below the waterline.



Figure 6 CLR 2214 Hunting Island Light 39

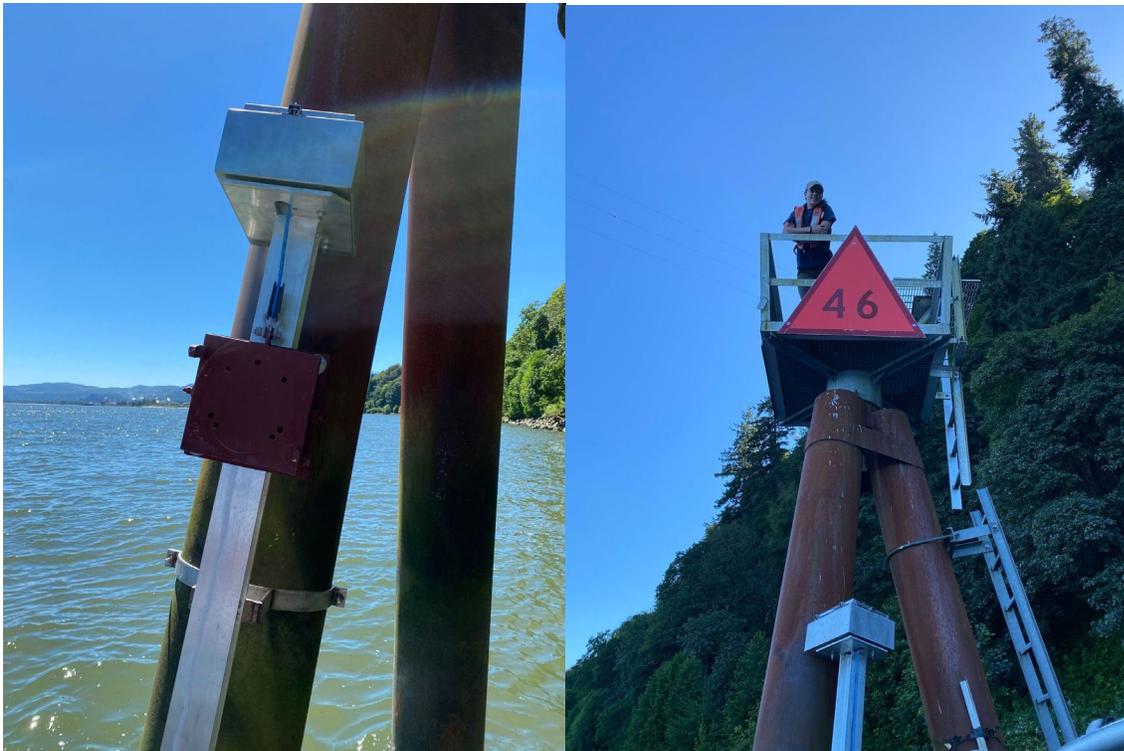


Figure 7 CLR2216 Buggy Hole Light 46



Figure 8 CLR2223 Cottonwood Island Light 35

5.3. Shore Station Photos:



Figure 9 CLR2206 Astoria 36 Daymarker on private pier:



Figure 10 CLR 2217 Cathlamet City Dock, right panel shows an underwater bracket attached to an I-beam before installation.

