HABITAT SURVEY REPORT

ENVIRONMENTAL IMPACT STATEMENT

For

Bremerton Waterfront Infrastructure Improvements

Naval Base Kitsap Bremerton, Washington

Department of the Navy

Naval Facilities Engineering Command, Northwest

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February 2021

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Habitat Survey Report

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ACRONYMS AND ABBREVIATIONS

CAPJV	Cardno-AECOM Pacific Joint Venture
DEA	David Evans and Associates
DON	U.S. Department of the Navy
EIS	Environmental Impact Statement
GIS	geographic information system
GNSS	Global Navigation Satellite System
HIPS	Hydrographic Information Processing System
IMF	Intermediate Maintenance Facility
MBES	multibeam echosounder
MLLW	mean lower low water
NAD83	North American Datum of 1983
NAVFAC NW	Naval Facilities Engineering Command Northwest
Navy	U.S. Department of the Navy
OBIA	object-based imagery analysis
PSNS	Puget Sound Naval Shipyard
ROV	Remotely Operated Vehicle
RTK	Real Time Kinematic
U.S.	United States
USACE	U.S. Army Corps of Engineers
USBL	ultra short-baseline positioning
WSDOT	Washington Department of Transportation

CHAPTER 1
Project Overview

The United States (U.S.) Department of the Navy (DON or Navy) proposes to construct a new dry dock and piers and associated waterfront infrastructure improvements at the Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS & IMF), located in Sinclair Inlet, Washington (Appendix A, Figure 1). The purpose of the Proposed Action is to improve the infrastructure at Naval Base Kitsap Bremerton to enable PSNS & IMF to meet its mission to maintain, repair, modernize, inactivate, and recycle Navy ships, submarines, and aircraft carriers. The Navy proposes to implement multiple component actions as part of the Proposed Action. The Proposed Action would include demolition of existing in-water structures, construction of new in-water structures, upgrade or replacement of existing in-water structures, and modification of upland facilities required to support the in-water structures. The Proposed Action is needed because existing infrastructure does not meet current design standards or provide sufficient capacity to support the Fleet Commander warfighting requirements for combat-ready ships, submarines, and aircraft carriers.

1.1 TASK OVERVIEW

This habitat survey was conducted under Cardno-AECOM Pacific Joint Venture (CAPJV) oversight as a study in advance of an Environmental Impact Statement (EIS), which will analyze impacts of the Proposed Action alternatives. The habitat survey was intended to delineate the spatial extent of eelgrass and macroalgae within the areas potentially affected by construction and operation of the Proposed Action alternatives to be included in the EIS. This survey area includes in-water areas of dredging for dry dock construction, pier replacement, and a potential turning basin in Sinclair Inlet. The habitat survey data will be incorporated as part of the EIS impact analysis.

The eelgrass and macroalgae survey was scoped to be conducted under the 2018 U.S. Army Corps of Engineer (USACE) guidance *Components of a Complete Eelgrass Delineation Report* (USACE 2018). The Navy specified that the methods used should include a hydroacoustic survey encompassing the broadest possible range of alternatives, followed by ground-truthing along transects by scientific divers for a smaller subset of the area. Field data collection was planned for the summer of 2020.

During the course of 2020, the Covid-19 pandemic emerged and spread. The survey technical team and Naval Facilities Engineering Command Northwest (NAVFAC NW) leadership conferred and decided that ground-truthing could be done effectively and more safely using a Remotely Operated Vehicle (ROV) collecting underwater imagery. The ROV work could be done using a field team of four wearing face coverings (masks), per the U.S. Centers for Disease Control and Prevention and Navy guidelines, whereas the scientific diving team would include up to eight people, and face coverings would not always be possible. In September 2020, the survey approach was formally modified to use an ROV for ground-truthing. This report describes the results of both the hydroacoustic survey and the ROV survey.

1.2 SURVEY PROTOCOL

The survey team followed the methods described in the 2018 USACE guidance *Components of a Complete Eelgrass Delineation Report*, including the following:

- **Method 4: Hydroacoustic Mapping.** If the site is very large, hydroacoustic surveys may be considered as an alternative to other methods. Because detection and mapping of eelgrass using

hydroacoustic equipment is not limited by water clarity, this method is particularly suitable for turbid water conditions; however, this method does have certain limitations. Depending on the heterogeneity of the eelgrass beds, the size of the area, and the desired degree of survey resolution, transect spacing may vary from as little as 25 feet (8 meters) to more than 100 feet (31 meters). However, ground-truthing using wading, divers, or underwater photography must be performed to verify the hydroacoustic mapping classifications. It should also be noted that this method is likely to underestimate the extent of the eelgrass beds, because the eelgrass bed boundaries as defined herein may be below the minimum detection thresholds of the hydroacoustic system.

- **Method 3: Underwater Photography.** Underwater videography can be particularly useful for detecting and mapping the presence of eelgrass over large study areas that may be difficult to sample using more intensive methods such as diver transects. At each site, establish a series of transect lines running perpendicular to the shoreline that begin just outside the boundaries of the proposed project area, making sure the transects cover the entire project area. Record underwater imagery along each transect and identify the locations of all visible eelgrass beds or patches.

Methods described in the 2018 USACE guidelines were adapted to conditions at PSNS & IMF and Sinclair Inlet and are described in more detail in Chapter 2.

1.3 SURVEY TIMING

The 2018 USACE guidance recommends that eelgrass delineations be conducted during the period when above-ground leaves and shoots are present in sufficient quantities to be readily observable, which is from June 1 to October 1 in Puget Sound. Both the hydroacoustic survey and ROV surveys for underwater imagery were conducted during this time period. Details regarding precise survey dates can be found in Section 3.1.

1.4 SURVEY LOCATIONS

1.4.1 Hydroacoustic Survey

Based on a visual estimate of the area potentially encompassed by the range of alternatives depicted in the 2019 *Alternatives Feasibility Study for Waterfront Infrastructure Improvements* (BergerABAM 2019), the hydroacoustic survey area was originally estimated to be 509 acres (206 hectares; CAPJV 2020) in an irregular shape (Figure 2). Actual hydroacoustic data collection encompassed 685.5 acres (277.4 hectares; Figure 3) due to favorable field conditions and long survey days. The expanded survey area was approved by the Navy Project Manager prior to implementation.

1.4.2 Underwater Imagery Survey

Due to the large size of the hydroacoustic survey area, underwater imagery transects were planned for shoreline areas in less than 30 feet (9 meters) of water (Figure 4), along the -10, -20, and -30 foot (-3, -6, and -9 meter) contours. In areas deeper than 30 feet (9 meters), 40 survey point locations were established in a grid pattern (Figure 5).

1.5 SURVEY PERSONNEL

The hydroacoustic survey was conducted by a certified hydrographer[1] from David Evans and Associates

[1] John Staly, National Society of Professional Surveyors, Certified Hydrographer #322.

(DEA). The ROV survey was conducted by Gravity Marine. Both surveys were supervised by CAPJV biologists with Occupational Safety and Health Administration 30-hour training and certification.

1.6 DATA ACQUISITION EQUIPMENT

1.6.1 Hydroacoustic Survey

DEA's survey vessel *River Hawk* was used for the hydroacoustic survey. The *River Hawk* is a custom-built, shallow-draft river vessel with a length of 19 feet (6 meters), a beam of 7.2 feet (2.2 meters) and a working draft of less than 1 foot (0.3 meter). The *River Hawk* was designed for safe, efficient navigation in shallow and/or obstructed waters. The vessel is powered by a 105-horsepower outboard jet drive and a 9.9-horsepower auxiliary outboard motor. The *River Hawk* was outfitted with a Teledyne-Reson SeaBat T50-P precision multibeam echosounder (MBES). The T50-P is a wide-band sonar system capable of operating at frequencies of 190 to 420 kilohertz. The T50-P logs 512 soundings with each sonar ping over a nominal swath angle of 140 degrees (70 degrees to each side of the sonar). Survey instrumentation, specification, and methodology were in accordance the NAVFAC NW *Standard Operating Procedure for Multibeam Hydrographic Surveying at NBK Bremerton* (DON 2019).

Primary positioning was provided by a land-side base station installed at the Washington Department of Transportation's (WSDOT) survey marker GP18304-20, located at the Bremerton Ferry Terminal. The base station broadcast Real Time Kinematic (RTK) global navigation satellite system (GNSS) corrections that were received aboard the *River Hawk* by a Trimble SPS-851 GNSS receiver. Survey marker GP18304-20 was recovered most recently in 2016 and considered in "good" condition at that time. Additional information about this survey marker can be found in Appendix B.

Motion reference was provided by an Applanix POS/MV 320 V5 integrated GNSS and inertial reference system. The system consisted of an inertial motion unit, dual-frequency GNSS antennas, and a data processor. The POS/MV system provided complete time synchronization of the sonar, position, heading, motion, and timing data, which were output to HYPACK data acquisition software on the data acquisition computer.

An AML Oceanographic Smart-X was used as the primary sound velocity sensor. The Smart-X was deployed from a davit on the port side of the vessel. An AML Oceanographic Micro-X sound velocity sensor was also mounted on the T50-P sonar head and provided direct measurements of surface sound velocity to enable proper sonar beamforming and bottom detection. All sound velocity sensors were calibrated prior to survey operations.

The data acquisition station aboard the *River Hawk* consisted of a Windows computer with HYPACK software, Teledyne-Reson SeaBat MBES software, and DEA's proprietary LineLog software for recording acquisition settings, environmental conditions, and survey notes.

1.6.2 Underwater Imagery Survey

The ROV used in this study was the Deep Trekker Revolution ROV on board the survey vessel *Cayuse*. The ROV has a 4K video camera and LED lights. The images collected using an ROV include a laser range finder in the field of view. There were scaling lasers (they adjusted as the ROV moved up or down), so the distance between the two laser points was always 4 inches (10 centimeters).

One survey day (September 25, 2020), a video tow sled was used instead while the ROV cable was being replaced due to malfunction. For the tow sled, the field of view was measured at 6.6 feet (2.0 meters) wide when it was positioned 3.3 feet (1.0 meter) above ground surface. The field of view would change if raised

or lowered from that position.

HYPACK Survey 2018 and HYSWEEP Survey software was used to perform spatial data collection and navigational and vessel positioning support.

1.7 PROJECT DATUMS, CONTROL, AND POSITIONING

The horizontal datum used for this survey was the North American Datum of 1983 (NAD83). The projection was Washington State Plane Coordinate System, Zone WA-4601 Washington North. Horizontal units were in U.S. survey feet. The vertical datum for this survey was mean lower low water (MLLW), epoch 1983-2001 for non-long-term monitoring surveys (DON 2019).

1.8 PERMISSIONS

Access to PSNS & IMF and use of hydroacoustic equipment and underwater cameras was allowed by permission of PSNS Information and Operations Security, Naval Sea Systems Command, and PSNS & IMF Cyber Security. Imaging Device Permit number 2020-00238 was obtained for the ROV. Underwater images obtained with the ROV were viewed and cleared for use in this report by PSNS Information and Operations Security and Naval Sea Systems Command on October 8, 2020.

CHAPTER 2
METHODS

The general survey methods, survey area, and target locations were previously established in a *Habitat Survey and Data Management Work Plan* (CAPJV 2020). This chapter describes the actual workflow and field methods used during the survey.

2.1 HYDROACOUSTIC DATA COLLECTION

The *River Hawk* was mobilized from DEA's office in Vancouver, Washington. Hydroacoustic survey operations were conducted during the week of July 13, 2020. During survey operations, the *River Hawk* was based at Bremerton Marina and transited to/from the survey area (Figure 2).

The Teledyne-Reson T50-P MBES was used to simultaneously acquire multibeam bathymetric data, acoustic backscatter imagery, and side-scan imagery. Confidence checks were performed to confirm that the acquisition system and survey sensors were functioning properly prior to initial survey operations, when any significant changes were made, and upon completion of survey operations. Confidence checks included a bar check to MBES depth comparison, a sound speed confidence check, and daily position checks; refer to Section 2.6 for further detail on quality control methodology.

The multibeam survey consisted of overlapping swaths to obtain 100 percent coverage. During survey data acquisition, line spacing was adjusted as necessary to help improve data capture in shallow areas and areas containing significant obstructions (e.g., moored vessels, piers/wharves, docking lines). Line spacing varied from approximately 20 feet (6 meters) in shallower nearshore areas and around docks and structures to approximately 90 feet (27 meters) in deeper areas. An optimum survey speed of approximately 4 to 6 knots (7 to 11 kilometers per hour) was targeted. A HYPACK survey matrix was used to track the progress of the survey in real time. Cross lines were run in the field and then analyzed during post-processing for a quality control.

Upon conclusion of hydroacoustic survey operations, the *River Hawk* was demobilized and transported back to DEA's office in Vancouver, Washington.

2.2 HYDROACOUSTIC DATA ANALYSIS

DEA post-processed the MBES data set to produce data deliverables in accordance with project specifications. Upon receipt of the MBES data, DEA transferred the raw data to secure servers in Vancouver, Washington, where the data were inventoried and prepared for processing. All source data, processed data, and derivative products were stored on secure servers and routinely backed up during the execution of the project. After the initial data assessments were complete, data were prepared for import into CARIS Hydrographic Information Processing System (HIPS) software, which was used for all bathymetry processing and deliverable creation activities. A CARIS HIPS vessel file, which stored sensor offsets for the survey vessel, was constructed prior to import into HIPS. Sensor offset values for the *River Hawk* were entered into the HIPS vessel file. MBES data were imported into HIPS and stored logically by survey day. Once in HIPS format, calibration data were analyzed, and alignment corrections were calculated and subsequently applied to the soundings. Sound speed profiles were incorporated to correct multibeam slant range measurements and compensate for refraction in the water column. Sound speed profiles were applied using the "closest in distance and time" function in CARIS HIPS software. A preliminary Digital Elevation Model was constructed and reviewed for erroneous depths ("flyers"), systematic biases, timing

errors, and/or alignment offsets. Erroneous depths were flagged as rejected using manual or automated filtering techniques available in CARIS HIPS software. After processing was complete, the soundings were gridded using a swath angle filter to a grid resolution of 20 inches (50 centimeters), and the resulting bathymetric grid was exported to a 32-bit floating point GeoTiff file. Depth contours at 1-foot (0.3-meter) intervals and shaded relief imagery were generated from the GeoTiff file using tools in ArcGIS software. All bathymetric products were referenced to NAD83 Washington State Plan Coordinate System, Zone WA-4601 Washington North, with horizontal units in U.S. survey feet and vertical units in U.S. survey feet relative to MLLW.

2.3 UNDERWATER IMAGERY DATA COLLECTION

Underwater imagery data collection occurred over 10 field days in September 2020. At the beginning of each field day, the ROV hand-held controller was supplied with a new mini SD card to store imagery files. The ROV was installed with a fully charged battery and connected via a cable tether to the topside controller. The 24-foot (7-meter) survey vessel *Cayuse* was launched from the Port Orchard public boat launch, and a Global Positioning System (GPS) control point was taken with the A-frame of the vessel directly over the end of the boat launch dock.

At ROV points (numbers 1 to 40), the vessel was generally anchored at the center of the coordinates mapped in the *Habitat Survey and Data Management Work Plan* (CAPJV 2020). In a few instances (e.g., when blocked or in unsafe proximity to other boats or structures), the location of the ROV point was slightly adjusted in the field. At ROV transects (locations of -10, -20, and -30 foot [-3, -6, and -9 meter] contours), *Cayuse* was anchored near survey areas at available piers or wharves that were not actively being used for shipyard operations. ROV drop locations are shown in Figure 5.

The ROV was deployed from the bow door of the vessel and maneuvered by a handheld controller on deck. The ROV operator was able to view the actual ROV location relative to the vessel, ROV points, and contours on a computer in the vessel cabin. At each survey location, the ROV was initially lowered to the seafloor bottom, and a "depth lock" was set to 3.3 feet (1.0 meter) above the ground surface. The height above ground surface was manually overridden in locations where debris or obstructions were encountered or the seafloor elevation changed substantially over a short distance. The ROV operator controlled the speed and direction of travel for the ROV. At each ROV point, the ROV was flown approximately 328 feet (100 meters) in each cardinal direction from the vessel, in this order: west, east, north, and south (Figure 5). The start and stop points for the ROV were recorded using the vessel-based GPS system.

As mentioned in Section 1.6.2, a tow sled was used for one day when the ROV cable tether was being repaired. The tow sled was raised and lowered using a winch. The survey speed and direction were controlled by movement of the vessel. The start and stop points for the tow sled were recorded using the vessel-based GPS system. The speed and direction of travel for the vessel was also recorded in the vessel navigation system for tow sled operations.

2.4 UNDERWATER IMAGERY DATA ANALYSIS

For this analysis, positioning of the ROV as it collected underwater imagery was determined by a process called "vector positioning." This is a method that uses the speed and heading of the ROV to calculate its position in space and time. Calculations were done after the field work and data collection was complete, as part of data post-processing. Prior to the field work, the planned approach to spatial data collection was to use the ROV's onboard ultrashort-baseline positioning (USBL) system. However, interference from structures and ships at the PSNS & IMF prevented the USBL system from functioning entirely properly

during field work.

To map underwater vegetation, the spatial location of the ROV or tow sled was matched to the video images by the date and time stamp, in 1-minute increments. Each minute was considered a data point on which additional analysis and mapping was conducted. The process of converting live streaming video and spatial data into the 1-minute increments is described below.

2.4.1 ROV Spatial Data

Start and stop times for each video at each ROV point or transect were determined from the vessel navigation files and/or the logbook (Appendix C). An average speed of travel and heading were calculated for each video survey segment (e.g., a given contour or ROV point to the east, west, north, or south). In this calculation, it was assumed that the ROV was travelling at a consistent rate of speed during each segment.

The ROV position was post-processed in geographic information system (GIS) software into segmented line data in 1-minute intervals, and a coordinate was then calculated for each 1-minute point. These 1-minute intervals were established to correspond to the imagery post-processing intervals. The GIS file was output to an Excel file named "ROV Spatial Data.xls."

2.4.2 Video Review and Analysis

The video recording files (MP4) were reviewed on a computer in the office after all field work was complete. The start and stop times of each video file were entered into an Excel workbook, and one row was created for each minute of video, starting from the moment the video began recording. This file is named "ROV Imagery Data.xls." Biologists watched the video replay, and for each 1-minute increment, assigned a single coverage category, defined in Table 2.4-1. The categorization was a visual estimate of the "average" conditions observed during the minute of video.

Table 2.4-1. Macroalgae Coverage Categories

Macroalgae Coverage	*Description*
None	None observed
Trace	Less than 2% coverage, or only one or two individual macroalgae observed
Low	Approximately 2-34% coverage
Medium	Approximately 35-65% coverage
High	Approximately 65-100% coverage
Not Applicable	Video image was obscured due to low water visibility, excess height above ground surface, or speed of movement

Example images of macroalgae density categories are provided in Appendix D.

2.4.3 Habitat Mapping

Object-based imagery analysis (OBIA) was used to transfer and extrapolate the macroalgae observations. In OBIA, neighboring pixels are grouped together into polygons ("objects") having similar spectral, spatial, and textural attributes. Using tools in ArcGIS software, OBIA was applied to the bathymetry Digital Elevation Model, and a polygon data set was produced that divided the area into zones of similar terrain and texture. The macroalgae observations were overlaid on the OBIA polygons. For each macroalgae observation point, the interpreted macroalgae coverage was transferred to the OBIA polygon in which the observation was contained. These polygons were classified as "Observed High," "Observed Medium," "Observed Low," or "Observed Trace." In some cases, it was possible to extrapolate the macroalgae

observations to the adjacent OBIA polygons based on similar bathymetric texture and/or setting; these polygons were classified as "Inferred High," "Inferred Medium," "Inferred Low," or "Inferred Trace." The resulting macroalgae distribution map was exported in ESRI shapefile format.

2.5 DATA MANAGEMENT

The role of data management in this analysis was to ensure the validity of the ROV imagery files; create the ROV imagery data Excel workbook; integrate the ROV spatial data with the ROV imagery data file; and coordinate with the CAPJV field staff and subcontractors to ensure a consistent data and file management structure.

2.5.1 ROV Imagery File Management

All ROV imagery files were extracted from their external storage media (mini-SD cards) and stored on a secure encrypted hard drive. After the transfer from mini-SD cards to the hard drive, a software program ("Be Compare") was used to conduct a side-by-side file comparison to ensure validity and reconcile any file transfer differences between the storage media and the encrypted hard drive.

2.5.2 ROV Imagery Data Excel Workbook

As mentioned in Section 2.4.2, an Excel workbook ("ROV Imagery Data.xls") was created to track all start and stop times of the ROV recording video files. The workbook stored the video filename, transect location, field date, start time, end time, length of video, sampled minute, minute number, macroalgae coverage category, reviewer initials, and reviewer comments.

2.5.3 Integration of ROV Imagery Data and Spatial Data

The data from the ROV imagery data file were merged with the ROV spatial data file (mentioned in Section 2.4.1) by matching the field dates and video times in both files.

2.5.4 Data and File Management Structure

A draft data and file management structure is included in Appendix E. Data files to be provided with the final Habitat Survey Report will include the ROV imagery videos, bathymetric contours, spatial data, and GIS maps products. Total file size is estimated at 535 gigabytes.

2.6 QUALITY CONTROL

2.6.1 Hydroacoustic Survey

To verify the accuracy of hydroacoustic survey equipment, a battery of tests was conducted during the mobilization of the *River Hawk* and at the beginning and conclusion of survey operations.

Position checks were conducted at the start of each survey day. The position of the survey monument occupied by the base station was used to compare the accuracy of horizontal and vertical positioning being received by the SPS-851 GNSS antenna on the *River Hawk*. Position checks were performed by removing the antenna from the vessel and mounting it on the base station tripod. Position and elevation information were recorded in a HYPACK RAW file. The northing, easting, and elevation were then extracted from the RAW file and compared to the survey monument position. This process verified that correctors were being obtained and confirmed that position and height data were correctly entered into the GNSS base station and validated geodetic parameters were entered correctly in HYPACK software. Application of RTK correctors resulted in maximum differences of 0.48 inch (1.22 centimeter) horizontal and 0.60 inch (1.52 centimeter) vertical.

Static draft measurements were recorded daily for a quality assessment of the water line height. Draft measurements on the *River Hawk* were taken from a reference point on the sonar mount down to the waterline. The static draft reading was recorded daily to ensure the best approximation of the true draft at the vessel reference point due to loading changes from fuel consumption and variation in ballast distribution. Static draft changes were incorporated during MBES data processing.

Bar checks were performed at the start and end of survey operations to confirm that the MBES system was functioning properly and that accurate depths were being recorded at the head of the sonar. A plate attached to the end of a wire cable and chain, marked at 6.6 feet (2.0 meters), was used to bar check the T50-P MBES depths. The 6.6-foot (2.0-meter) marks were checked periodically with a measuring tape. The individual bar check device was lowered to 6.6 feet (2.0 meters) below the water surface of the sonar, a point above the natural bottom, where it could be clearly measured by the sonar (i.e., ensonified). The depth of the bar was compared to the depth of the bar reported by the sonar. Observations were recorded in a comparison log. The corrected depth accounts for the waterline correction, roll and pitch correctors, and the calculated vessel offsets. All bar check comparisons displayed a difference between the corrected depth and the raw bar depth of less than 1.2 inches (3.1 centimeters).

Multibeam patch tests were conducted at the start and end of field survey operations to measure alignment offsets between the inertial motion unit sensor and the T50-P sonar transducer and to determine time delays between the time-tagged sensor data. Each patch test consisted of a series of lines run in a specific pattern. A precise timing latency test was performed by running a single line over a flat bottom with induced vessel motion. Roll alignment was determined by evaluating the reciprocal lines run over a flat bottom used for the latency test. The pitch tests consisted of set of reciprocal lines located on a steep slope or over a submerged feature. The heading bias was determined by running parallel lines over the same area as the pitch tests. All lines were run at approximately 3 knots to 6 knots. Patch test values were incorporated during MBES data processing.

During survey operations, the sound velocity profiler was deployed as needed to obtain a representative number of sound velocity profiles to properly correct the multibeam data for acoustic refraction during data processing. Sound velocity profiles were measured throughout each survey day. The location of casts along the survey track lines was varied to ensure adequate spatial coverage. A real-time comparison was made between the sound velocity profiler and the sound velocity measured at the sonar head, and any deviation was noted in the log. Casts were extended to at least 80 percent of water depth, with at least one deep cast (extending to 95 percent of depth) taken per day.

During survey operations, DEA hydrographers monitored the MBES system, tracked vessel navigation and motion systems, recorded sound velocity measurements, and maintained the digital line log. The MBES system status was displayed in the Teledyne-Reson SeaBat software user interface. Adjustments to range, power, and gain were made as necessary to optimize data quality and coverage, and all changes were noted in the digital line log. Primary and secondary navigation systems were monitored to verify quality position data were acquired at all times; raw attitude and nadir depth were also recorded in HYPACK RAW format as a supplementary backup. Typical windows for monitoring raw sensor information included timing synchronization, vessel motion, number of satellites, horizontal dilution of precision, and position dilution of precision (amount of error). Vessel motion accuracy was monitored using Applanix POSView software. The Teledyne-Reson, HYPACK, and Applanix user interfaces were displayed on a monitor mounted at the data acquisition station on the *River Hawk*. The hydrographers worked together to monitor and adjust vessel speed and track to meet the required along-track coverage and data quality objectives.

During survey operations, the preliminary hydroacoustic data were reviewed in real time by DEA

hydrographers for any evidence of submerged vegetation. In addition, at the end of each survey day, the preliminary hydroacoustic data were reviewed by a DEA geophysicist for any evidence of submerged vegetation. No evidence of submerged vegetation was observed. As a confidence check of the ability of the MBES system to detect submerged vegetation, reconnaissance surveys were conducted in areas with documented submerged vegetation. Hydroacoustic data in these areas showed evidence of submerged vegetation, supporting the ability of the MBES system to detect and recordvegetation present in the survey area.

A crossline analysis was conducted to evaluate overall MBES system performance and assess survey precision and accuracy. During survey operations, crosslines (lines run orthogonal to main survey lines) were acquired at least once per day in a relatively flat area, avoiding any slopes. During data postprocessing, the crossline data were gridded at a 20-inch (50-centimeter) resolution to match the final bathymetric grid. A statistical analysis was conducted to compare the crossline data to the bathymetric grid. Results of this analysis indicate 100 percent of the data are within the vertical accuracy requirement of +/- 0.8 feet (0.2 meter) established by USACE's *Engineering and Design Manual for Hydrographic Surveying* (USACE 2013).

2.6.2 ROV Underwater Imagery

A daily position check was conducted during ROV data collection. This check was done by taking a GPS point in the vessel navigation system at the end of the boat dock at the Port Orchard public boat launch.

The start and stop times of each video transect were recorded into the field logbook and checked against the spatial data and ROV image files. This check determined that on occasion the ROV internal clock was set to the incorrect time zone. This error was corrected manually in the "ROV Spatial Data.xls" and "ROV Imagery Data.xls" files.

CHAPTER 3
RESULTS

Raw hydroacoustic data and imagery collected as part of this survey were post-processed and then integrated in GIS for further corroboration of the results described below. The results are also visually depicted in figures included as Appendix A.

3.1 SURVEY DATES

Hydroacoustic data collection occurred from July 13 to 17, 2020. Underwater imagery data collection occurred on September 19, 20, 21, 22, 23, 24, 25, 28, 29, and 30, 2020.

Due to long survey days, favorable tides, and the maneuverability of the *River Hawk* in confined areas with significant obstructions, survey coverage was completed in advance of the anticipated schedule. As a result, additional hydroacoustic surveys were conducted to increase the coverage area. The additional surveys increased the coverage area from 509 acres (206 hectares), as originally planned, to 685.5 acres (277.4 hectares).

All underwater imagery files collected on September 24, 2020, were corrupted due to a malfunction in the cable tether between the ROV and the topside controller unit. Imagery for the locations initially collected on September 24 were re-collected at later dates. One additional imagery file from September 19, 2020, for the -20 foot (-6 meter) contour in the south side of Sinclair Inlet, was corrupted for an unknown reason, which is further discussed below in Section 3.4.2.

3.2 SURVEY COVERAGE

A total of 685.5 acres (277.4 hectares) of hydroacoustic survey was completed at PSNS & IMF and Sinclair Inlet. The bathymetric contours from the hydroacoustic survey data are shown in Figure 6. There are two notable gaps in hydroacoustic data coverage. First, on the west side of Pier B, the USS *Carl Vinson* was docked during the July 2020 survey dates. Second, the area around Mooring A was occupied by multiple submarines. The sonar was unable to penetrate the area beneath those vessels.

Sonar typically penetrated some, but not all, of the areas beneath the piers and moorings. The sonar survey vessel did not operate directly underneath the piers for safety reasons, so some gaps in coverage can also be seen underneath existing structures (Figure 6).

Approximately 28 hours and 45 minutes of underwater video footage was collected. Of that, 1,531 unique 1-minute segments (25 hours and 30 minutes) were delineated and mapped for use in data analysis. The 1-minute video segments eliminated prior to analysis included those times when the ROV was being deployed or returned to the vessel, when the ROV doubled back over previously viewed areas, and when the ROV was repositioning between contour lines and/or undergoing troubleshooting/setting adjustments.

3.3 HYDROACOUSTIC SURVEY RESULTS FOR EELGRASS AND MACROALGAE

3.3.1 Eelgrass

No eelgrass was detected during hydroacoustic surveys within the 685.5-acre (277.4-hectare) study area.

3.3.2 Macroalgae

No macroalgae was detected during hydroacoustic surveys. Sonar would typically be able to detect

vegetation beds with a height profile of 20 inches (50 centimeters) or more. The majority of macroalgae in the survey area (as seen in the underwater imagery) was shorter than that. Macroalgae forms a thin covering on substrates and essentially mirrors the seafloor morphology, degrading the ability of the MBES system to detect macroalgae based on bathymetric relief and/or surface texture.[2] Macroalgae is also non-vascular, which further degrades the ability of the MBES system to detect macroalgae based on acoustic response.[3]

3.4 UNDERWATER IMAGERY SURVEY RESULTS FOR EELGRASS AND MACROALGAE

3.4.1 Eelgrass

No eelgrass was seen in underwater imagery transects.

3.4.2 Macroalgae

The results of the ROV data analysis for macroalgae density are mapped in Figures 7 through 11. An overview of the detailed maps is shown in Figure 7. Areas of greater detail were selected where macroalgae occurred in greater abundance and are shown in Figures 8 through 11. Screenshots of typical types of macroalgae are provided in Appendix F.

Figure 8 shows detailed coverage for the area from Mooring F to Pier B, the "west" map area. The shoreline from Mooring F to Pier D had the greatest observed density of macroalgae recorded in the entire study area. Macroalgae occurred nearly continuously along the shoreline and up to the -30 foot (-9 meter) contour. Areas of high, medium, low, and trace density were observed throughout this zone. In areas where the ROV did not directly capture underwater images, OBIA data analysis inferred mostly areas of medium and low macroalgae density, with some inferred high density at the western extent of the study area, between Mooring F and Mooring E. Red, green, and brown varieties of macroalgae were seen in this area, especially from Mooring F to Mooring E and Pier D to Pier C.

Figure 9 shows detailed coverage from Dry Dock 6 to Pier 3, or the "central" map area. There is a notable gap in coverage at the shoreline of Mooring A, where submarine tie lines in the water prevented survey vessel access. On the east side of Dry Dock 6, macroalgae was detected in mostly low to trace density, with some medium density. In areas where the ROV did not directly capture underwater images, OBIA data analysis inferred medium and low density macroalgae. From Mooring A to Dry Dock 5, the observed macroalgae was primarily medium to low density, with a small amount of high density. OBIA data analysis inferred mostly medium density macroalgae where the ROV did not collect images.

Figure 10 shows detailed coverage from Pier 3 to Pier 7 and the area just east of Pier 7, which is outside of the PSNS & IMF. This area encompasses the seaward end of Dry Docks 1, 2, 3, and 4, where there is an abrupt vertical transition and therefore little to no water less than 30 feet (9 meters) deep. Trace macroalgae was detected in the berthing basins between piers in this area. East of Pier 7, macroalgae was relatively abundant, observed in high density along the -10 foot (-3.0 meter) contour and primarily low or trace density on the -20 foot (-6 meter) and -30 foot (-9 meter) contours. This area has an abundance of underwater debris and structures on the seafloor. OBIA data analysis inferred mostly low or trace density in areas lacking direct video imaging. In this part of the survey area, kelp may have been detected along the -20 foot (-6 meter) contour. An image captured east of Pier 7 appears to show an individual kelp, one of only two kelp

[2] Macroalgae would be detected via changes in bathymetric properties (e.g., differences in seafloor rugosity).
[3] Macroalgae would be detected via acoustic backscatter as acoustic energy interacts and bounces off vascular components, similar to how fish are detected using sonar response to swim bladders.

observed during surveys (see Appendix F, photo 3).

Figure 11 shows a portion of the study area on the south side of Sinclair Inlet. High density macroalgae occurred in the shallowest portion of this area (-10 feet [-3.0 meters] and less). At low tide, macroalgae could be seen on the exposed beach. It appeared to be green sea lettuce (*Ulva* sp.). As the water depth increased, macroalgae became less dense. As mentioned in Section 3.1, the underwater imagery file for the -20 foot (-6 meter) contour in this portion of the survey area was found to be corrupt and unviewable upon review in the office. Logbook notes (Appendix C, page 16) from the -20 foot (-6 meter) contour indicate that macroalgae was present along the length of that survey. Additionally, an 11-minute video segment of the -20 foot (-6 meter) contour that was recorded just outside of the survey area to the east also shows macroalgae. The majority of points along that transect were of medium density (6 of 12, or 50 percent), followed by low density (25 percent), high density (16.5 percent) and trace (8.5 percent). It may be inferred from these data that the -20 foot (-6 meter) contour inside the survey area would have similar macroalgae density. The -30 foot (-9 meter) contour showed primarily only trace amounts of macroalgae.

The frequency of macroalgae by depth is plotted in Chart 3.4-1 for the entire survey area. In the areas with 30 feet (9 meters) or less of water, macroalgae occurred primarily in trace or high density. One interpretation of this data is based on visual observations made during the survey. Where rocky substrate (e.g., riprap) occurs along the shoreline, macroalgae occurs in high density. Where there is no rocky substrate, macroalgae lacks hard structures to anchor to, and the activity of the shipyard may disrupt the growth and persistence of underwater vegetation.

Chart 3.4-2 shows a subset of macroalgae density by water depth, with the areas of -30 foot (-9 meter) depth in the south side of Sinclair Inlet excluded (Figure 11). Chart 3.4-2 shows that high density macroalgae does not occur in shallower waters (0 to -30 feet [0 to -9 meter]) outside of the vicinity of south Sinclair Inlet. Sinclair Inlet South was the only portion of the survey area with elevations 0 to -30 feet (0 to 9 meters) that was NOT inside the PSNS & IMF.

The data displayed in Chart 3.4-1 and Chart 3.4-2 are provided in Appendix G and include location information, macroalgae density, and elevation.

3.4.2.1 Macroalgae Identification

The genus *Ulva* is known to have eight species, all of which have flat blades of green color. *Ulva* species are difficult to distinguish in the field, and a microscope would be required to determine the number of cell layers for identification purposes (Druehl 2000). The vast majority of macroalgae in the survey area appeared to be *Ulva*. For an example of green *Ulva*, see "high density" photo in Appendix D (page D-3).

In addition, the darker, brown-colored *Ulvaria* appeared to occur in the survey area, sometimes among the green *Ulva*. For example, see photo 1 in Appendix F.

As mentioned in Section 3.4.2, one incidence of kelp was observed. Photo 3 in Appendix F seems to indicate five-ribbed kelp (*Costaria costata*) or broad-rib kelp (*Pleurophycus garneri*) (Druehl 2000).

Nearshore areas with rocky substrate appeared to have additional macroalgae species present. Identification of species was difficult due to limited water clarity, speed of ROV movement, and the need to maintain distance between the ROV and rocks, to prevent the risk of collision.

Chart 3.4-1. Macroalgae Density by Water Depth, Entire Survey Area

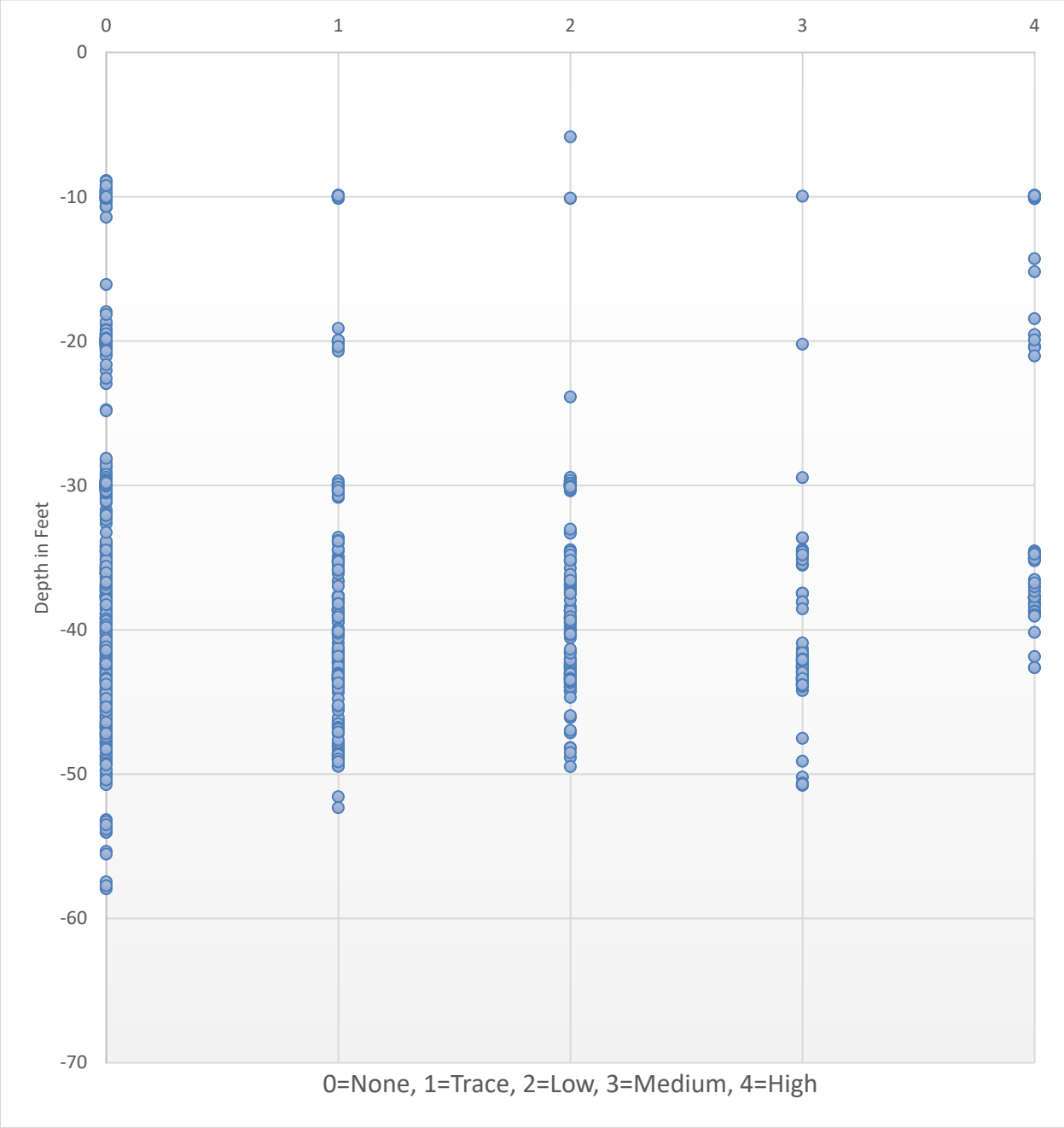
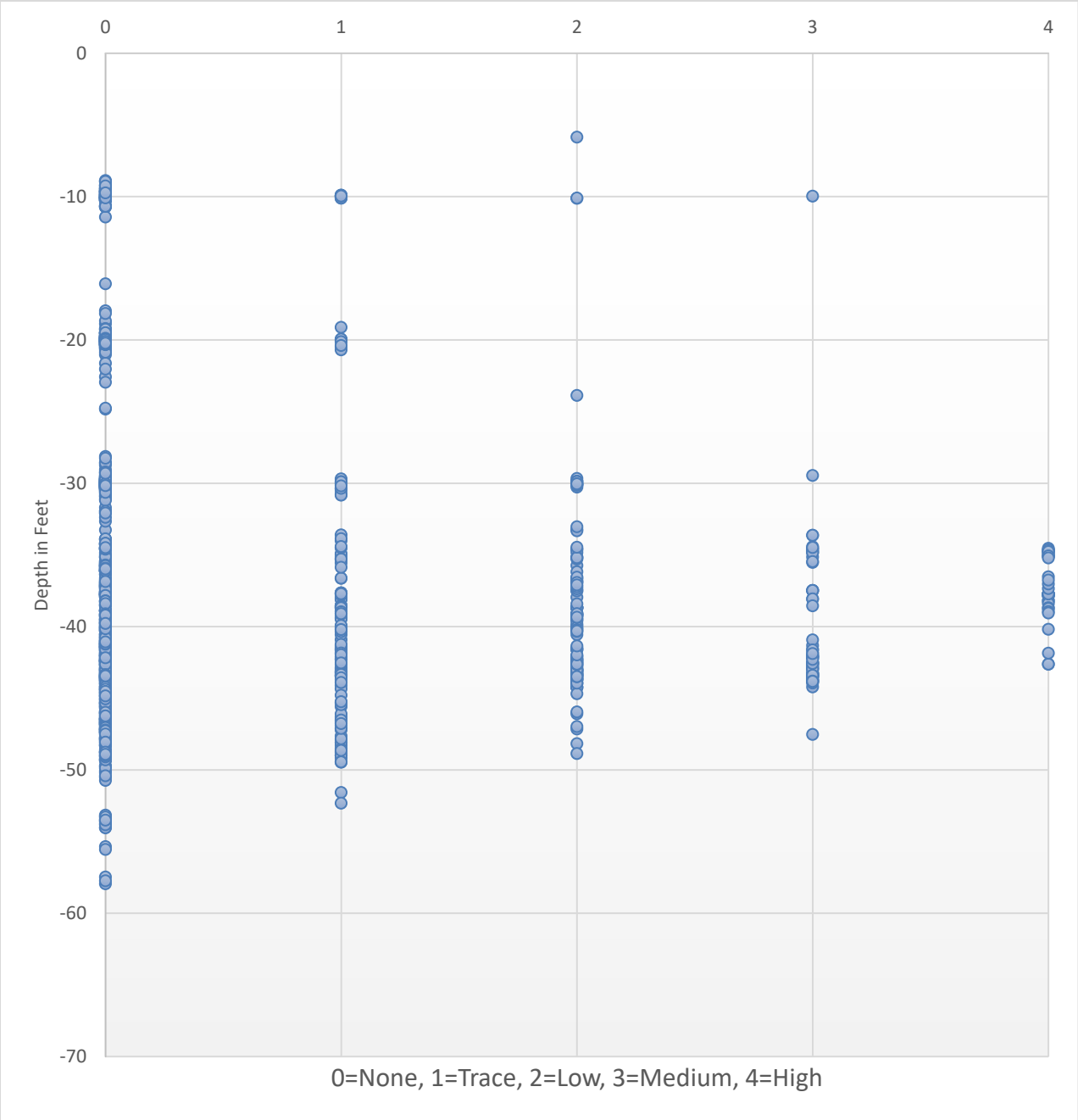


Chart 3.4-2. Macroalgae Density by Water Depth, Excluding South Sinclair Inlet



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CHAPTER 4
CONCLUSIONS

Underwater vegetation was surveyed within the PSNS & IMF and Sinclair Inlet during the summer of 2020 using two different methods. An initial hydroacoustic survey occurred during July 2020. This phase of the survey provided nearly complete coverage across 685.5 acres (277.4 hectares), except where ships or structures blocked survey vessel access or sonar penetration. Underwater imagery was collected during a second phase of survey, in September 2020, using an ROV. More concentrated imagery was collected in areas with 30 feet (9 meters) or less of water depth. Areas greater than 30 feet (9 meters) of depth were viewed using a gridded pattern of 40 points spaced evenly throughout Sinclair Inlet. All data were post-processed, analyzed, and mapped to determine the presence of underwater vegetation. The conclusions of this survey are described in the following sections.

4.1 EELGRASS

Eelgrass was not documented to occur at PSNS & IMF or the surrounding study area of Sinclair Inlet during the summer of 2020.

4.2 MACROALGAE

Macroalgae was present in shallow portions at PSNS & IMF and some other areas of the Sinclair Inlet study area during the summer of 2020. Shoreline areas with rocky substrate (riprap) or debris along the north side of Sinclair Inlet (in or adjacent to PSNS & IMF) seemed to have the greatest density of macroalgae, regardless of water depth. The south side of Sinclair Inlet also contained shallow areas of -30 feet (-9 meters) or less. That area had an abundance of what appeared to be green sea lettuce (*Ulva* sp.), a common species in Puget Sound. The berthing basins between piers and moorings, and greater Sinclair Inlet, had sporadic traces of macroalgae, as seen in underwater imagery.