5.4. Bridge station photos:

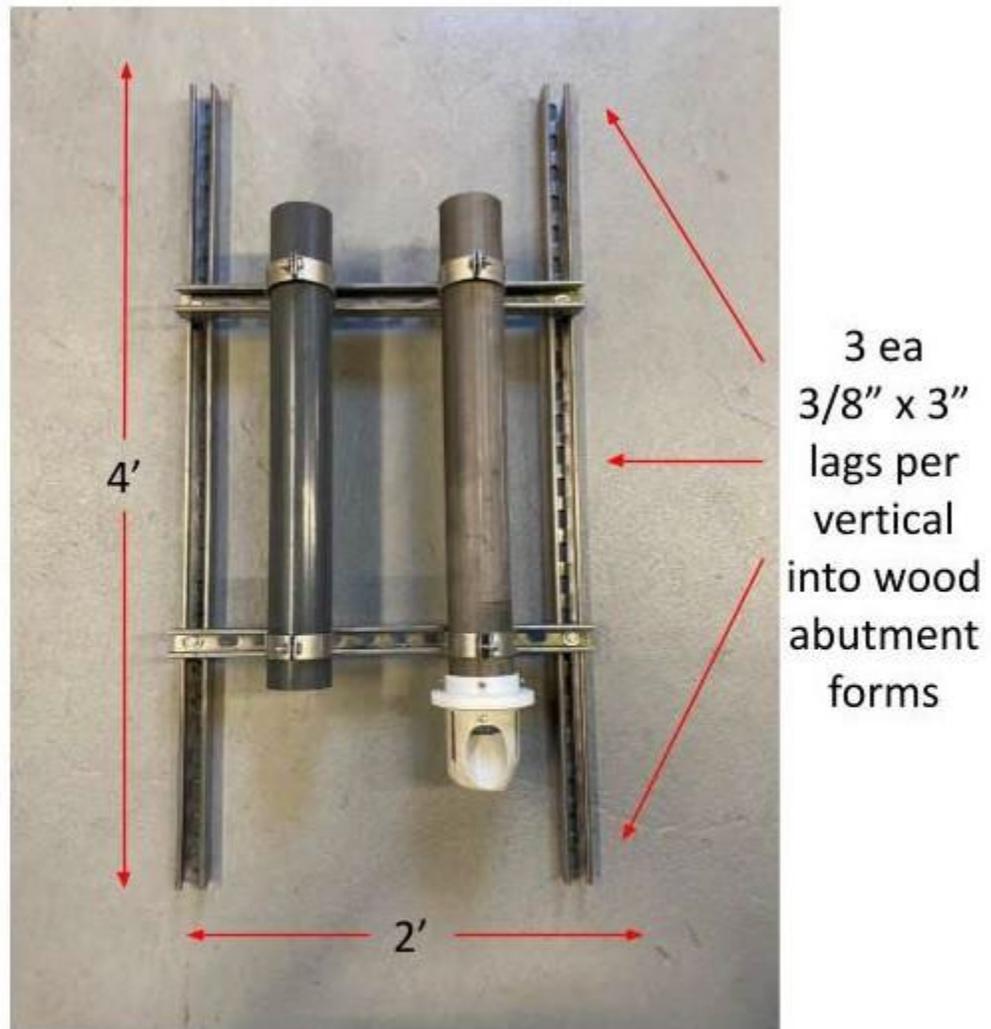


Figure 11: Mockup of mount:



Figure 12 Location of CLR 2322 Lewis and Clark Bridge

Appendix A: Charts of station locations

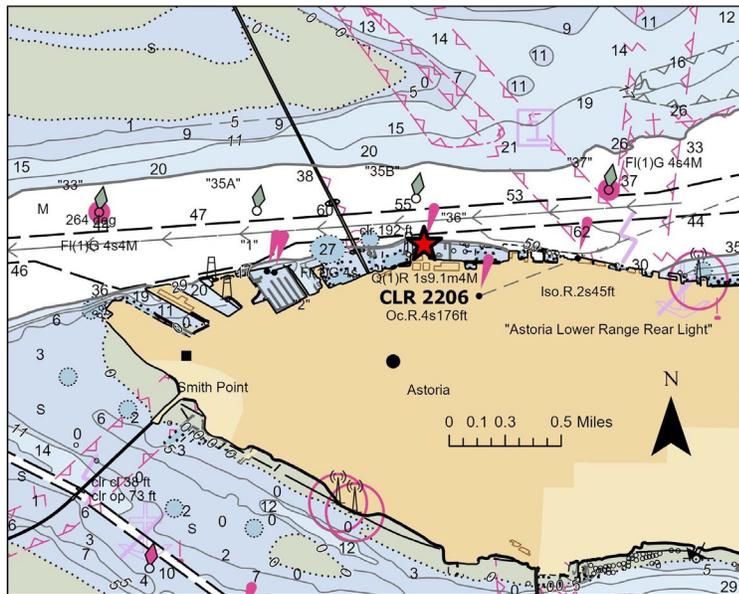


Figure A-1: Astoria area station: CLR2206

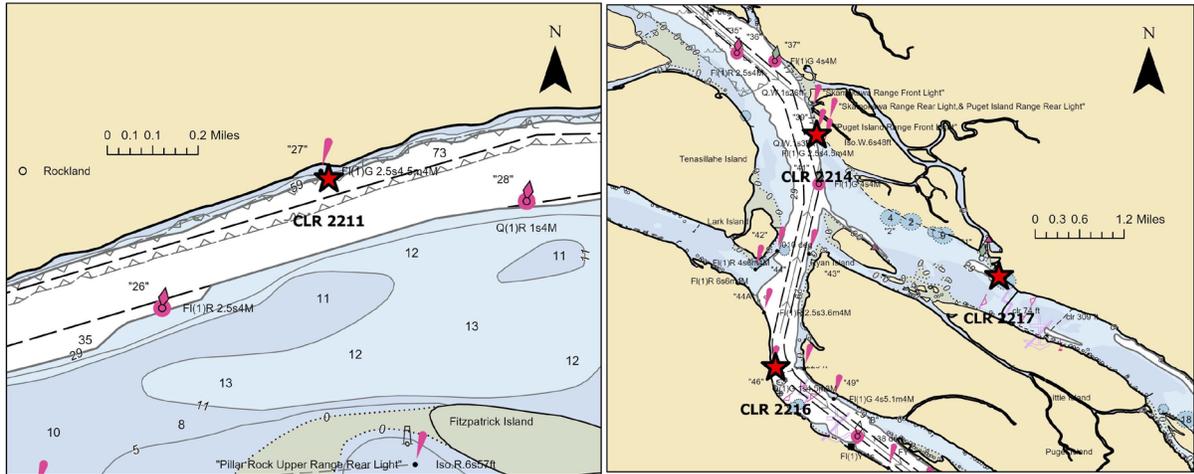


Figure A-2: Cathlamet area stations: Panel A: CLR2211 Panel B: CLR2214, CLR2216, CLR2217

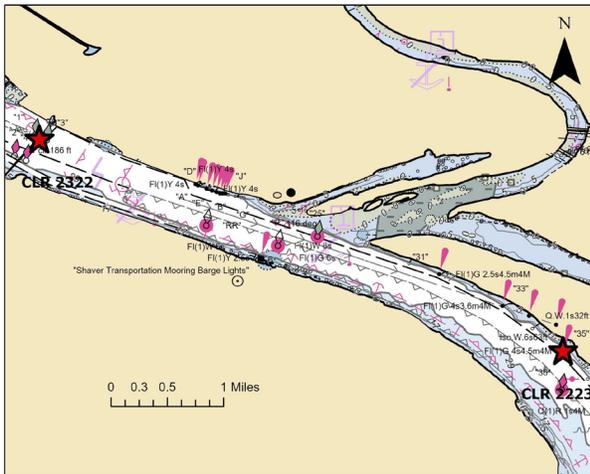


Figure A-3: Longview area stations: CLR2322, CLR2223

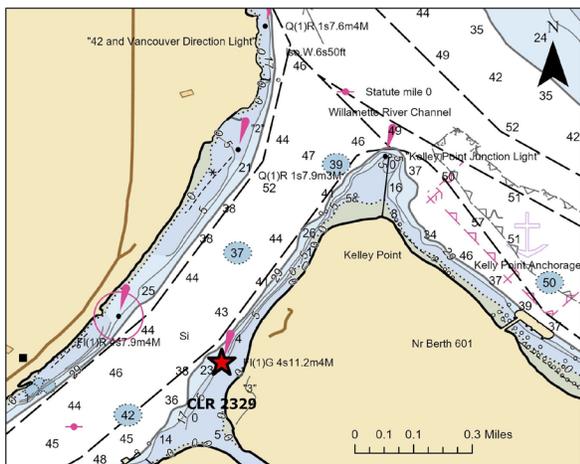


Figure A-4 Station CLR 2329 Willamette Light 3