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CHAPTER 5
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APPENDIX A
Figures

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Figure 1: Regional Location

- Naval Base Kitsap Bremerton
- Other Naval Base Kitsap Installations
- Water Body
- City
- Freeway or Other Major Road
- Other Major Roads

0 1 2 3 Miles

0 1 2 3 4 Kilometers

NAVFAC Naval Facilities Engineering Command

Date: 1/30/2021

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Projection: Lambert_Conformal_Conic
Datum: D_North_American_1983

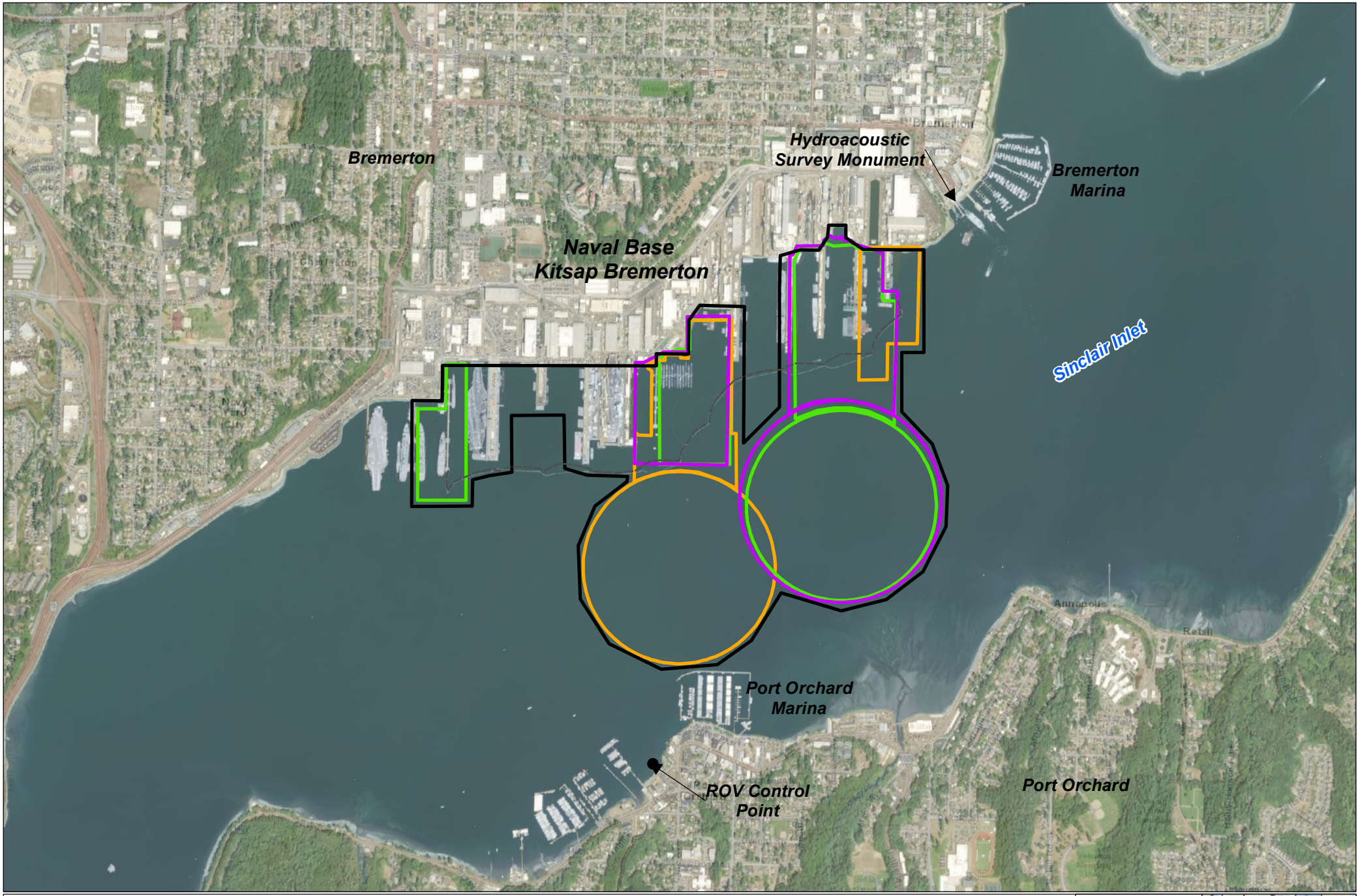

Figure 2: Proposed Hydroacoustic Survey Area

Dredging Alternative 1

Dredging Alternative 2

Dredging Alternative 12

Proposed Survey Extent

Approximate Location of Security Barrier

Meters
0 250 500 1,000

Feet
0 800 1,600 3,200

NAVFAC Naval Facilities Engineering Command NAVFAC PACIFIC

Date: 1/30/2021

CoordinateSystem: NAD_1983_StatePlane_Washington_North_FIPS_4601
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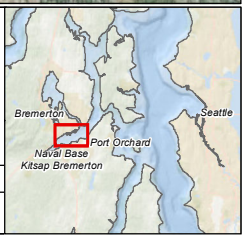


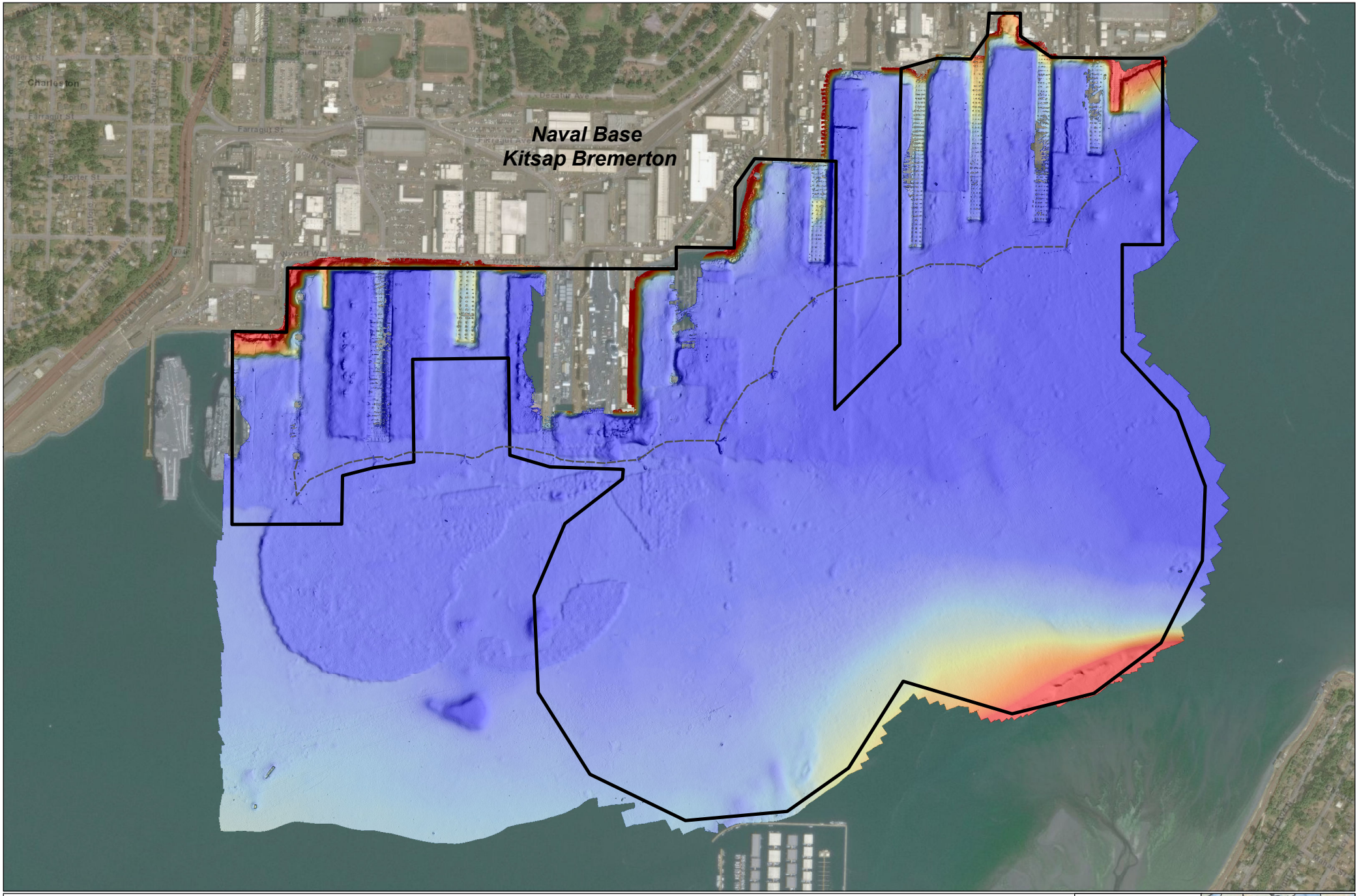


Figure 3: Actual Hydroacoustic Survey Area

--- Approximate Location of Security Barrier

Proposed Survey Extent

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020

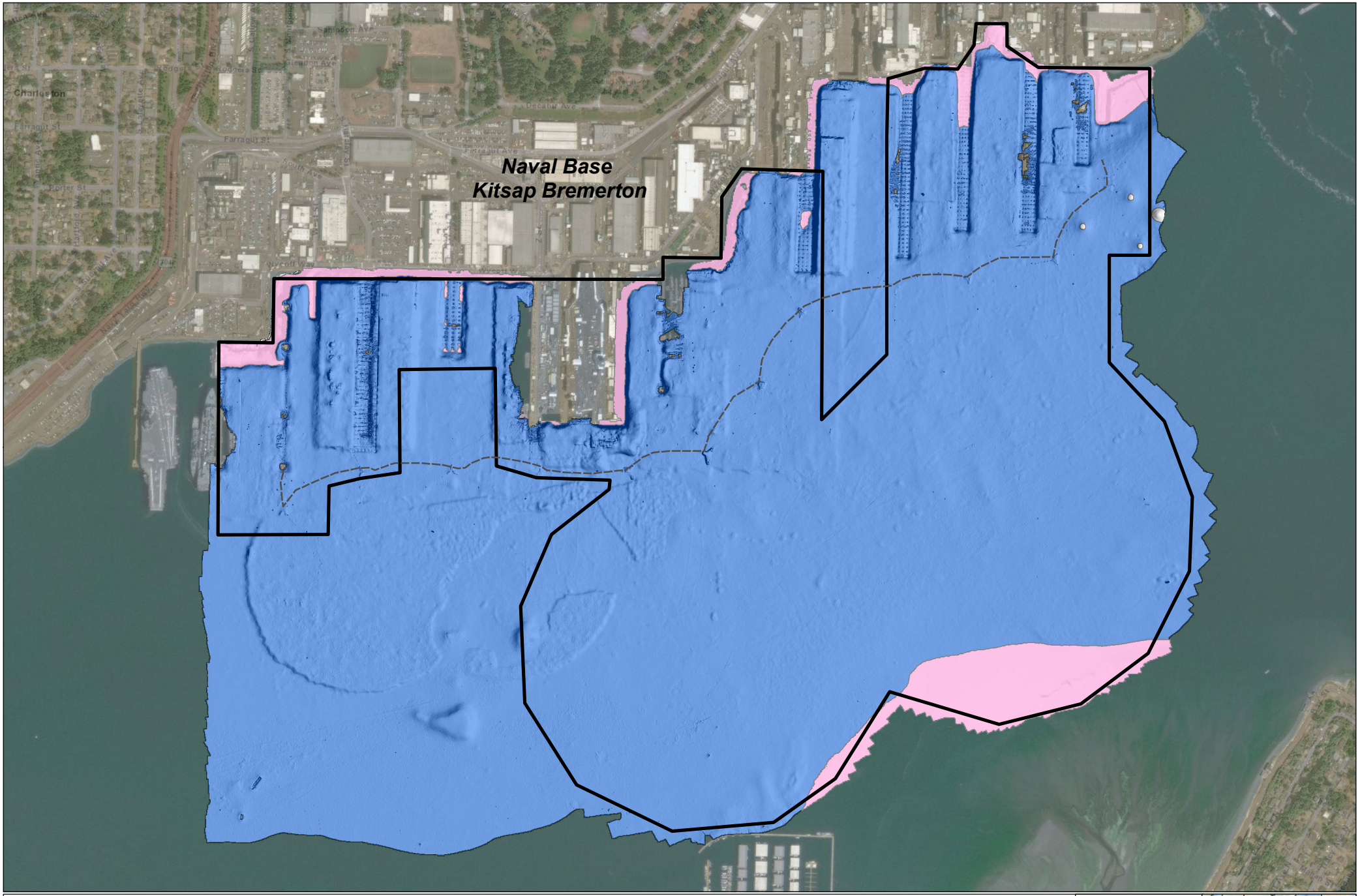


Figure 4: Hydroacoustic Survey Depth Zones

Approximate Location of Security Barrier

Proposed Survey Extent

Depth 0 - -30 Feet MLLW

Depth >-30 Feet MLLW

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020

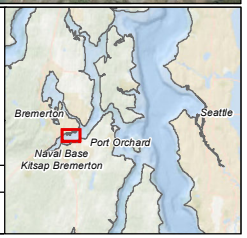
Meters
0 137.5 275 550

Feet
0 500 1,000 2,000

NAVFAC Naval Facilities Engineering Command NAVFAC PACIFIC

Date: 1/30/2021

CoordinateSystem: NAD_1983_StatePlane_Washington_North_FIPS_4601
Projection: Lambert_Conformal_Conic
Datum: D_North_American_1983



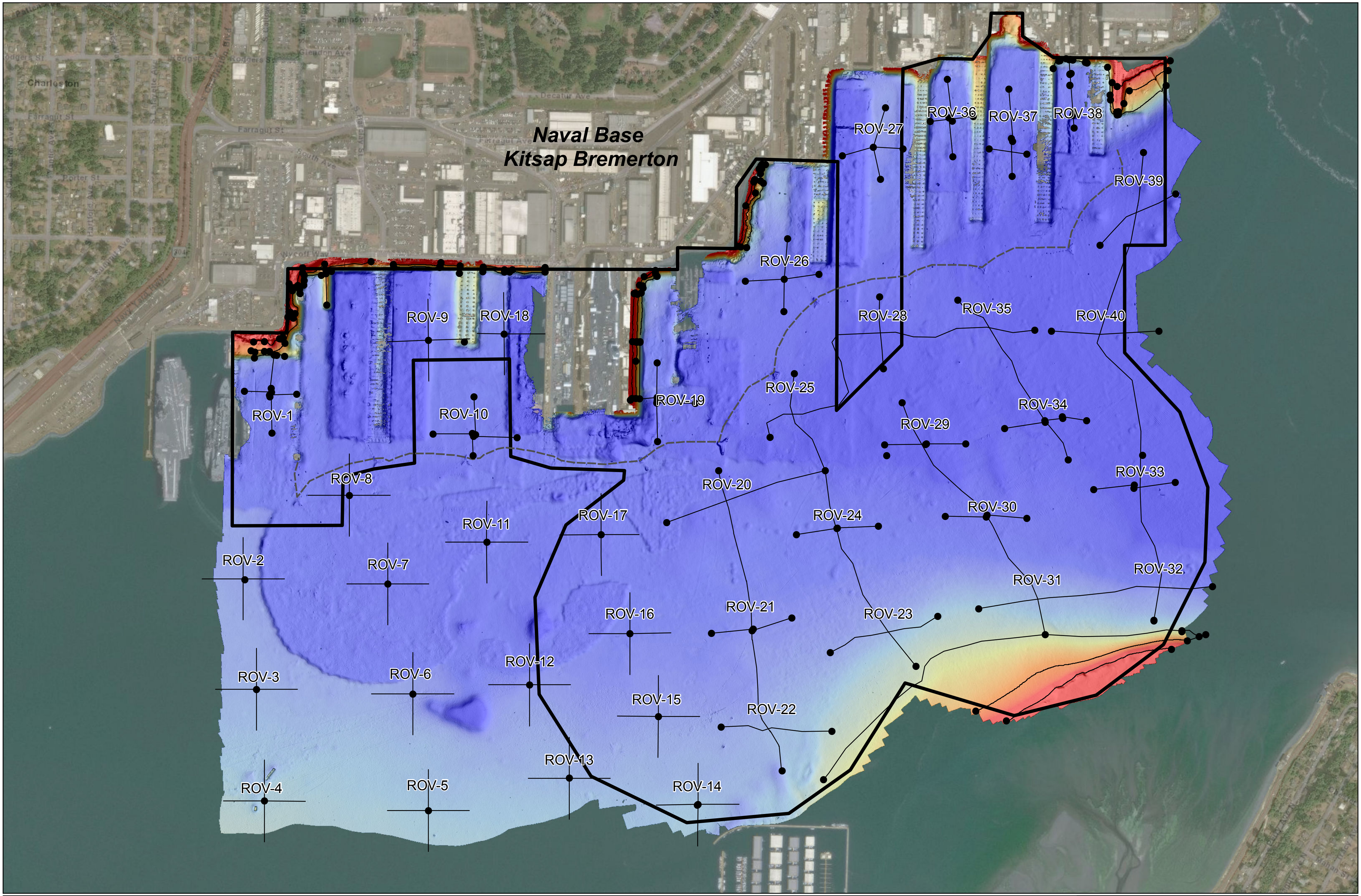


Figure 5: Actual ROV Drop Locations

- ROV Drop Location
- Approximate Location of Security Barrier
- Approximate ROV Transect Line
- Proposed Survey Extent

Depth in Feet (MLLW)

0, -5, -15, -20, -25, -30, -40, -45, -50, -60, -65

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020.
ROV underwater imagery survey by AECOM and Gravity;
September 19-25 and 28-30, 2020

Meters: 0, 137.5, 275, 550

Feet: 0, 500, 1,000, 2,000

Naval Facilities Engineering Command
NAVFAC PACIFIC

Date: 1/30/2021

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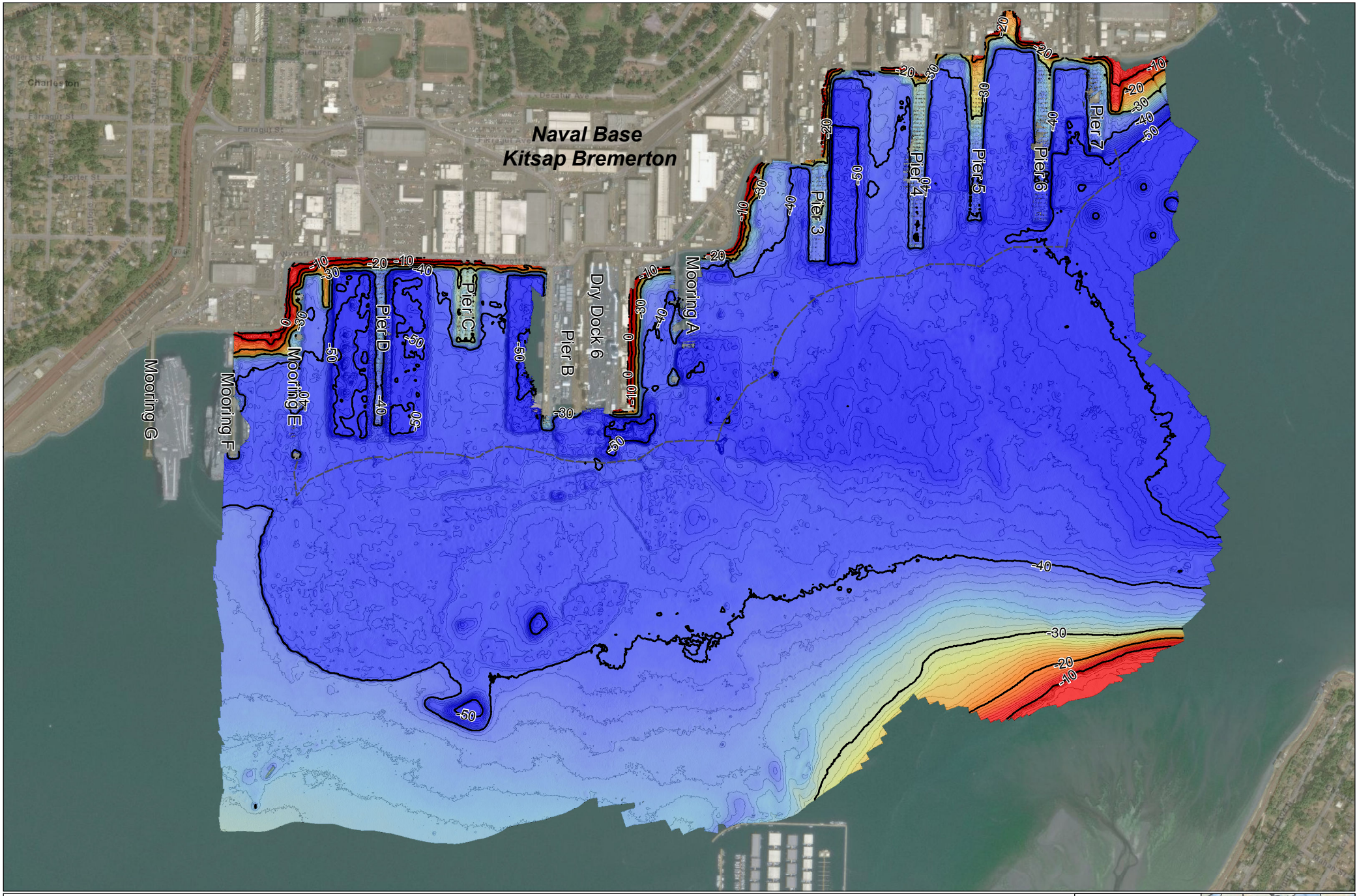

Figure 6: Bathymetric Contours

Approximate Location of Security Barrier

Bathymetric Contour (10 Foot Interval)

Bathymetric Contour (1 Foot Interval)

Depth in Feet (MLLW)

0 -5 -15 -20 -25 -30 -40 -45 -50 -60 -65

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020

Meters: 0 137.5 275 550

Feet: 0 500 1,000 2,000

NAVFAC Naval Facilities Engineering Command NAVFAC PACIFIC

Date: 2/1/2021

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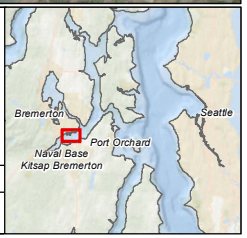

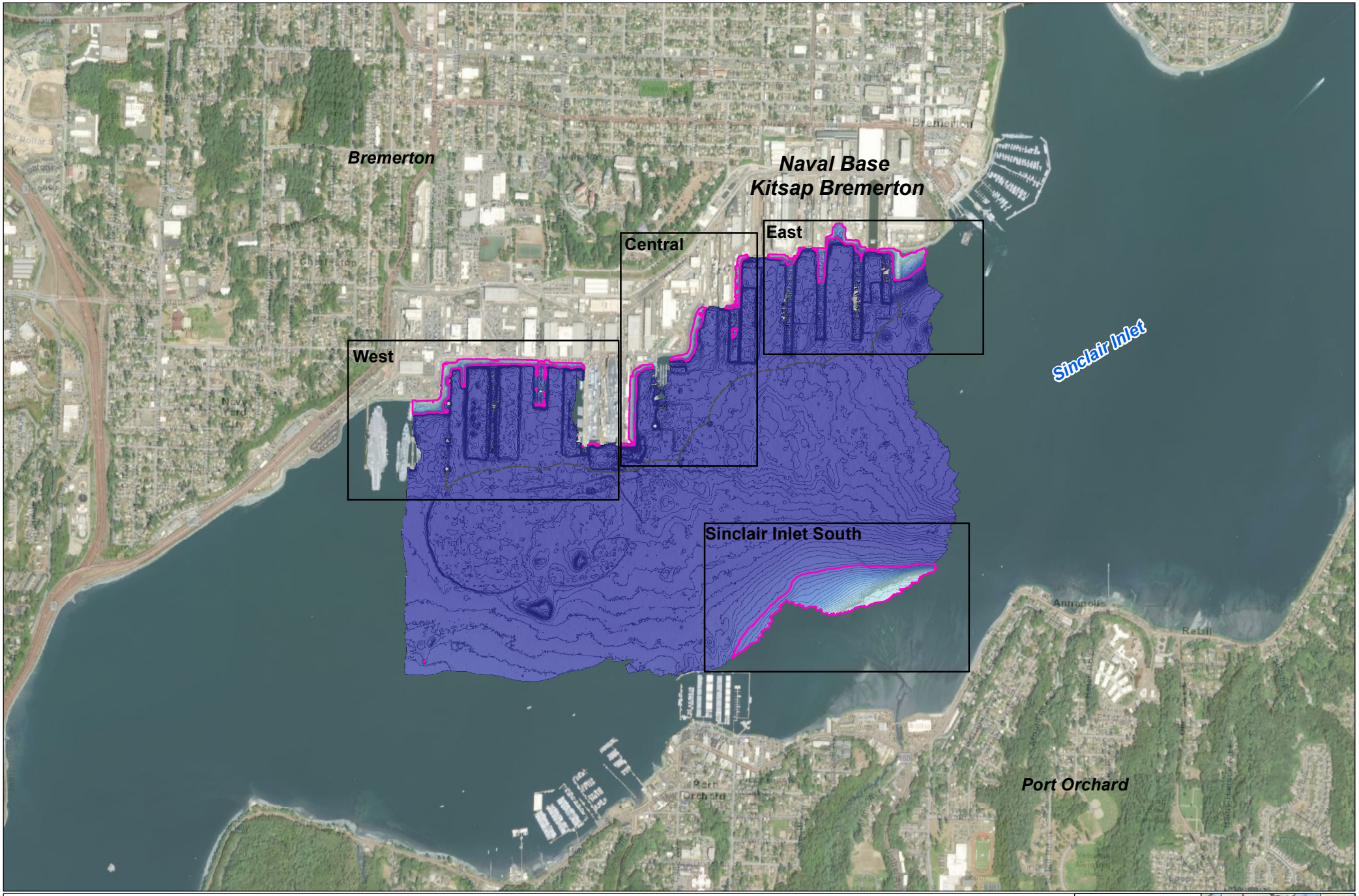

Figure 7: Overview Map of Macroalgae Results

Approximate Location of Security Barrier

Bathymetric Contour (1 Foot Interval)

Depth 0 - -30 Feet (MLLW)

Depth in Feet (MLLW)

0 -5 -10 -15 -25 -30 -35 -45 -50 -60 -65

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020

Meters
0 250 500 1,000

Feet
0 800 1,600 3,200

NAVFAC Naval Facilities Engineering Command NAVFAC PACIFIC

Date: 2/1/2021

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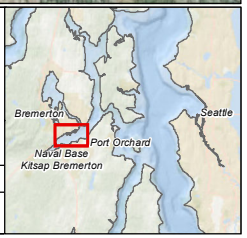

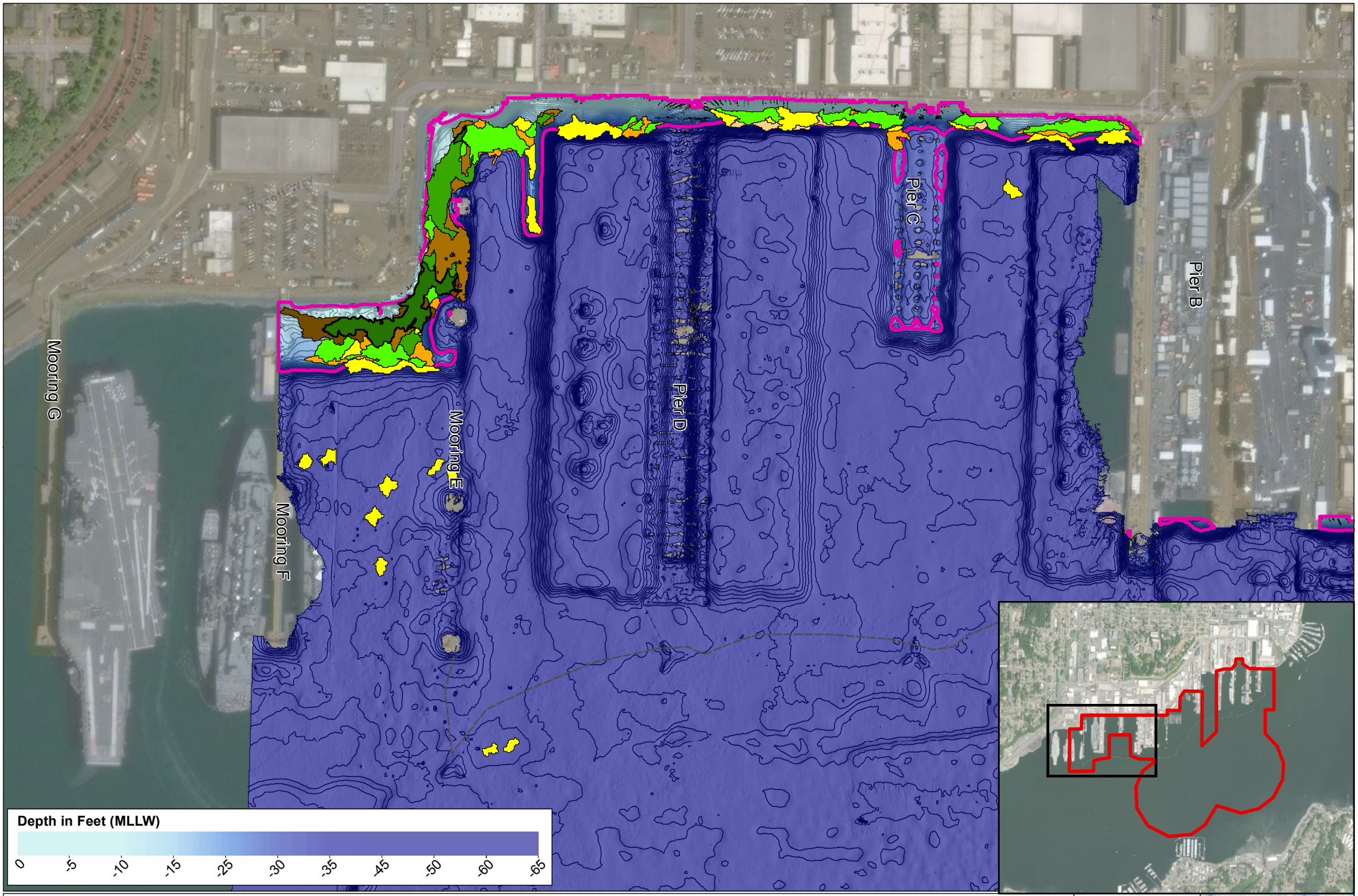

Figure 8: Detailed Macroalgae Map, West (Mooring F to Pier B)

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020. ROV underwater imagery survey by AECOM and Gravity;September 19-25 and 28-30, 2020

Macroalgae Cover

- Observed High
- Observed Medium
- Observed Low
- Observed Trace
- Inferred High
- Inferred Medium
- Inferred Low
- Inferred Trace

Depth 0 - -30 Feet (MLLW)

Bathymetric Contour (1 Foot Interval)

Meters: 0 37.5 75 150

Feet: 0 137.5 275 550

NAVFAC Naval Facilities Engineering Command NAVFAC PACIFIC

Date: 2/1/2021

CoordinateSystem: NAD_1983_StatePlane_Washington_North_FIPS_4601
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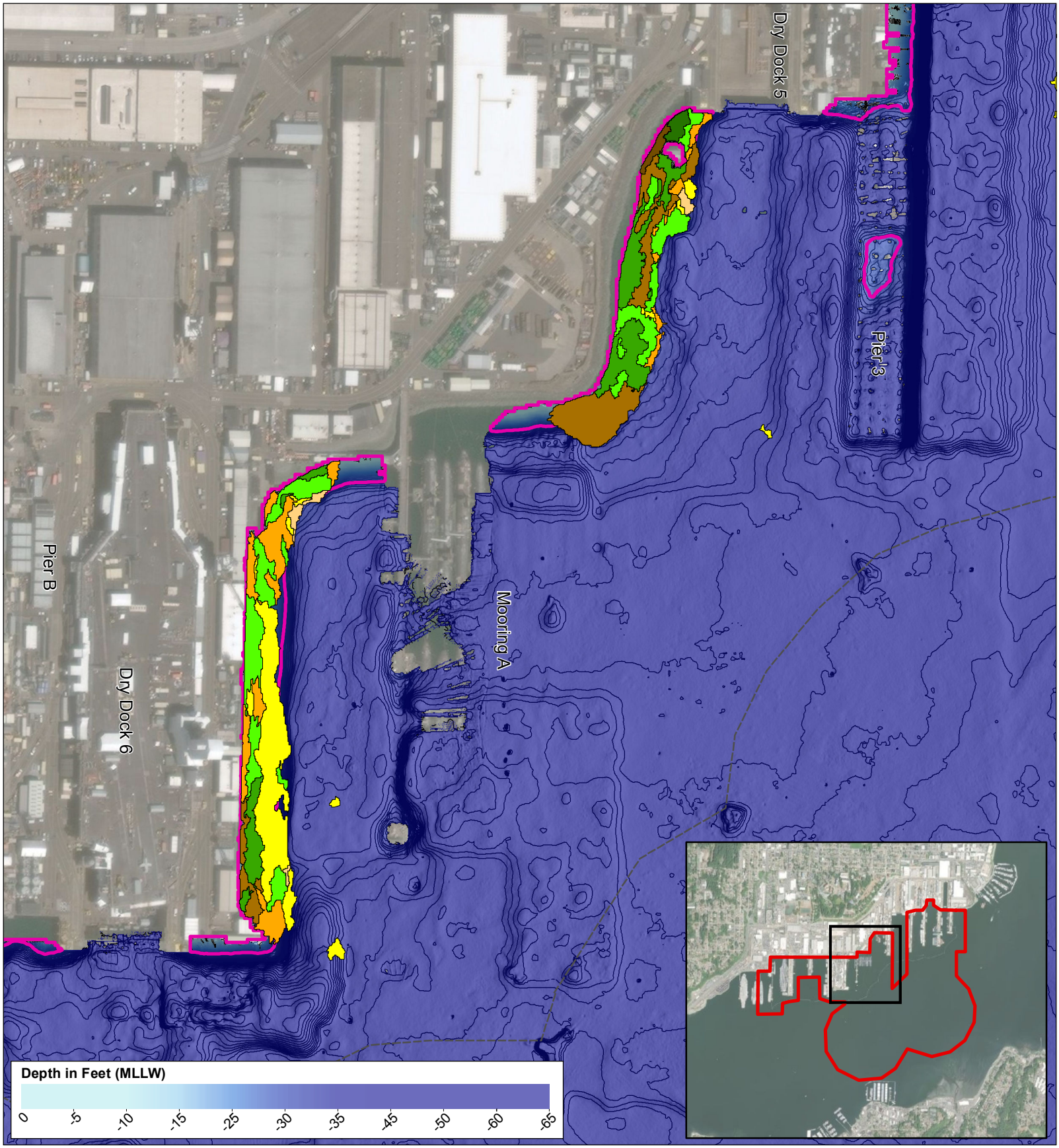


Figure 9:
Detailed Macroalgae Map,
Central (Dry Dock 6 to Pier 3)

0 125 250 375 Feet
0 25 50 75 100 Meters

NAVFAC Naval Facilities Engineering Command

Date: 1/30/2021

CoordinateSystem: NAD_1983_StatePlane_Washington_North_FIPS_4601
Projection: Lambert_Conformal_Conic
Datum: D_North_American_1983

Macroalgae Cover

- Observed High
- Observed Medium
- Observed Low
- Observed Trace
- Inferred High
- Inferred Medium
- Inferred Low
- Inferred Trace

Depth 0 - -30 Feet (MLLW)

Approximate Location of Security Barrier

Bathymetric Contour (1 Foot Interval)

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020.
ROV underwater imagery survey by AECOM and Gravity;
September 19-25 and 28-30, 2020

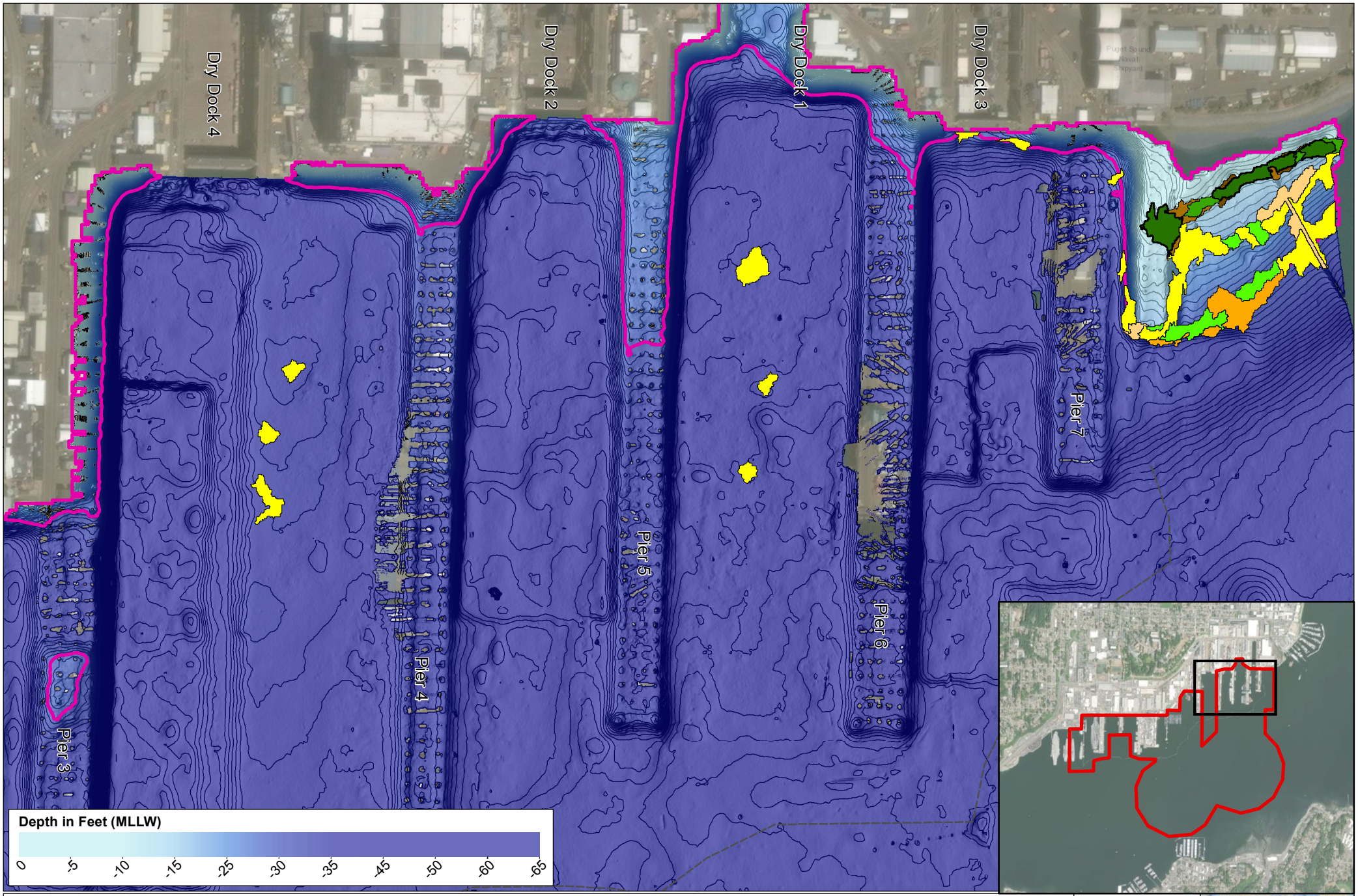


Figure 10: Detailed Macroalgae Map, East (Pier 3 to Pier 7)

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020. ROV underwater imagery survey by AECOM and Gravity; September 19-25 and 28-30, 2020

Macroalgae Cover

- Observed High
- Observed Medium
- Observed Low
- Observed Trace
- Inferred High
- Inferred Medium
- Inferred Low
- Inferred Trace

Bathymetric Contour (1 Foot Interval)

Depth 0 - -30 Feet (MLLW)

Meters: 0 25 50 100

Feet: 0 100 200 400

NAVFAC Naval Facilities Engineering Command NAVFAC PACIFIC

Date: 1/30/2021

CoordinateSystem: NAD_1983_StatePlane_Washington_North_FIPS_4601
Projection: Lambert_Conformal_Conic
Datum: D_North_American_1983

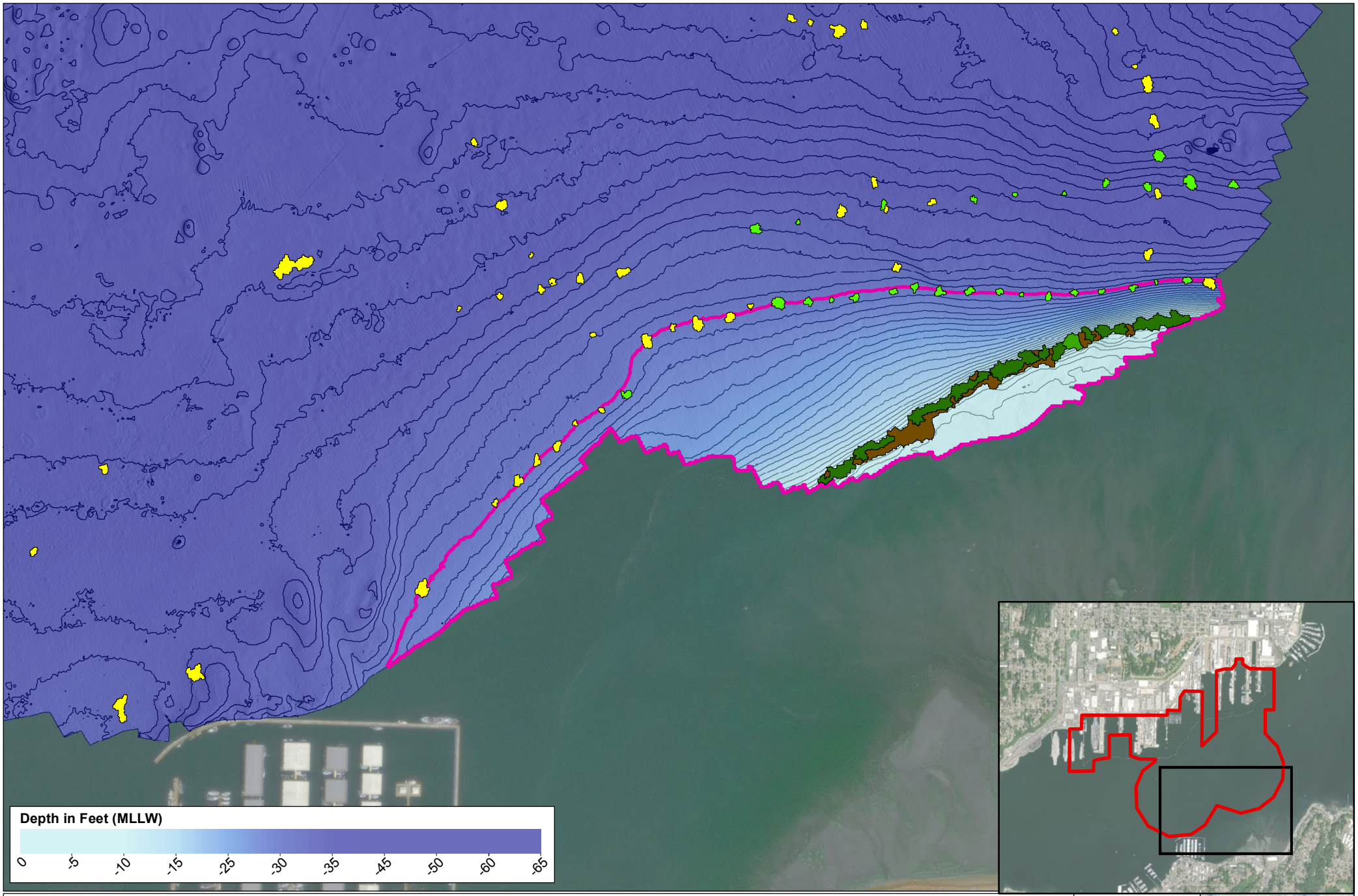


Figure 11: Detailed Macroalgae Map, Sinclair Inlet South

Hydroacoustic survey by AECOM and DEA; July 7-13, 2020. ROV underwater imagery survey by AECOM and Gravity; September 19-25 and 28-30, 2020

Macroalgae Cover

- Observed High
- Observed Medium
- Observed Low
- Observed Trace
- Inferred High
- Inferred Medium
- Inferred Low
- Inferred Trace

Depth 0 - -30 Feet (MLLW)

Bathymetric Contour (1 Foot Interval)

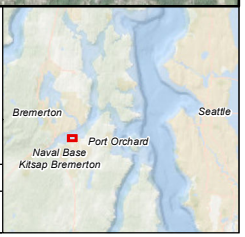
Meters: 0 50 100 200

Feet: 0 162.5 325 650

NAVFAC Naval Facilities Engineering Command

Date: 1/30/2021

CoordinateSystem: NAD_1983_StatePlane_Washington_North_FIPS_4601
Projection: Lambert_Conformal_Conic
Datum: D_North_American_1983



APPENDIX B
WSDOT Report of Survey Mark GP18304-20

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Washington State Department of Transportation

Geographic Services

SURVEY INFORMATION SYSTEM — Report of Survey Mark

				ACCOUNTS INFORMATION		
Designation:	GP18304-20	**T.R.S:**	24N, 1E, 13	**BOOK**	**PROJECT**	**INVOICE**
Monument ID:	2949	**Corner Code:**		108	0L2771	23-97052
NGS Pid:		**State Route:**	304	224 / 233	MS5400	23-05032
State:	WASHINGTON	**Mile Post:**	3.5	321	MS4466	23-07029
County:	KITSAP	**Station:**		NA	MT0319	23-11026
Region:	OL	**Offset:**				
Nearest Town:	BREMERTON	**Owner:**	GS			
USGS Quad:	BREMERTON EAST	**Bearing:**	M			

THE STATION IS AT THE WASHINGTON STATE FERRY TERMINAL IN BREMERTON. IT IS LOCATED APPROXIMATELY 85 METERS NORTH OF 1ST STREET ALONG THE BREMERTON BOARDWALK AND NEAR THE WESTERLY EDGE OF THE CONCRETE WALKWAY, IN LINE WITH THE NORTHERLY PIER OF THE MARINA, BETWEEN THE MARINA SUPPORT FACILITY BUILDING AND THE SEWAGE PUMP STATION/RESTROOM BUILDING, 24.4 METERS @ 200 DEGREES FROM A BRONZE PROPELLER STATUE, 12.1 METERS @ 305 DEGREES FROM THE NORTHWEST CORNER OF BUILDING # 102, 16.9 METERS @ 25 DEGREES FROM THE PORT OF BREMERTON MARINA SUPPORT FACILITY AND 11.1 METERS @ 125 DEGREES FROM A FLAG POLE IN RECOGNITION OF THE PUGET SOUND NAVAL SHIP YARD. THE MARK IS A WSDOT BRASS DISK CEMENTED INTO A DRILL HOLE AND SET LEVEL WITH THE CONCRETE SURFACE.
*NOTE: THIS STATION SIGHTS GP18304-21.
*NOTE: THIS MARK IS SET ON A WOODEN-PILE STRUCTURE.

Survey Control

Datum: NAD 83/11 **Date:** 01/10/2013

Lat: 47 33 47.731613 N **Long:** 122 37 25.799570 W **Ellips:** -18.158 (M) -59.573 (USFt) **Geoid:** -22.675 (M)

Washington State Plane Zone: North

Northing	Easting	Scale	Comb Factor	Conv Angle
64191.663 (M) 210602.148 (USFt)	365273.143 (M) 1198400.303 (USFt)	0.99998880	0.99999165	-1 19 59.0

Ortho: Date: 07/21/1997

Datum: NAVD 88

Elevation: 4.517 (M) 14.820 (USFt)

Mllw: 1983-2001 5.279 (M) 17.32 (USFt)

Survey Info	Accuracy	Network	Method
Horizontal	2 CM	PRIMARY	GPS
Ellips	5 CM		GPS
Ortho	1 CM	PRIMARY	DIFF LEVELS
Mllw	1 CM		DIFF LEVELS

Datum: NAD 83/07 **Date:** 05/19/2008

Lat: 47 33 47.730768 N **Long:** 122 37 25.801945 W **Ellips:** -18.136 (M) -59.501 (USFt) **Geoid:** -22.653 (M)

Washington State Plane Zone: North

Northing	Easting	Scale	Comb Factor	Conv Angle
64191.638 (M) 210602.066 (USFt)	365273.093 (M) 1198400.139 (USFt)	0.99998880	0.99999165	-1 19 59.0

			Survey Info	Accuracy	Network	Method
Ortho:		Date: 07/21/1997				
Datum:	NAVD 88		Horizontal	2 CM	PRIMARY	GPS
Elevation:	4.517 (M) 14.820 (USFt)		Ellips	5 CM		GPS
			Ortho	1 CM	PRIMARY	DIFF LEVELS
Mllw: 1983-2001	5.279 (M) 17.32 (USFt)		Mllw	1 CM		DIFF LEVELS

Datum: NAD 83/91 **Date:** 02/02/2007

Lat: 47 33 47.727962 N **Long:** 122 37 25.804196 W **Ellips:** -17.956 (M) -58.911 (USFt) **Geoid:** -22.473 (M)

Washington State Plane Zone: North

Northing	Easting	Scale	Comb Factor	Conv Angle
64191.553 (M) 210601.787 (USFt)	365273.044 (M) 1198399.979 (USFt)	0.99998880	0.99999162	-1 19 59.0

			Survey Info	Accuracy	Network	Method
Ortho:		Date: 07/21/1997				
Datum:	NAVD 88		Horizontal	2 CM	PRIMARY	GPS
Elevation:	4.517 (M) 14.820 (USFt)		Ellips	5 CM		GPS
			Ortho	1 CM	PRIMARY	DIFF LEVELS
Mllw: 1983-2001	5.279 (M) 17.32 (USFt)		Mllw	1 CM		DIFF LEVELS

Datum: NAD 83/91 **Date:** 07/21/1997

Lat: 47 33 47.728279 N **Long:** 122 37 25.804818 W **Ellips:** -17.966 (M) -58.943 (USFt) **Geoid:** -22.483 (M)

Washington State Plane Zone: North

Northing	Easting	Scale	Comb Factor	Conv Angle
64191.563 (M) 210601.820 (USFt)	365273.031 (M) 1198399.936 (USFt)	0.99998880	0.99999162	-1 19 59.0

			Survey Info	Accuracy	Network	Method
Ortho:		Date: 07/21/1997				
Datum:	NAVD 88		Horizontal	2 CM	PRIMARY	GPS
Elevation:	4.517 (M) 14.820 (USFt)		Ellips	5 CM		GPS
			Ortho	1 CM	PRIMARY	DIFF LEVELS

History

Recovered On	Recovered By	Action	Condition
1/15/2016	GEOGRAPHIC SERVICES	RECOVERED	GOOD
1/10/2013	GEOGRAPHIC SERVICES	UPDATED	
5/19/2008	GEOGRAPHIC SERVICES	UPDATED	
2/2/2007	GEOGRAPHIC SERVICES	UPDATED	
7/21/1997	GEOGRAPHIC SERVICES	MONUMENTED	

APPENDIX C
Field Logbook

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MADE IN TACOMA
— SINCE 1916 —
Rite in the Rain®
— DEFYING MOTHER NATURE —

Name NAVFAC NW
Bremerton Waterfront
Infrastructure EIS

Address Habitat Survey
Sinclair Inlet &
Puget Sound Naval
Ship yard

Phone 2020

Email

Projects [redacted]

CONTENTS

PAGE	REFERENCE 2020	DATE
	Hydroacoustic Survey - J. Pretare : 14 July to 18 July	
	ROV Survey - J. Pretare, L. Howard : 19 Sept to	
	Each ROV transect file: 1) Start time and white board, notes 2) Date 3) General location (pier, dock) 4) Depth contour	
	West east North South	

Bremerton Waterfront Infrastructure EIS
Habitat Survey - Hydroacoustic

14 July 2020
Navfac NW

0700 Bremerton Marina
Jennifer Pretare (AECOM), John Staly; Sam Werner (DEA)
Sunny, 52° F, calm. Temps expected in mid-70's today. J. Pretare = notetaker

Tailgate Safety meeting completed on RV River Hawk, a 24' Aluminum survey vessel. Completed Covid Health Assessment, Vessel Inspection, discussed PPE, sunscreen, bathroom breaks.

0800 - J. Staly updated computer software license, started digital log. Calculated reference point offset for Sonar head. Equipment onboard:
- 2020 Hypack, 02 updates
- Applanix POS MV Serial No. 7113
- Sea Bat Reson T-50P multi-beam sonar

Notes from yesterday (13 July 2020): Launched River Hawk in Port Orchard, left boat trailer there, motored boat to Bremerton Marina. Gate code for marina is 31
DEA checked control point on Bremerton boardwalk: 2949 - WSDOT, Designation GP18304-20
Lat. 47 33 47.731613 N
Long 122 37 25.799570 W
NAD 83/11
This was a rover check (Trimble handheld TSC3)

0837 - Shove off from dock, doing position check within marina on boat. Same WSDOT monument, but directly to boat instead of with the rover. All data looks accurate. Checks are logged in ~~DE~~ DEA digital logs.

0907 - Leaving Bremerton Marina
0918 - Sound Velocity cast with AML Smart X sensor.
0927 - Begin collecting data on ~~west~~ JAP east side of survey area along floating seawall barrier

Scale: 1 square = ____ JAP

Rite in the Rain

Navy vessels seen in shipyard: Bob Hope, Carl Vinson

0947: Sound velocity cast.
1030: Stopped by Navy police boat to check on permissions. They asked us to keep 300 feet from security barrier until they can verify with Michael Kelly. So we moved further out into Sinclair Inlet & resumed survey.
1045: New sound velocity check
1130 Sound Velocity check.
1315 Sound velocity check.
1330 Visit with Navy ~~police~~ JAP police again. Still no permission.
1346 Back to Bremerton marina.
John & Sam to go get badges and we may resume survey later.
No data download yet.
1520 - Resume data collection outside of floating security barrier. Wind picked up a little. Water has small chop. 79° F.
1615 - Sound Velocity Cast
1702 - sound velocity Cast
1732 - sound velocity Cast

Summary of grid areas covered today: 22, 23, 25, 18, 19, 20, 21, 16, 17, 11 plus thin area along floating security barrier in 14, 15, 9, 10, 4, 5
- Mostly the survey area was 40 - 50 ft. depth, some area 35-40 ft. Area was too deep for eelgrass. Did not detect anything that looked like vegetation. We did see one sunken boat.
1806 - sound velocity cast.
1820 - stopped logging data. Downloaded data to AECOM encrypted drive #1. John will upload data to DEA network server tonight.
1830 - return to marina. Done for day. 31 GB

7-14-20

15 July 2020 Page 3 Bremerton Shipyard Habitat Survey

0600 - TO River Hawk survey boat at Bremerton Marina, slip 29A.
AECOM - J. Pfetzer
DEA - J. Staly, S. Werner

Tailgate Safety Meeting: Yesterday went well. New surroundings today, inside shipyard, lots of new hazards. Everyone will need to be looking around and communicating.
Health Assessment Completed.
Data Download from yesterday is still going now. Need to confirm later with Tim McClinton that it completed.

0645 - Stopped by Navy police boat. We need to radio on Channel 12 as we approach the floating security barrier.

0650 - At floating gate just outside Dry Dock 6.

Weather: Temps mid-50's, sunny, water smooth, no wind temps expected to be high 70's

360.340.0374
gate coordination #

0630-1400
gate ops daily
M-F

0700 - inside the gate
0701 sound velocity check
We are at Pier D - ~43 ft depth.

JP - not today for Pier 7 survey
Foreman - on boat Jeff Becker 360-204-2819
Stand off 50 feet. No set break time
6 am to 4 pm their operations for Dive
In water at 8 am - potentially survey Pier 7 on thursday morning at 0630. Call Jeff Becker later.

Scale: 1 square = JP

Rite in the Rain

0723 – Surveying area between Pier D and Mooring E. West side of Pier D has an orange boom deployed so we cannot survey immediately over it. But sonar appears to be picking up data.
Mooring E has a vessel on East side. North end of Mooring E is too shallow right now. We will come back in the afternoon when the tide is higher.
0730 Sound velocity cast
Then continue survey between Pier D + Mooring E. Floating Security barrier connects to the end of Mooring E today. The boom does not appear to be anchored in any way. As the tide shifts it's position changed.
0757 – Finished most of area between Pier D + Mooring E, moving east. USS Carl Vinson is on west side of Pier B, with orange boom around outside. Navy barge also on west side of Carl Vinson. Lots of small tugs + work barges around Pier C.
0808 – Sound velocity cast

Birds observed: Belted kingfisher, great blue heron, spotted sandpiper, rock dove, gull sp., crow, double crested cormorants, pidgeon guillemot, European Starling
0828 – talked to Jeff Beltler. Agreed to call him as soon as we are inside the gate tomorrow ~ 0630 to confirm we can go to Pier 7.
0842 – Sound velocity cast.
Finished the area between Pier B and Pier D
0902 – Sound velocity cast.
0908 – At the end of Mooring A
0930 – Saw harbor seal
0946 – Sound velocity cast
1000 – Sound velocity cast
1017 – 8 submarines around mooring A today.
dAP 10
1040 – Sound velocity cast
1110 – Sound velocity cast
1125 – Cleared prop of vegetation
1127 – Sound velocity cast.

Scale: 1 square = 1P.

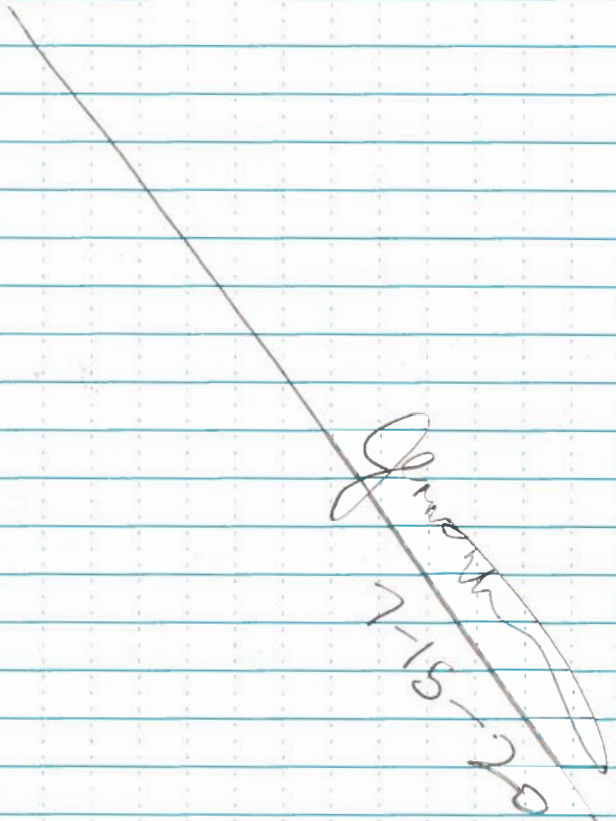
1209- Begin retracing shore area with sonar at 15° tilt at high tide to get more coverage in shallow areas and under piers
1217 - Clear more vegetation off prop, then sound velocity cast.
1230 - Sound velocity cast

Note: Shore side of mooring A has large diameter lines from the submarines to the ~~ster~~ shore, making it inaccessible for the vessel. No coverage possible there.
1247 - Sound velocity cast.
1300 - Bathroom break at DDG - SE corner
1320 - Sound velocity cast
1335 - Sound velocity cast
Afternoon tide is about 7 feet higher than the morning.
1357 - finished survey inside the shipyard. Passed through gate. Communicated with Navy police boat to continue survey along the boom (floating security barrier).
1405 - Restarting survey. Between moorings E + F. Ships docked on both sides
USS Rainier - mooring E
Bridge - mooring F
1444 - Sound velocity cast

Bald eagle nest at the top of the radar structure on the boat at mooring F (west side). 1 adult eagle sitting on edge of nest.
1512 - Sound Velocity cast.
1521 - sound velocity cast
1538 - Sound Velocity cast
1540 - heading to south side of survey area to finish SE corner of survey area
1600 Bathroom break at Port Orchard marina. Refuel boat too.

Scale: 1 square = JP

1640 - sound velocity cast.
1703 - sound velocity cast. Shutting down survey.
Begin data download.
Tim confirmed that yesterdays data was QA'd and everything looked good.
1705 - heading back to Marina.
1718 - back to marina



Bremerton Waterfront Shipyard Habitat Survey - Hydroacoustics

0600 - Meet at River Hawk at Bremerton Marina
AECOM - Jenny Pretare
DEA - John Staly, Sam Werner
Completed Covid 19 Health Assessment, took temperatures
Completed Tailgate Safety meeting - everything went well yesterday. Boat working well. It is a tight space but that is working well for getting in + out of docked vessels. Main hazard is looking for submerged mooring lines from Navy vessels to dock or to anchors. In the afternoon we were in Sinclair Inlet and there are many ferry passes from Port Orchard to Bremerton. We had to yield to them on several occasions.
Also mats of vegetation got stuck in prop + had to be cleared.
Weather is sunny, mid -50's Humidity is high.
Water calm. Highs expected in mid 70's. F
WSDOT Control point check on marina boardwalk
0620 - Badge check with Navy police
0635 - In through floating security barrier
0640 - Called Jeff Becker Dive team foreman Pier 7
- South end of outboard vessel on Pier 7 west. starting at 0800. = location of dive work.
- We will go there first to do survey before they start.
0655 - Bathroom break at Pier 7
0656 - Sound velocity cast
0700 - Begin survey
0736 - Sound velocity cast
0808 - Sound velocity cast, finish Pier 7 vicinity
0815 - Bathroom break
0830 - Survey begin in area between Pier 4 + 5
0841 - Sound velocity cast
0907 - Talked to Doug Gilkey and updated him on our status. He will call Navy PM later today and pass on information. Doug agreed with the plan to go to known eelgrass + kelp bed tomorrow and do a "confidence check" with the equipment.

Scale: 1 square = _____

0929 – Sound velocity cast
0950 – Complete survey. Motoring to area to do patch test.
1012 – Arrive west side of Pier D to do patch test.
1023 – start patch test to align the sonar to the inertial systems of the boat
1040 – Bar check w/i 1/100 of a foot
1100 – Bathroom Break.
1100-1200 lunch break and wait for tide to go up to re-trace shoreline on east side of shipyard.
1200 – Tide at +4 ft
Sound Velocity cast
1205 – Begin shoreline Pier 7 to Pier 6 to Pier 5 to Pier 4
1344 – Bathroom break, head to Gate
1353 – Sound velocity cast
1402 – outside the floating security barrier now. Continue survey adjacent to barrier. Headed to area east of Pier 7.
1423 – sound velocity cast
1445 sound velocity cast
1614 – Finish survey – entire study area from work Plan is complete now.
Download data onto hard drive #1
motor back to Bremerton Marina.
Tim notified us that he sent Shapefile with location of known eelgrass + Kelp Bed.

Jenny A Rice
7-16-20

0630 At Bremerton Marina
AECOM - Jenny Pretare
DEA - John Staly, Sam Werner
- Health Assessment Check - Covid 19
- Control point check
- Checked the Kicker Motor this morning to make sure its working well in case we need a backup motor.

Weather is misty rain & fog. 60° F, clearing a bit by the afternoon to mid-60's. Water is flat

Tailgate Safety meeting: Weather is very different today. Visibility low. Watch more carefully for other vessels, especially ferry traffic going back & forth between Port Orchard and Bremerton.
- Navigation Lights on.
- Slippery deck
- Move inside ~~up~~ under canopy
- clear impeller often, vegetation is clogging it up.

0721 - Depart Marina. Received coordinates for known eelgrass patch on opposite side of Sinclair inlet, outside of study area. We are ~~going~~ going over there now to see if we can find it.
0735 - At shoreline opposite of the Bremerton marina, 15 ft water depth down to ~ 8 ft. Looking for eelgrass patch on Coastal Atlas / Eelgrass data base file.
0746 - We can visually see eelgrass-like vegetation on exposed shoreline. Tide will be 5 feet higher in afternoon. We will return then and collect sonar at that time.
0750 - Heading to fuel dock.
0840 - Refueled & heading to area SW of study area to do "extra" survey.
0846 - Sound velocity cast.
0850 - Radioed Navy police Ch-12 to hail them for entry.

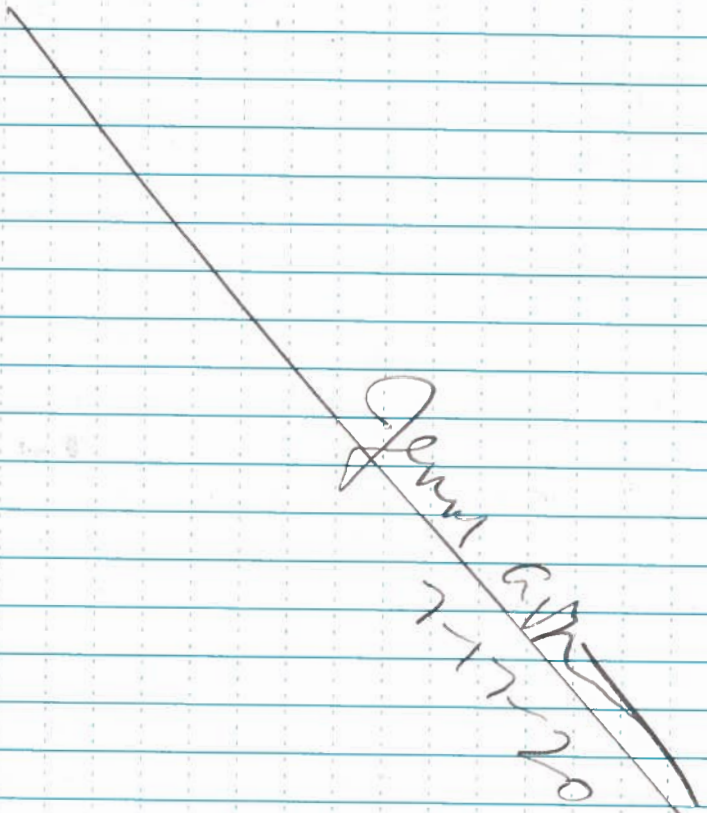
Scale: 1 square =

0855 - Badge check w/ Navy police.
0900 - Begin survey.
0907 - Sound velocity cast.
0946 - sound velocity cast
1012 - sound velocity cast
1047 - sound velocity cast
1127 - sound velocity cast
1215 - sand velocity cast
1300 - sand velocity cast
1305 - Bathroom break at Port Orchard
1315 - motoring back to eelgrass area
1336 - Arrive back near beach where we think we saw eelgrass this morning.
1355 - We saw eelgrass floating on the surface of the water, detached from substrate, but we never saw it on the sonar profile. We could see to the bottom when water depth was ≤ 3 ft. Also did not see eelgrass on bottom. Decided to pull up the sonar head and motor up to next closest eelgrass patch in ~~Phinney Bay~~ ~~Ostrich Bay~~ Phinney Bay JAP ~~Ostrich~~ JAP.
1426 - Motored around S. end of Phinney Bay. Saw a lot of floating aquatic vegetation, but no eelgrass visible from water's surface. We were at 5-7 ft water depth. tide is at +6 ft. Now going to try area north of marina in Phinney Bay which also appears shallow on NOAA chart.
1447 saw individual blades of eelgrass floating on surface north of marina but mostly thick mats of other aquatic vegetation.
1447 - put down sonar + continue survey
1502 - Beginning to see vegetation on the sonar. Is probably the not-eelgrass stuff.
1518 - survey back + forth at south end of bay. Sonar DS detecting some sort of vegetation in the 10 ft depth range on the bottom.
1525 - Sound velocity cast.
1528 - Turn off sonar. Pull sonar head out of water.

17 July 2020. Page 11 Bremerton Waterfront Habitat Survey - Hydroacoustic

1531 - Start back to Bremerton Marina.

1545 - Back to Bremerton marina Downloading data.



Scale: 1 square = _____

Rite in the Rain

16 September 2020 Page 12

J. Pretare
L. Howard
S. Hinz
R. McClese

- Camera permit
- ROV permit
- H/S Briefing
  - additional people on phone:
    - M. Duffield
    - R. Trudeau
    - D. Gilkey
    - K. ~~Sylv~~ Sylvestov

19 September 2020

Bremerton Waterfront Habitat Survey - ROV

AECOM: Jenny Prefare
Gravity: Shawn Hinz, Ryan McElice
RV Calypso

Start 0730 - setting up pole in parking lot (survey pole) on port side

0800 Vessel inspection
0815 Tailgate meeting
0900 - Launch RV Calypso
0923 - Control point check at end of Port Orchard Public Boat Launch. Today "PL-1-091920"

Daily To Do
- control pt. check
- calibrate ROV to Nav. computer
- Notify port ops Ch. 12 or 360-476-3467
- Keep track of completed survey locations
- turn laser on!

Ryan called Port operations to notify them we are working. 360-476-3467
60°F, cloudy, light wind.
Key hazards today: pedestrian ferry
Lots of jellyfish in the water
0930: Headed to ROV4
0935: Drop Anchor immediately over ROV 4
Lower sonar pole with USBL
* Need to remember to show board in front of ROV camera each time we start a new file.

ROV-4 45 feet deep
"float test" to see if the ROV floats or sinks
It is floating so we add some weights - less than 1 pound worth.

Working on calibration of ROV to Hypack, making sure they can talk to each other via USBL.

Setting the date + correct time zone
Setting coordinate units to those in work plan!
WA State plane North
NAD83 US ~~set~~ Survey feet.

Can see lots of perch (fish) at this location

19 September 2020

Bremerton Waterfront Habitat Survey

List of Equipment Being Used:
RV Cayuse - ~~26~~ 27 feet
Deep Trekker ROV S/N
Hypack 2018 version

1016 - Still working on set up; Shaun is reporting low visibility. Switching between different lights to find the best clarity.

1022 ROV4 - East - start
1025 return on ROV4 east - going faster
1026 ROV4 - west - start
can see green algae mats and fish, anenome
"sediment slime"
1032 Return on ROV4 west
1033 ROV4 - North start
anenome
1034 Return on ROV4 North
1036 ROV4 - st south start
tubeworms? maybe, shell, perch, seaper., sculpin
1042 - Return on ROV4 ~~North~~ South.
1043 turn off file. All 4 complete in 22 minutes.

ROV4 coordinates: 1191083.09 E
204203.38 N
40 ft depth.

Lessons learned from ROV point 4:
The ROV loses contact with the USBL at about 50 meters from boat. Tomorrow we can add a cable counter, but for today we have to estimate the 100 m. length.

1058: Anchor down at ROV3 40 ft deep
1101: Image of ROV3 board recorded.
Deploy ROV

19 Sept 2020

Bremerton Waterfront Habitat Survey

1104 ROV3 west start
seapens, anemones, crab
1109 Return on ROV3 west.
1110 ROV3 East start
anemone, shells, seapen, sculpin
1118 Return on ROV3 East
1124 ROV#3 North start
seapens, anemone, flander, shell
1127 Return on ROV#3 North
1129 ROV3 South start
seapen, anemone, fish, crab, shell
1135 We just passed over 30 minute mark + the ROV automatically starts a new file
- Also we turned on laser scale ~10 cm between points
1136 Return on ROV3 south.
pull ROV on deck.
Lots of jellyfish in water column, but not on bottom.
ROV3 point coordinates: 1191026.59 E
205020.38 N
38.4 ft. deep
1152 - Lunch + bathroom break.
1218 - Shove off from dock
1226 - Arrive ROV5, anchor
1229 - took picture of white board
1230 - deploy ROV 5
Lots of jellyfish in water column
1232 ROV5 west start
jellyfish, seapen, anemone
1237 Return ROV5 west
1239 ROV5 east start
fish (good view + picture), seapens, Crab, fish, jellyfish
1251 ROV5 North start
seapens, jellyfish
1258 Return ROV5 North
1304 ROV5 south start.
seapens, fish, jellyfish
1310 - Return on ROV5 south; stopped video file

ROV5 has more than 1 file.

19 Sept 2020

Bremerton Waterfront Habitat Survey

Laser Scale : on deck, the lasers are 4 inches apart. They are scaling lasers, so no matter how far from the surface, the distance between points is 4 inches

ROV5 position 1192280.90 E
204132.85 N
35 ft deep.

1326 - Calibrated compass on ROV.

1335 - Arrive ROV13, drop anchor
1339 - ROV in water, took it back out, did picture of white board, redeployed.
1342 - Start ROV13 west
seapens, crabs (1111), anerome, fish
1352 - Return on ROV13 west
1357 - Start ROV13 east
seapens, anerome, jellyfish, crab
Having some trouble with the changing current right now, pulling the ROV off course.
1402 - trying to clear something stuck on camera.
1405 - Return on ROV13 east. Going to pull it on deck to clear ROV off.
Jellyfish goo cleared off
1413 - took new picture of white board
1413 - ROV13 North - start
seapens
1417 : Return from ROV13 North
crab
1422 : ROV13 south - Start
seapens, crab, anerome, fish,
1426 - Return from ROV13 south, stop video

ROV13 location: 1193310.05 E
204372.85 N
Depth 37.5 ft.

Scale: 1 square =

19 Sept 2020

Bremerton Waterfront
Habitat Survey - ROV

1445 - Bathroom break
Heading to area ~30 feet in the SE corner of survey area to work on linear transects

1510: South side of Sinclair Inlet
Depth contour of 70 ft.
1512: ROV in water
1513 Begin recording
Macroalgae
Shells
1517 macroalgae - rooted
crab
1519 macroalgae - rooted
red macroalgae
crab
shell
seapens
1522 - Hard to tell if we are on transect or not.
Mixed green red macroalgae
1526 - pull up ROV and reset transect
1532 - Restart -20 ft. contour; took picture of board, new file
1533 - start recording
macroalgae
crabs
anemone.
seapens
1555 - End recording of 20 ft. contour.
Heading to -10 ft contour on S. side of Sinclair Inlet
1604: Begin -10 ft on S. Side of Sinclair ~~Inlet~~ Inlet
1605: ROV in water
1606: Start recording
Lots of macroalgae - red + green, pretty continuous coverage on this contour.
crab
1631 - Stop recording
1632 - ROV on board, shutting down for day.

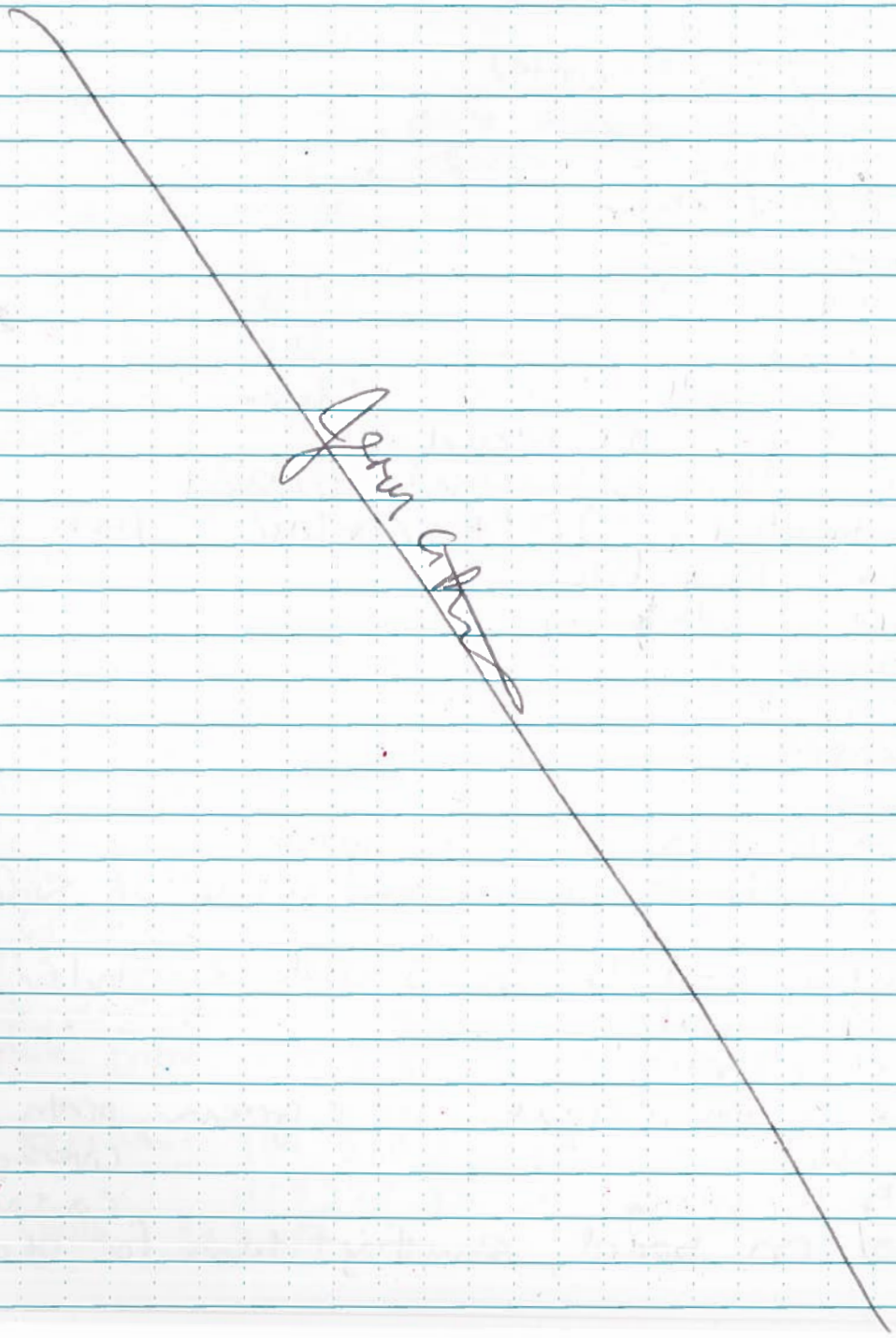
19 Sept 2020

Bremerton Waterfront
Habitat Survey

Recorded end point in GPS file.

20 GB of 64 GB mini SD card used.
Jenny to the mini SD card with todays Data

1650 - Return to dock.
1711 - Transition gear to Linda Haverd for tomorrow.



20 September 2020 — Bremerton Water front Habitat Survey - ROV

AECOM: Linda Howard
Gravity: Shawn Hinz, Ryan McElice, John S
Start 0730 - Setting up monitors at boat launch

0820 Tailgate Meeting
0830 Launch RV Cayuse
0831 Control Point Check at end of Port Orchard boat launch Today:

Ryan called port operations to let them know we are working 360-476-3467

58° F Humidity 99% Wind speed 0 mph

0832 Headed to ROV 6
0841 Drop anchor over ROV 6
0845 Lower ROV

ROV 6 50 ft deep
Can see: jellyfish

0849 Landed mast - recording start
See pens, crab, anemones, clam holes, fish
0859 return on west - going faster
0900 ROV East start
Sea pens
0907 return on east - going faster
0909 ROV North start
crab, Sea pens, anemones, clam shells, crab, fish, jellies
0917 return on North - going faster
0919 ROV South start
0920 Started new file @ 30 minutes
Sea pens, pits?, holes, fish, sculpin, clams
0924 Return on South jellies, Sea pens,
0928 Turn off file.
09 ROV 6 coordinates: 1192167.090
204987.910

928 Bring up camera
930 Pull up anchor
1931 Headed to ROV 12
1934 John called Security boat that is on ROV12 to let them know we have a data point at that location.
936 Dropped anchor at ROV12
938 Photo board

ROV12 46.9' dep
Coordinates, ~~47° 32.865~~ 1193021.720
~~122° 39.706~~ 205052.380

940 ROV west start
anemones, seapens, shells, crab
946 Return on west
0948 ROV east start
anemones, seapens, shells, fish, crab,
0955 Return on East - going faster
seapens, anemones, anchor chain
958 ROV North start
anemones, crab, seapens, fish, clam, fish,
1005 Return on North - anemone, seapens
1010 ROV South start
1010 * started new file
anemones, seapens, shells, Fishing gear case, sock, shells,
1014 Return on south, done recording for ROV12
1021 Bring camera up
1022 Bring anchor up
1025 Heading back to public marina for restroom break
1032 Arrived back at public marina
1049 Leaving marina, heading to ROV#2
11:00 Arrived ROV2 & dropped anchor at ROV#2
ROV 2 43.5' dep
Coordinates: ~~47° 32.979~~ 1190939.480
~~122° 39.213~~ 205819.220
1103 Photo board

Scale: 1 square = _____

11:03 Deployed camera
11:06 ROV west start
anemones, Pike, shells, sea pens, fish, sculpin, crab
11:15 Return on west
11:19 ROV East start
shells, crab, anemone, fish, big anemones
11:26 Return on East
11:28 ROV North start
anemones, loose macroalgae - 1 piece, sea pens, clam shell, crab, more crabs,
11:36 Return on North
1139 ROV South start
crab, anemones,
11:41 brough camera to surface then headed south again
11:42 Started another file
anemones, sea pens, crabs, flounder, fish, tube worm, sculpin, lots of anemones,
1151 Return of South
1154 Stopped recording for ROV 02
1155 Camera brought up
1200 Headed to ROV 07
1203 Arrived ROV 07
Depth 46.7 ft.
Coordinates: 1191984.81 E
205789.64 W
1204 Photo board
Deployed camera
* 1 strobe light not working.
jellies
1207 Start recording ROV 07 ROV west
anemones, sea pens, shells, macroalgae debris? fishes
** getting some interference with underwater GPS
sea cucumber
1215 Return on West
1219 Stopped recording & brought camera up to check GPS.
1221 Redeployed camera - jellies
1222 Start recording again on ROV 07 East
** GPS working now

Scale: 1 square = _____

Continuing on ROV 07 East
Sea pens, anemones, fishes
Algal bloom on surface - red
1227 Return on East
1231 Bringing camera up - jellies - then back down
1232 ROV 07 North
Sea pens, anemones, jellies,
1237 Return on North
jellies (lots)
1241 ROV 07 South start
Sea pens, anemones
1246 Return on south, stopped recording
jellies
1251 Bring camera onto boat
1252 Camera off
Taking a rest break
1254 Anchor up
1255 Headed back to marina for lunch break
1325 Departing marina
1335 Dropped anchor at ROV 11
Depth: 48.8'
Coordinates: 1192708.19 E / 206094.62 W
1336 Photo board
1340 Deploying camera
1342 Camera on
Dropping camera
1343 ROV 11 West Start recording
Sea pens, anemones, crab, small fish, crab
1351 Return on west
1355 ROV 11 East Start
Sea pens, anemones, crab, fish
1404 Return on East - jellies higher in water column
1409 Bring camera up to go around boat
1410 ROV 11 North Start
Sea pens
1413 automatically started new file
1416 Return on North - fishes, jellies
1420 ROV # 11 South Start

Scale: 1 square = _____

1422 Continue ROV 11 South
Sea pens, shells, anemones, jellies
1426 Stop recording ROV 11 & ~~turn off camera~~.
1428 ~~Bring camera not up~~ Return on South
1432 Bring camera up
1433 Camera on when brought up to deck
1434 Turn camera off.
1436 Anchor up
1436 Headed to ROV 17
1440 Arrived at ROV 17
Depth: 45.8'
Coordinates: 1193542.140 E | 206150.270
1443 Photo board
1443 Deploy camera
1446 ROV 17 West Start
Sea pens, anemone
1450 Return on West
~~1458~~
~~1458~~ ROV 17 East Start
sea pens, crab, anemone, crab
1505 Return on East
1510 ROV 17 North Start
Sea pens, anemone, crab, shells,
1518 Return on North
1525 ROV 17 South Start
~~1528~~ Sea pens, anemone, sea cucumber
1531 Stop recording & return on South
* ROV battery getting low
1537 Brought camera up on deck.
1541 Charging ROV batteries
1544 Return to marina for break while ROV batteries charge.
1550 Arrived marina
1559 Leave marina for ROV 16
1600 Generator ran out of fuel, refuel
1607 Arrived ROV 16, Dropped anchor
1609 Photo board
Depth 45.3'
Coord: 1193754.12 E
205427.22 W

Scale: 1 square = _____

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1650 ROV 16 West Start
old anchor, sea pens, anemones, crab
1616 Return on West
1628 ROV 16 East Start
crab, seapens, anemones
1629 camera hung up on somthing.
1634 Return on East
herring school passed by
1636 ROV 16 North Start
Sea pens, anemons, crab, shells
1643 Return on North
1645 ROV 16 South Start
anemone, shells, seapens, crab
1650 stopped recording
Return on South.
1700 Camera back on boat. Heading back to Marina

20GB of 64GB mini SD card used. Linda took the mini card with todays data and the nav file on a thumb drive.
1705 Return to marina.
1800 Linda saved camera data and Navigation data files to encrypted laptop.

1630 20-SEP-2020
Linda M. Howard

Scale: 1 square = ________

Bremerton Waterfront Habitat Survey

0730 Meet Port Orchard Public Marina Boat Launch
0745 Ryan called Navy Security to arrange access into Floating Security barrier
0750 Safety briefing
0755 Launch RV Cayuse
0758 Motor overheating alarm went off
0800 Thru security barrier
* Need to do control point check at end of day.
0805 Headed to ROV 09
0812 Anchored directly over ROV 09
0815 Lower Sonar pole with USBL
0815 Photo board — abandoned
* SD card not installed
0818 Ryan installed SD card
0820 Dropped camera into water
ROV 09 Depth: 55
Coordinates: 1192282.04 / 207570.62
0823 ROV 09 West
crabs, jellyfish remains,
0829 Return on West
0830 ROV 09 East
Flounder, fish, crabs
0839 Return on East
0841 ROV 09 North
Jellyfish, fish, anchor, crab, anemone, fish, cable
0849 Return on North
0852 ROV 09 South
jellies, crab
0903 Return on South
0913 Headed to contour Pier D - Pier C
0920 moored at Pier C
0923 Photo board
0923 Lower ROV into water
0925 Start Recording Pier D - Pier C 30' contour

AECOM: Linda Howard
Gravity: Shawn Hinz
Mike Duffield
Ryan McElica

Questions for Jenny

Survey every area highlighted in green. There are some patches around, under docks?

0927 continue Pier D - Pier C contour 32'
jelli
0928 pilings laying on bed
0928 shells
0929 Turning to return heading west
0929 shells, crabs
0929 riprap
0930 crab
0931 riprap, shells
crabs
0932 piling on bed
0932 riprap
0933 turning to go to 10' contour
shells, crab, riprap
reached pilings at 10' cannot go under dock
0940 ~~began~~ going along 20' contour
riprap, shells, debris
0950 reached pilings at end of 20' contour
0951 returning to boat on 30' contour
0954 crab, shells, angular rock
1000 crab, shells, riprap
1004 Stop recording, end contour - 30'
1007 bring ROV onto boat, restroom break on shore
1021 heading to Conteurs Pier D - Mooring E
1033 moored in center of pier D - mooring E contours
1037 Start - 20 contour ~~→ Photoboard~~
point location taken
1038 Photoboard
1038 Lower camera into water
1040 at bottom, start recording
shells, crab, debris, old piling, jellies
macroalgae - green, red
steep shelf, contour difficult to follow
1044 crab, shells, rock
1046 bringing camera up. Possible interference w/ GPS.
1049 Stop recording. Brought camera to surface to check position
1052 start recording 20 ft contour again.
1053 macroalgae - green
lots of metal debris, shells, crab
1055 Piling

Scale: 1 square =

1056 tree/log in water
1057 lots of debris in water that could tangle up ROV. raising up a little more
Lots of shells, broken off piling, crabs
1100 old pier, crab
1101 mark end of -20 ft. contour then turn around and follow 30' contour
1102 anemone, shells, jellie debris
1103 macroalgae
1105 crabs
1107 ROV back at boat
1108 end -30' countour
start at on -30' contour that extends south
* Depth is reading 50; repositioning ROV.
1111 Tide = +9 so moved up to approx 40' water depth
1112 Holding position, pulling cable in.
1113 moving ROV again
macroalgae - sea lettuce - rooted
shells
1114 pier - broken/old
1115 cable hung up
1115 Stop recording -- end of southern -30' contour
1117 start recording on 20ft contour heading west
1118 starfish
shells, debris, tire
1119 stop recording, bringing camera up to reset position
1122 lower camera back down
1122 restart -20 contour heading west
1123 green macroalgae mixed with metal debris
crab, angular rock, shells
green macroalgae, sea lettuce.
1127 stop recording -20' contour - end
1130 start recording -30' contour heading back to boat
1131 macroalgae - green
crab, shells, lots of crabs
1133 macroalgae - red, green, sea cucumber
cable, crab
1135 Stop recording end -30 contour
1134 bring camera back to boat - hung up on log.

Scale: 1 square =

1144 Removed in different location & put ROV back in water

1145 Start -10' contour at west end [Wrong contour]

1146 Start recording
riprap with barnacles, red algae jellies

1148 Stop camera & reboot ~~Ftn~~ ~~Ftl~~.

1150 recovering ROV for equipment check

1153 Put ROV back in water
Restart -10' contour - Aborted - getting motor msg.

1156 Bring ROV back up for full inspection.

1201 Removed at Pier for-
lunch break & equip inspection, running diagnostics on ROV.

1233 End lunch break, returning to Pier D - Mooring E -10 ft. contour

+ Diagnostic on ROV indicated one of the motors got overheated; may have gotten debris inside.

1236 Turning camera on - aborted

1239 Removing in a different more stable location.

1241 Turning ROV back on. Changing out controller. because it is responding slowly.

1244 Turned ROV on with alternate controller

1246 Put ROV in water. Shawn getting motor msg. flashing on screen again.
Start on -10 ft. contour. Note: previous 10 ft contour attempt that was aborted was wrong contour.

1250 Aborted - ROV motor disable msg. still flashing.

1252 Shawn calling ROV company for technical assistance.

1305 Put ROV back in water and turned controller back on to check operations. Still getting motor disable msg. flashing on screen.
Brought ROV back up for troubleshooting
Removed USBL and checked operations without; same motor disabled msg. appearing w/o USBL connected.
Reconnected USBL. Replacing both ROV batteries in case that is the problem.

1334 Turning ROV back on & checking operations, putting ROV back in the water to test operations.
Still has same issue.

Scale: 1 square = _____

1343 Still troubleshooting ROV / Camera.
1345 headed to security barrier gate.
1350 troubleshooting ROV/Camera outside shipyard
1407 Pulled ROV back into boat. Shawn may need to upgrade firmware. Need internet connection. Heading back to marina for more troubleshooting.
1413 Shawn gave Linda the Nav data and SD card for today.
1415 Arrived back at Port Orchard Public Marina
Linda saved ROV camera files + Nav data to encrypted laptop. Emailed Nav files to Jenny.

21 Sep 2020

0730 Met at Port orchard Public Marina boat launch

AECOM: Linda Howard
Gravity: Chad Furulie
Mike Duffield
Ryan McElveen

Set up ROV
0800 Tested ROV operations at boat launch
0811 ROV operations working correctly.
0815 Safety briefing
Todays operations ✓
New staff on board ✓
equipment check ✓
covid 19 screenings ✓
Badges ✓
No phones with cameras on board ✓
0832 Called Naval Security; headed to security gate.
0845 Moored at Pier D/E transects
0850 Lowered USBL WBLS Pole at Pier D/E transects
0852 Photo board
0853 Collected start point of -10' contour. Depth = 28'
0855 Start recording
crabs, shells, jellies, fish
Tide = +10'
0857 dense patch sea lettuce
Collected end point of -10' contour.
* Note actual contours do not seem to match mapped countours. Following actual depths.
Collected start point of -20' contour.
0903 large pipeline.
end point of -20' contour.
* USBL is spotty in this area, so following depth off ROV.
0908 start point of -30' contour
0909 Debris
0910 Large pipeline. Need to be careful to not go under pipeline or get wrapped around pipeline.
Going up to go over pipeline.
0912 Crabs, shells, sea lettuce
0913 Reached wall.
0914 End point of -30' contour.

Scale: 1 square = _____

0915 Brought camera up to verify position.
0918 Start -10' contour in other direction → south
0919 macroalgae (sea lettuce)
crabs
macroalgae patch (sea lettuce)
0922 crabs in patch macroalgae
end -10' contor in south direction
0924 Start -20' contour in north direction.
big rock, crab
macroalgae patches
0928 old piling on bed
macroalgae patches
lots of crabs
0932 large pipeline.
end - 20' contour.
0933 Stopped recording, brought camera back to boat
0938 ROV cable caught on boat transducer.
0939 Moving boat to do -30' contour in this area.
0944 untangled ROV from cable.
0945 Lowering ROV & finding -30' contour
0946 Start point -30' contour heading south.
pile of tires
large pipeline, ran into pier pilings.
0948 end of -30' contour, stopped recording.
0951 brought camera int. boat, headed to transect between piers B/C.
1005 moored at boathouse between Pier B-C.
1010 Photo board for transect Pier B-C.
1011 Start point -30' contour heading west
1013 crabs, structure w/ anemone attached
crabs, shells, debris, crabs,
1017 end of -30' contour at west end.
moving to -20' contour
1018 Start -20' contour heading east back to boathouse
riprap wall, debris, shells, crabs
1021 end of -20' contour heading east back to boathouse
1021 Stop recording & bringing ROV on board to move boat.
* -10' contour not present on this transect.

Scale: 1 square = _____

Rite in the Rain

1025 Moved boat to conduct ~~west~~ east end of transect
1027 Put ROV back in water
1029 Start -30' contour heading ~~west~~ east, Not going under bouthouse anemone, shells, crabs
1033 old structure in water
end -30' contour heading east.
1036 Start -20' contour east of bouthouse heading west- crabs, jellies, anemone, shells, some macroalgae, metal debris, concrete blocks, crab, concrete pile lots of crabs, badgers, cable, anemone, school of fish.
1042 End of -20' contour heading west. back to boat.
* No -10' contour along this transect.
1043 Stopped recording & brought ROV onto boat.
Break for lunch & restrooms.
1112 Moved to transect Pier A / DD-6
1115 Bathroom break
1121 Photoboard, put ROV in the water.
1123 Lost camera feed, bring ROV up to check equipment.
1125 Cycled power & camera feed obtained.
1126 Navigate ROV to -30' contour
1129 Start point -30' contour heading north.
jellies, shells, debris pile, anemone, green macroalgae pipe debris, green macroalgae (sea lettuce), anemone, crabs,
1136 ROV is on outside of buoys
lots of crabs, scattered sealettuce, fish
1145 End point -30' contour heading north.
1146 Start -20' contour heading south back to boat.
1152 ROV may have got hung up on something - cable
1153 Stop recording and take a point. ROV cable caught.
1203 Retrieved ROV. Heading to -10' contour.
1205 Start -10' contour heading south
1215 end -10' contour
moved to -20' contour
1214 Start -20' contour heading south north
1227 end -20' contour, Stop recording, ~~come~~ ROV back on boat

Tide ≈ +9

1230 Restroom break
1242 Re moored
Start -10' contour heading south
1245 Start recording
debris, pipe, crabs, shells, macroalgae (Sea lettuce)
Tide ≈ +8
1254 end -10' contour heading south
1257 turnaround & find -20' contour then head north back to boat
1300 Start -20' contour heading north
crabs, shells, scattered sea lettuce and other algae
1307 End -20' contour back near point
1312 Start -30' contour heading south, navigating around pilings
1313 Heading south along -30' contour
crabs, shells, fish, scattered sea lettuce
1325 end -30' contour * Noted that may not have recorded last portion of -30' contour due to 3263 SD card may have filled up. However no eelgrass observed.
1331 camera is off, bring ROV onto boat.
* Ryan gave 3263 SD card to Linda
1333 Charging ROV batteries.
1341 Heading back to security barrier
1346 Called control that we are headed to security barrier for exit
1351 Exited security barrier; headed to ~~ROV15~~ ROV14
1354 Anchored on ~~ROV15~~ ROV14
Need to ensure new
* SD card is recording before starting ~~ROV15~~ ROV14
1414 Photo board at ROV14
Depth = 40'
Coordinates: 1194251.42E / 204178.20N
1417 Put ROV in the water; confirmed SD card recording

TO DO
V - Control point @ boat launch
V - SD card + nav files to Linda
- Compressed air
* Remember we will be using 3263 mini SD cards tomorrow.
* 8:30 tomorrow at gate

Scale: 1 square = _____

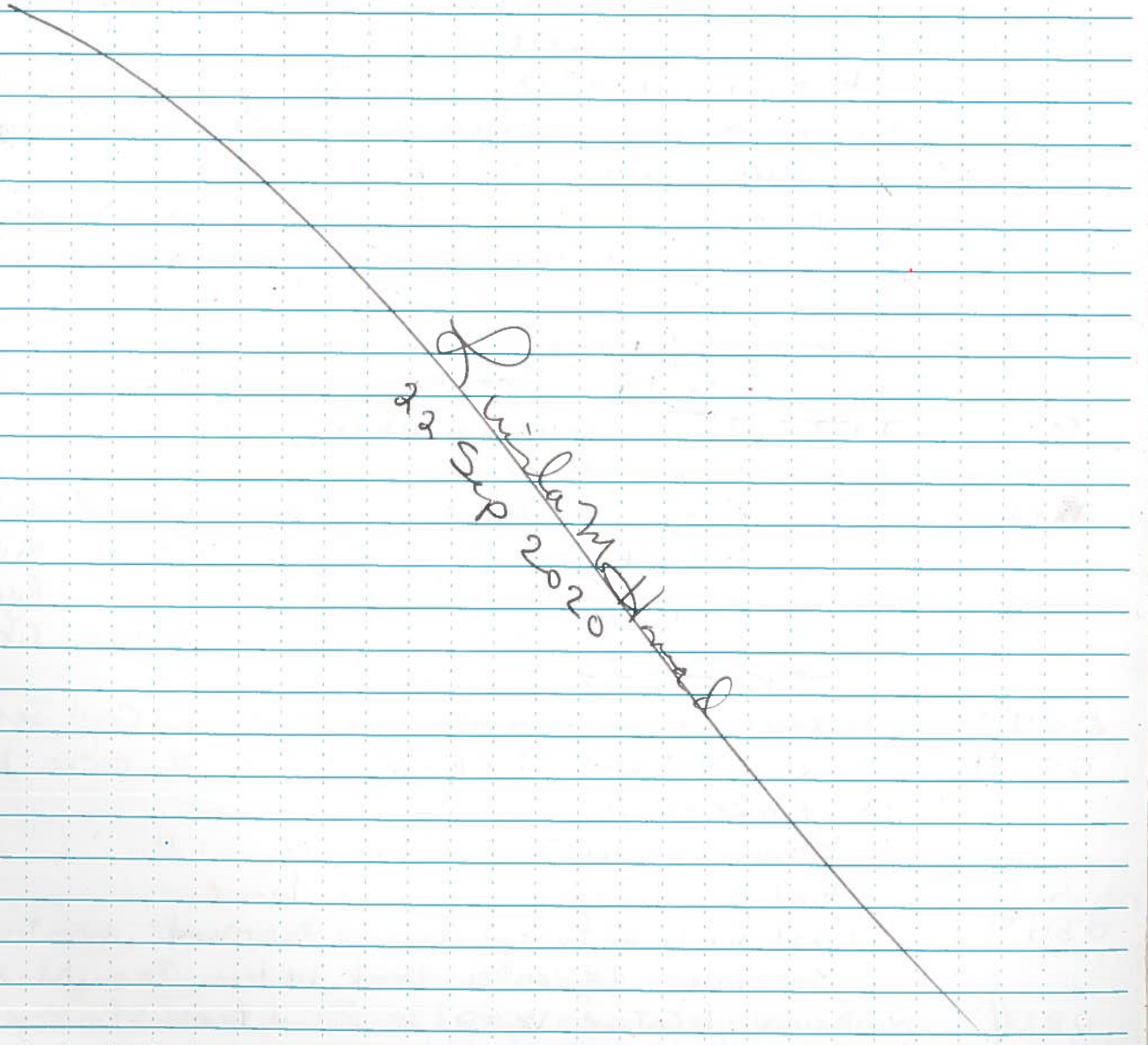
Rite in the Rain

1419 Dropping to bottom
1424 ROV 14 West Start
Seapens, anenomes, sculpin, crab
Fish, jellyfish
1434 Return on West
Jellyfish
1437 ROV 14 East Start
Jellyfish, fish, seapens
crab
1449 Return on East, lots of jellyfish
1451 ~~Automic start new file~~
1455 ROV 14 North Start
Lots of jellyfish, sometimes covering the camera.
Crab, seapens, sculpin, anenomes
1505 Return on North
1508 ROV 14 South start
fish, jellyfish, anenome, seapens
* current is pushing ROV off transect.
1524 Return on South, ~~Stopped recording~~
1532 ROV back on boat. Note, cable was wrapped around ROV which may have caused some of the pull during last transect.
Cleaned camera.
1537 Pull anchor and head to ROV 15
~~1542~~ 1547 Anchored on ~~ROV 14~~ ROV 15
Depth: 43
Coordinates: 1193962E / 204821.82N
1549 Photoboard for ROV 15
1551 ROV in water
1552 ROV 15 West start
Seapens, Fish, anenomes
1559 Return on West
1604 ROV 15 East Start
Seapens
1616 Return from East
1620 ROV North Start
1622 Abort and replace ROV batteries.
1632 ~~Put ROV back in water~~ Had to replenish generator fuel & restart computer.
1632 ROV back in water

* 32 GB cards seem to be showing pixelation. Buy 64 GB cards tonight

Scale: 1 square = _____

1637 ROV 15 North, start recording anemone, Seapens, crab, fish
1645 Return on North
1648 ROV 15 South start
Seapens, anemones, crab, fish
1654 END ROV 15 South, Stop recording
Return on South to boat.
1658 ROV back on boat
1701 Ryan saved Nav files to USB & gave to Linda along 2nd SD card for today.
1704 Heading back to Port Orchard marina.
1708 Gravity took control point at end of public boat launch.



Scale: 1 square = _____

23 SEP 2020 Pg 35 Bremerton Waterfront Habitat Survey

0730 Met at Port Orchard Public Boat Launch
Loaded equipment and personnel on vessel
0745 Tailgate Safety Briefing
Major hazards today:
- weather - wind, lightning
- work in Navy shipyard
- Public vessel traffic
Scope of Work
- focus on transects
- work in shipyard
0803 Completed temp screening
Powering up vessel
0808 Ryan called port operations
0811 Control point taken at end of public boat launch
PL1 - 92320
0812 Headed to Naval shipyard
* Ryan using 64 bit SD card today
0819 Navy security boat pulling alongside
0822 Thru security barrier
Headed to DD-5 ~~/ Pier 11~~
0839 ~~Photo board~~ Lowered USBL pole mounted at DD-5
0844 Photo board for DD-5
ROV in water

TIDE +7'

~~R Start hand~~
0846 ~~start -10 ft contour~~ aborted
0848 Calibrate vessel + ROV
timestamp
macroalgae
Fishes
0849 Lost video feed for a moment, waited for software to come back online. Brought ROV up
0854 Recalibrated vessel & ROV timestamp

To DO
- Discuss Scope of Work
- Safety briefing
  - wind, thunder & lighting
- Control point
- ~~Vessel~~ track logs
- Transitions for Thursday

* Not doing vessel or ROV trackslog.
Vessel - parking it
ROV - difficult to process not being recorded doesn't currently

AECOM: Linda Howard
Gravity: Mike Duffield
Ryan M'Elicia
Chad Furuli

Call Jenny re area by submarine.

0854 Lower camera back to bed.
0857 Start -10' contour heading south
Macroalgae - green
0859 Macroalgae - red, green on structure
0900 macroalgae - red, green in rock
Took point in dense bed of red/green macroalgae
Decorator crab, greenling & other fishes.
0905 Red macroalgae
Fishes, ~~Painted~~ Kelp greenling, rockfish
0908 Red macroalgae
0911 Seastar
Red, green macroalgae
0914 anemones
0915 End -10' contour

* Entire -10' contour contains red & green macroalgae.

0916 Mow to -20' contour
0916 Start -20' contour heading north
Red algae on rocks.
Anemones
0919 Red macroalgae
0920 Green & red macroalgae.
0920 Seastars
0923 Seastar
0923 Red & green macroalgae
0924 anemones
0924 Lost camera feed momentarily, lost computer
0928 continued on -20' contour. Repositioned on -20' contour.
0928 Crab
0929 Red algae
0930 Seastars
Red algae,
0934 Sunstar, crab
0934 Sea cucumber
0935 not as much macroalgae, lost sensor & depth
0937 Stopped recording, may be off contour.
Surfacing to hard reboot software.
0938 Took point at stop recording location.

0940 Restart -20' contour
0942 Red algae, pipeline, crab
0942 Green algae, brown algae, crabs
0944 End - 20' contour

* Macroalgae along entire length of contour in varying percent cover.

~~0947~~ moving to -30' contour
0947 Starting -30' contour heading south
lots of crabs
0948 small isolated patch of green macroalgae
lots of crabs
0950 sediments + broken shells
0951 red macroalgae on boulders.
some red algae in boulders toe of slope
0953 red algae
0954 Sunstar
0956 scattered red macroalgae on boulders
0957 red macroalgae.
1000 red macroalgae.
1001 Sunstars. -- a little deep, getting back on contour
10002 red macroalgae in boulder.
1007 red + green macroalgae.
1009 End -30' contour heading south
1017 Stop recording
1017 ROV back on vessel.
1035 Ryan called Shawn re file Gravity was to provide to Jenny.
1036 ROV back in water.
Heading to -10' contour heading north then east
1038 Start -10' contour.
~~1040~~ 1039 Point macroalgae present on boulders
crabs, fishes, Sunstars*, crabs
1044 red + brown algae, green
1046 Dense green macroalgae, crab - Point
1051 Stop recording, end -10 ft contour

* Macroalgae along entire length of transect

1100 Heading to NE end of transect DD-5 to see if -10, -20' & -30' contours ~~or~~ behind boathouse are accessible.

1106 Used ledline to get depth -16 | Tide = +10

1108 Put ROV in the water, head to -20' contour to confirm if present

1111 Start -20' contour heading north from boathouse boulders, ladder with macroalgae on pilings

Point 11:14 | scattered red macro algae on boulder. red + green macroalgae present on boulders. covered in sediments

11:15 End -20' contour.

* Did not go to -30' contour behind the boathouse because that would require driving ROV through pilings

1119 Pulled ROV from water. Head to south end of transect near bend in the shoreline.

1123 South end of DD5 along bend in shoreline is roped off - not accessible

1125 Pier 3 / DD-5 contours not present - under structures

11229 DD-4 / Pier 3 contours not present and Pier 4 / DD-4 contours not present

1138 Pier 4 / DD-2 / Pier 5 contours not present Pier 5 / DD-1 / Pier 6 contours not present

1159 Heading to ~~ROV9~~ already completed on 9/21/20

1205 Moore for restroom break

1214 Headed to ~~ROV9~~ ROV 18

1223 Anchoring over ROV 18 Depth: 49

Photo board Coordinates: 1192833.75 E

1227 ROV in water and lowering to bottom 207617.62 N

1232 Start ROV 18 West

anemone, crab, fish, sea pens, crab, anemone, encounter pier at 200'

1237 Return on West

1238 Start ROV 18 East

anemone, very murky, mud bottom

1244 End ROV 18 East, Return on East, very dark, may have been under pier.

1247 Start ROV 18 North
1248 Gunt chain
expanse of mud with scattered anemones, seapens, seapens, sole
1255 End ROV 18 North at 300'
Return on North
1301 Start on ROV 18 South
expanse of mud, very murky, some seapens & fish, sea anemones, crabs, school of fish
1306 End ROV 18 South, Stop recording.
1316 ROV Back on vessel
Ryan called control to verify latest departure ⇒ 1400, will head to gate
1345 Docked back at public boat launch for lunch & restroom break
1405 Left public boat launch
~~Headed to ROV 18~~ Will do Mooring E-F contours
~~Radio~~ Called Navy control to let them know we would be operating outside the security barrier around Mooring F the rest of today.
417 Moored on Mooring E
420 Photo board Mooring E/F transects
425 Start -10' contour heading east
+ Macroalgae present - Red, green, brown algae (dense)
crabs, perch
Tide +8'
433 Ended -10' east
* Macroalgae continuous entire contour
Mixed green, red, brown (kelp)
435 -20' is under structure
1440 Start -15' west, macroalgae present
red, green, brown, crabs
1441 sea cucumber
transitioned to -20' away from structure.
1444 sea cucumbers
1446 End -20 contour. Macroalgae along entire contour. Red, green, brown
Note -30' contour to north is under docks and not accessible.

Scale: 1 square = _____

1450 Start -10' contour heading west
Maroalgae - red, green, brown
Sea anemones
barnacles
lots of crabs
sea cucumbers.
1455 New file
1456 Rock fish
Point - dense macroalgae community
lots of sea cucumbers.
1501 End -10 contour here, macroalgae along entire contour.
1504 Start -20 contour heading east
1505 scattered macroalgae
1505 Point - macroalgae around pipe.
lots of crabs, jellyfish
sparse macroalgae
1508 macroalgae present point
scattered macroalgae
1509 Point - macroalgae present

* Macroalgae present in ~~sparse~~ scattered patches along entire -20' contour. Less dense than along -10' contour.

1515 End -20' heading east.
1517 Start -30' west, macroalgae present.
Sea cucumbers
Point sparse macroalgae present
1523 ~~End -30' west~~

* Macroalgae sparsely scattered along entire contour for most of length.

1525 End -30' contour, stop recording
Done with Mooring E/F
1526 ROV back to vessel.
* Weather conditions check. - rainy but otherwise fine.
1536 Headed to ROV Q1
1541 Anchored on ROV Q1. Aborted due to not being able to anchor.

Scale: 1 square = _____

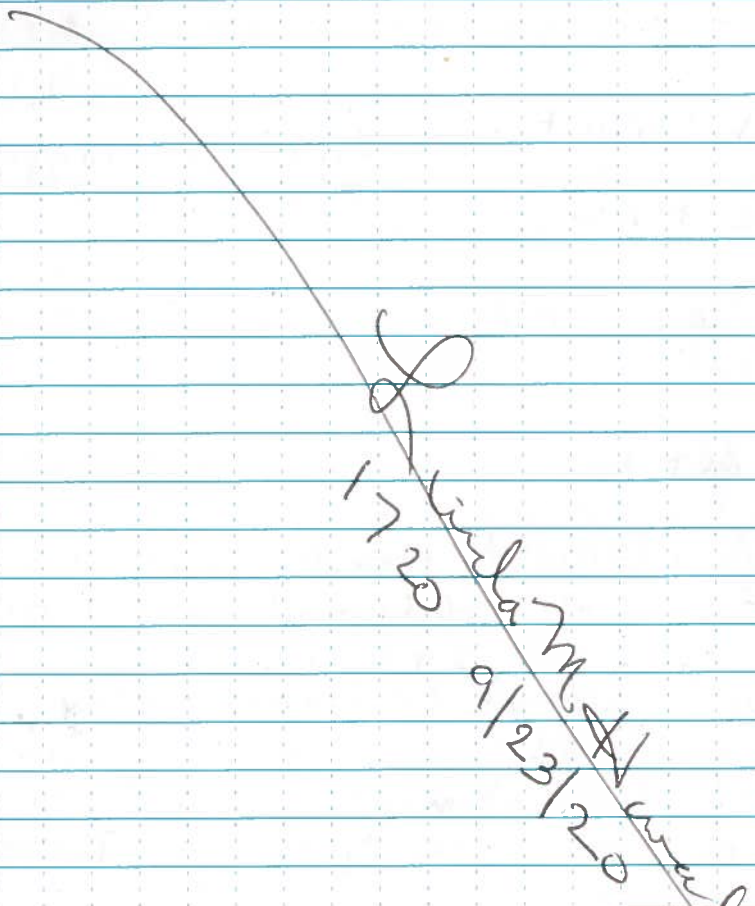
1537 Anchoring at ROV 08
1559 Photoboard for ROV 08
Depth: 50'
Coordinates:
1601 Start ROV 08 West
mud, anemones, jellies, crabs
very turbid, difficult to see
anemones
one spot of sea lettuce.
1614 sea lettuce.
End ROV 08 west
1615 Return on west
1618 Start ROV 08 East
Sea anemones
1629 End ROV 08 East & Return on East
1634 ROV Back vessel. Need to change
batteries. Stopped recording.
~~1644~~ 1640 ROV Back in water
1649 ROV 08 North Start
anemones, small fish, sea pens, sea cucumbers,
crabs
1655 End ROV 08 North, Return on North
1651 Start ROV 08 South.
anemones, Sea pens, crabs
1705 END ROV 08 South. Stopped recording.
Returning ROV to vessel.
1709 ROV back on vessel
END of surveying for today.
1711 # Mike gave Linda the SD card for today
vessel housekeeping.
Ryan called Port Operations Security that
2:12 we completed operations today.
Pulled USBL Pole up.

Note for 24 SEP 2020
Mike to give Jenny
Nav files for
9/23.

Scale: 1 square =_____

3SEP2020 Pg 42 Bremerton Water front Habitat Survey

1720 Back at Port Orchard Public boat launch.



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Rite in the Rain

24 Sept. 2020

Bremerton Waterfront Habitat Survey

59° F, rain, medium chop on water.

0715 Arrive Port Orchard Boat Launch
0730 H/S tailgate meeting, health assessment
0745 Shove off
0800 Badge check with security

Many seations headed out in floating security barrier ≥50 of them (at least)

Stuff on RV Cayuse today:
AECOM - J. Pretare
Gravity - Ryan McClelce, Mike Duffield (captain), Chad Furulie

0825 - Still waiting to get into floating security barrier.

Talk to Ryan and reviewed the data collected to date. The USBL has experienced a lot of interference due to hard structures in shipyard (it uses hydroacoustic signal to locate vessels). So this is a modification of how we thought the work plan would be implemented. Will need to get description of the quality issue.

0847 Arrive inside at RM 38
Adjusted anchor location slightly due to close proximity of boats on all sides. We will need to run the ROV in more of a North-South direction. Tied up to dock at north end of area between Pier 6 & 7.

0901 - ~~Start~~ Turned on ROV controller, deployed sonar pole w/ USBL.
0905 - Image of board for ROV38
0906 - deploy ROV
0915 - ROV in position at northwest corner of basin between 6 and 7 (pier) & we would begin a transect here but camera is not starting. Bringing ROV back to boat to a reboot.
Took GPS point but it is a false start
0926 - ROV on deck - checking cables & connections.

1057 - 50 ft depth in mid channel, mud sub strate, shell fragments. No macroalgae
Pixellation is bad. Can't really see. Going to test video resolution
1104 stop recording
1105 # "720P" - change to video resolution in settings
1105 start recording again: GPS point "start" w/ timestamp
just mud, no macroalgae
crab
red seaweed 51.7 ft depth. single rooted occurence
1108 fish
1108 crab > 138 ft. south of vessel location.
crab with barnacles on it
1109 fish
1110 crab
1110 crab, debris 165 ft from vessel
1112 sole (fish)
1112 crab
1113 man made garbage 187 ft. from vessel
1116 under berthing + messing barge, moored on Pier 6.
fish, crab, no macroalgae. man made debris.
1118 crab, & sole, fish, crab
1119 crab, fish. No macroalgae 53 ft.
Lots of crabs! TONS of crabs!! Eating a dead fish.
1121 anemone, crab. 51 ft. deep. 318 ft. from vessel.
1123 shell fragments, crab, no macroalgae.
man made debris.
1125 stop video + begin to drive ROV back
318 ft. GPS "end transect between Pier 6/7 52 ft deep.
1130-12 Lunch break
Changed battery in ROV.
1208 heading to unfinished transect at the north end of Dock to mooring A.

1224 – tied up to floating dock on north end of basin between DD6 & MOORING A.

1223 – Image of white board. & Deploy ROV
Start –10 ft. ~~contour~~ Contour

1227 – image seems less pixellated, but video won't start. Hard reboot of controller.

1228 – Start video Start GPS point –10 ft contour DD6/ Pier A

234 Hit bottom at ~ 25 ft., looking for –10 ft. in NW corner of this basin. shell fragments

235 New heading east at –20 ft.

1236 crab, piling
–10 ft contour seems to be under ⚓ or behind pilings
So we are following the –20 ft. contour instead.

1238 mud bottom, shell fragments, crab. No macroalgae. Visibility still poor. Pixellation on screen also still present.

1241 – rocks with some algae growth, but not necessary macroalgae. 65 ft from boat

1243 mud

1245 shell fragments No macroalgae

1245 ROV stuck

1248 shell fragments

1249 End transect –25 ft depth
GPS point

"fault detected." NO video.

1256 ROV back on deck

1300 Deply ROV with goal of doing –30 ft contour
GPS point

Screen shut down, bring ROV back. Done trying to collect data today. Going to try to fix ROV.

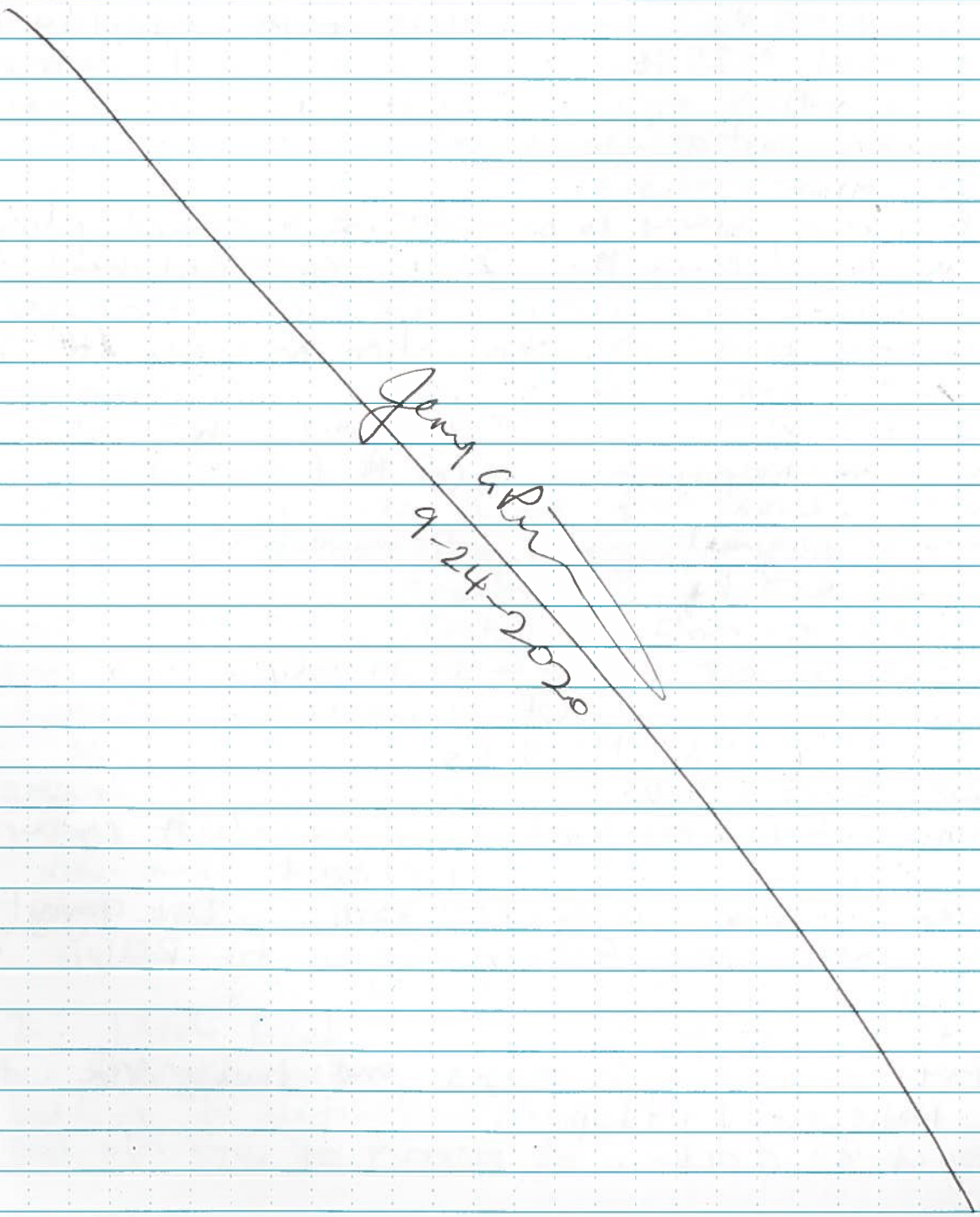
1320 Exiting Shipyard
Got SD card with images and thumb drive with Navigation / GPS points

1330 Back to dock.

Scale: 1 square = _____

24 Sept 2020 Page 416 Bremerton Waterfront Infrastructure – Habitat Survey

1600- Back at hotel – transferred video files to computer. Reviewed a few of them. It seems like when the controller screen froze, video recording also froze. So we got few (if any) usable videos today. The logbook notes are accurate though.



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25 Sept 2020 — Bremerton Waterfront Habitat Survey

Raining hard, 58° F. Forecast rain all day.
AELOM - J. Pretare
Gravity - M. Duffield (captain), Ryan McElicce, Chad Furulie

0700 - Port Orchard Marina
0730 - transfer RV Cayuse to Port Orchard Boat Launch
Load tow sled
check # repaired cable for ROV → DOES NOT work
Switching to tow sled operations today.
0915 - Tailgate Meeting for tow sled operation
Heavy rain all day.
Called Port Operations to let them know we would be near floating security barrier, but not going inside
0928 Control point check
Using a track log in Hypack today.
0938 - Deploy tow sled to ROV-22, cancel that
Need to adjust the tether straps
0936 - Deploy at ROV-22. Begin recording
mud, seapens, anenome, shell fragments, crab
Boat at ~0.8-0.9 Knots, running one engine forward one in reverse.
Note: Temperate and Depth shown on recording does not reflect the actual.
0951 - passing over ROV-24
1000 - Directly over ROV-20
1002 - end recording near floating security barrier
completed a line south to north through ROV-22, 21, 20.
No eelgrass or macroalgae seen.
pulled up tow sled. turning boat around to go south through ROV-25, 24, 23
1007 - Deploy tow sled 51 feet deep
crab, seapens, anenome, mud substrate
1011 - crossing over ROV-25
1022 - crossing over ROV-24 49.4 ft
1030 - passing over ROV-23

360-876-5535 Port Orchard Marina

Scale: 1 square = _____

25 Sept 2020 — Bremerton Waterfront habitat survey

pull up tow sled

1032 stop recording! completed line ~~south~~ north to south through ROV-25, 24, 23. No eelgrass or macroalgae seen during live feed.

1038 Deploy tow sled, start recording, just south of ROV-31.

→ sea pens, crab,

1046: brief flash of green - possible macroalgae

1043: passed over ROV-30 getting towards ROV-29, just mud, hardly any sea life. Is this near a cap?

1052 - crossing over ROV-29 then a patch of low visibility.

1056 - stop recording, bring up tow sled because we can't see anything.

1059 Redeploy tow sled on same line, continuing north towards ROV-28.

1100 Begin recording - light seems to be off, need to check cable. sea pen

1106 end recording, bringing up tow sled. completed line south to north through ROV-31, 30, 29, 28. No eelgrass or macroalgae seen

1111 - Deploy tow sled to go south towards ROV-35

1112 - start recording. Light fixed 53.8 ft.

sea pens, anemone, empty shells

1115 - passed by ROV-35

1125 - crab, anemone

1127 - passing over ROV-34

1132 - End recording

Line done north to south through ROV-35, 34 tow sled on board. driving to ROV-32

~~1137 - deploy tow sled~~ stop: change batteries.

1203 - Deploy tow sled, just south of ROV-32

1206 - begin recording

1208 - passing over ROV-32

sea pen, shells, anemone

1217 passing over ROV-33 marked possible macroalgae 55 ft

1226 - passing over ROV-40 59 ft. deep
Crab, seapens, anemone, shells
1235 - passing over ROV-39
1238 - stop recording
Completed line ~~E~~ South to North through ROV-32, 33, 40 and 39. No eelgrass or macroalgae seen on live feed, except one small patch noted in logbook p. 48.
1300 - Break at Bremerton Marina
1312 - Heading to ROV-39 to do east to west line
1316 - Deploy tow sled east of ROV-39 67 feet deep
1320 Begin recording 62 ft deep
sea pen, crab, anemone, mud bottom.
1327 - stop recording
No macroalgae or eelgrass seen
1328 - tow sled on deck. Moving to ROV-40, 35, 28, 25, 20
1332 - Deploy tow sled, begin recording east to west
Seapens,
Stop recording - filled SD card. - Changing to new card.
1340 - ~~started~~ recording again
~~pen~~ seapen, anemone
1344 - Crossing ROV-35 cables seen
Crossing over ROV-28
1350 - crab, seapens
a lot of mud w/ no biologic stuff.
1401 - crossing over ROV-25
1404 - Stop recording to reposition boat
No eelgrass or macroalgae seen on live feed of ROV-40, 35, 28, 25 east to west
1411 - positioning to do ROV 20 West to east
1413 - deploy tow sled
1414 - start recording 53 ft deep
1416 - seapens, low visibility, anemone
~~1419~~ passed over ROV-20 no eelgrass, macroalgae
1423 - stop recording, raise tow sled
1425 - deploy tow sled west of ROV-29
1427 start recording
super low visibility

Can't see anything, tow sled might be stuck, pulling it up.
31 deploy tow sled west of ROV-29, heading east.
33 Still no visibility - stop recording. trying to ~~figure~~ rotate tow sled.
Going to try to move to a different part of the survey area and see if visibility is better.
45 At east side of -30 ft contour in SE corner of survey area. Deploy tow sled.
147 - start recording
shell fragments, jellyfish, seapens, sea lettuce → but tow sled is upside down. Not towing correctly.
49 - stop recording
50 - start recording visibility better
sea pens, sea ~~le~~ lettuce (patchy), mud, crabs
26 ft deep jellyfish, anemone
54 - mud substrate, not so much sea lettuce.
56 - sea lettuce, sea pens, crab
00 - sea lettuce, but scarce, sea pens, crab
02 - scarce sea lettuce, empty shells
05 - no sea lettuce
13 - " " "
15 - small patch sea lettuce visibility getting low again
18 - tiny bit of sea ~~le~~ lettuce hardly any visibility
24 - anemone
24 - stop video, pull tow sled up
35 - positioning on east side of ROV-32, Adjusting a bit to avoid large mooring buoy.
37 - deploy tow sled
37 start video 51 ft deep.
seapens
39 - a little bit of sea lettuce
40 - Crossing over ROV-32. A little sea lettuce; patchy
43 - low visibility, lower sled. seapens
45 - small bit sea lettuce
46 - Crossing over ROV-31 42 ft.
47 - sea lettuce
48 - " "
49 - Stop recording. Repositioning to ROV-23

cale: 1 square =_____

1551 - start recording. Visibility low. seapens anemone floating bits of sea lettuce, not really rooted.
1554 - passing over ROV-23
1557 - stop recording Depth 47 ft.
reposition to ROV-22
1601 - start recording. Low visibility seapens only thing visible.
1604 - passing over ROV-22 bad visibility
1609 - end recording 47.2 ft.

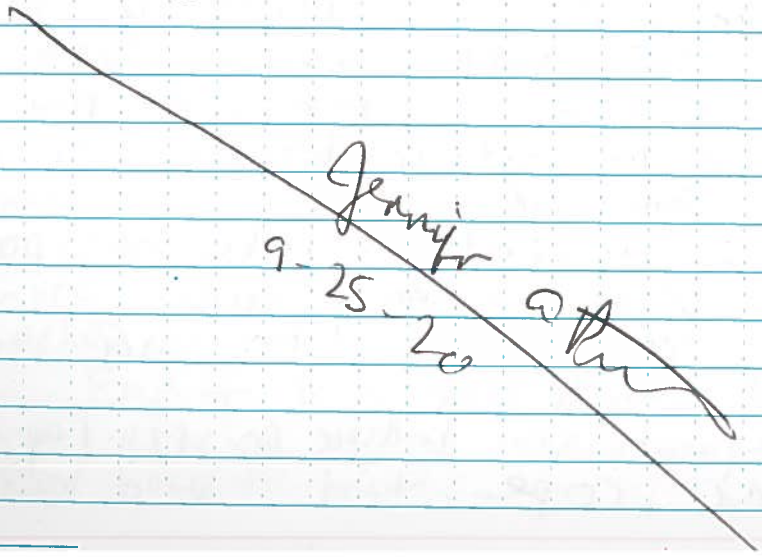
Decided to quit for the day due to low visibility probably taking Saturday + Sunday off. Resume on Monday.

Summary for today. Completed: ROV - 39, 40, 35, 28, 25, 20, 32, 31, 23, 22 and -30 ft. cantaur in SE corner

1622 - Back at dock.
Measuring field of view for tow sled
At 1 meter high, field of view under the tow sled is 2 meters wide

Got 2 mini SD cards with video files and 1 thumb drive with track log. will need to convert that file to Excel.

End of Day.



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8 Sept 2020 Bremerton Waterfront

0715 Port Orchard boat launch
Clear + sunny today. Calm water + wind. High mid-70's expected
AECOM: J. Pretare
Gravity: Ed Sloan (captain), Ryan McElisce, Chad Emslie
0730 - Health Assessment and Tailgate meeting
0745 - Testing ROV cable repair
Fuel is low in RV Cayuse ½ tank. Gas not open until 9 am
0830 - Motor to shipyard gate, security check, wait for gate opening

Review previous work. Need to redo all video taken on 9/24/20 and the following points: ROV-1, ROV-10, ROV-19, ROV-26, ROV-27, ROV-36, ROV-37, redo ROV-38 (8 total)

0900 - Inside floating security barrier, motor to area between DD6 and mooring A

0910 - tied up near shore. Tide is at roughly zero right now. Riprap exposed on shore has barnacles. No macroalgae visible on shoreline
Deploy ROV, heading to -30 ft contour btwn DD6 and mooring A.
0912 Start recording -30 ft contour to north + east cable anenome; low water clarity → lots of "snow" ROV following the contour on Navigation Screen mud substrate, shells, shell fragments, crab
0922 - End @ -30 ft. contour: take GPS point. Changing to -20 ft contour between DD6 and mooring A, on east side.
0924 - Start -20 ft. contour. Take GPS point. macroalgae present - sea lettuce
looks like toe of rip rap from shoreline.
mud/sand bottom substrate
scattered, infrequent sea lettuce on rip rap.
fish, sea star, rope

Scale: 1 square =

0928 - crab, "painted greenling" fish, sea lettuce
0930 - crabs End ~20 ft. contour
0934 - start -10 ft contour, going west to east
rip rap, small patches of sea lettuce on rip rap, crab, shell fragments
0937 - sea cucumber, crab
0938 - stop recording -10 ft. contour, took GPS point
Drive ROV back to boat.
0941 - ROV on deck
0956 - Arrive between Pier 3 & 4 TO do ROV-27.
Noting that the area ~30 feet in this basin has a barge moored. Anchoring at ROV-27
1003 - Image of white board, deploy ROV
1005 - ROV to west - ~~USS Bob Hope~~ 40 ft deep
1007 - Begin video recording TAP (Bob Hope is east)
anemone, ladder, s
1018 - fish, structure
1019 Return on west transect. We did full 300 feet to
1021 Back up under boat, stop video west.
1025 - sending ROV down, east from ROV-27, towards the USS Bob Hope.
1026 - Start video: crab, anemone, mud substrate
1030 - end east transect. fly back to boat.
1033 - stop video
1035 - ROV back at boat
1036 - ROV-27 North start recording.
anemone, mud substrate
1041 - to end of cable; turn video off, drive ROV back.
1046 - ROV back to dock.
1047 - ROV-27 South starting
1048 - start recording
mud bottom, nudibranch (maybe?), seaper, sole
1054 - man made debris with anemone on top.
more man made debris. cylanders
1059 - crab
1101 - End of ROV-27 South transect. Stop recording. Drive ROV back to boat. No eelgrass or macroalgae
1104 - ROV back to boat.

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White board accidentally says ROV-36. Should say ROV-26.

Lunch break

1139 - Motor to ROV-~~36~~ 26 JP
1145 - Anchor at ROV-~~36~~ 26
1147 - White board picture and ROV in water
1148 - Start recording ROV-~~36~~ 26 JP west 45 feet deep
crab, anemone
1150 - nudibranch
1155 - Almost all the way to mooring A. End video of ROV-26. ROV heading back to boat.
1203 - Begin ROV-26 east, start recording
1206 - crab Crab, anemone
1208 - end ROV-26 east, fly back to boat
1214 - Begin ROV-26 north
1216 - start recording
mud bottom, not much biota JAP ~~seapen~~ seapens, crab,
1221 - stop recording, end ROV-26 north, 47 feet deep
fly ROV back to boat.
1225 - ROV starting south.
start video.
1227 - seapens flat fish, crab
1236 - end video ROV-26 south. ROV return to boat
No eelgrass or macroalgae seen on live feed.
1241 - ROV on deck. pulled anchor
Heading to ROV-19
1248 - ROV-19 location on map is under a dolphin, we are adjusting to the west a little bit to avoid the dolphin. Mooring on the dock at the southeast corner of DD6.
1253 - "New" ROV-19 GPS point:
1193950,44 E
207113 96 N
1257 - ROV in water at ROV-19
1259 - ROV-19 North start
seapen, crab.
1306 - man made debris w/ anemone on it, orange anemone, mud substrate

Forgot to do white board for ROV-19

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1310 – End ROV-19 North transect. Stop video. Drive ROV back to vessel.
1315 – Start ROV-19 south transect
1317 – start video.
man made debris
1318 seastar, anemone, seapens, shells
1323 – End ROV-19 south. End video. ROV back to boat
1328 – ROV-19 East – start video
seapens, crab, anemone,
1331 – squids (?)
1333 – crabs
1335 – End ROV-19 East, stop video.
1340 – Need to skip ROV-19 west because battery seems to be dead on ROV. We need to meet our exit time of 1400 from Shipyard.

For tomorrow, we requested 0700 entry.

1356 – To Port Orchard boat launch.
1410 – control point check at end of dock
fuel, charge batteries
1440 – heading to <30 feet deep contours east of Pier 7.
1502 – anchored and deploy ROV on ~~10~~ -20 ft contour, east to west
JAP
1506 – start video. GPS point
Sea lettuce – small pieces. Not a bed
shells
1509 – outfall.
1513 shells, little tufts of macroalgae
1514 – more tufts of multiple kinds of macroalgae.
1515 – tire w/ macroalgae on it.
1516 – very good close up of macroalgae on a cable.
1517 – crab
1518 – substrate changing, ROV now going south.
more like gravel, cobble, rough.

1520 - jellyfish, man made debris w/ macroalgae tufts shells
1522 - crab pots + big rope in a pile
1524 - End -20 ft contour, GPS point
1526 - -20 ft going north, start
jellyfish, macroalgae tufts
1527 - big jumbled pile of man made stuff
1528 - more debris
- going to jump ahead 20 feet, trying to avoid getting ROV stuck in this hazardous condition
1531 - return to bottom. lots of macroalgae, and more debris
1534 - End -20 ft contour south to north
1536 - Starting -10 ft contour, heading east.
Big pile of macroalgae, anenome
1538 - more macroalgae, debris
1540 - macroalgae
1543 - " "
1544 - lots of biota
1546 - fish
1547 - maybe a rockfish?
1549 - fish
1551 - End of -10 ft contour in NE corner. move ROV to -30 ft. contour. (ended recording)
1602 - Start -30 ft contour, heading West
anenome
1603 - start recording
1609 - interesting fish (need to check) in a pile of debris
cabazon (?)
1610 - ladder + other debris.
1614 - Crab (good view)
1615 - stop -30 ft. contour

* we need to finish the NW corner of -30 ft contour. But fatigue is setting in and we need to stop for the day.

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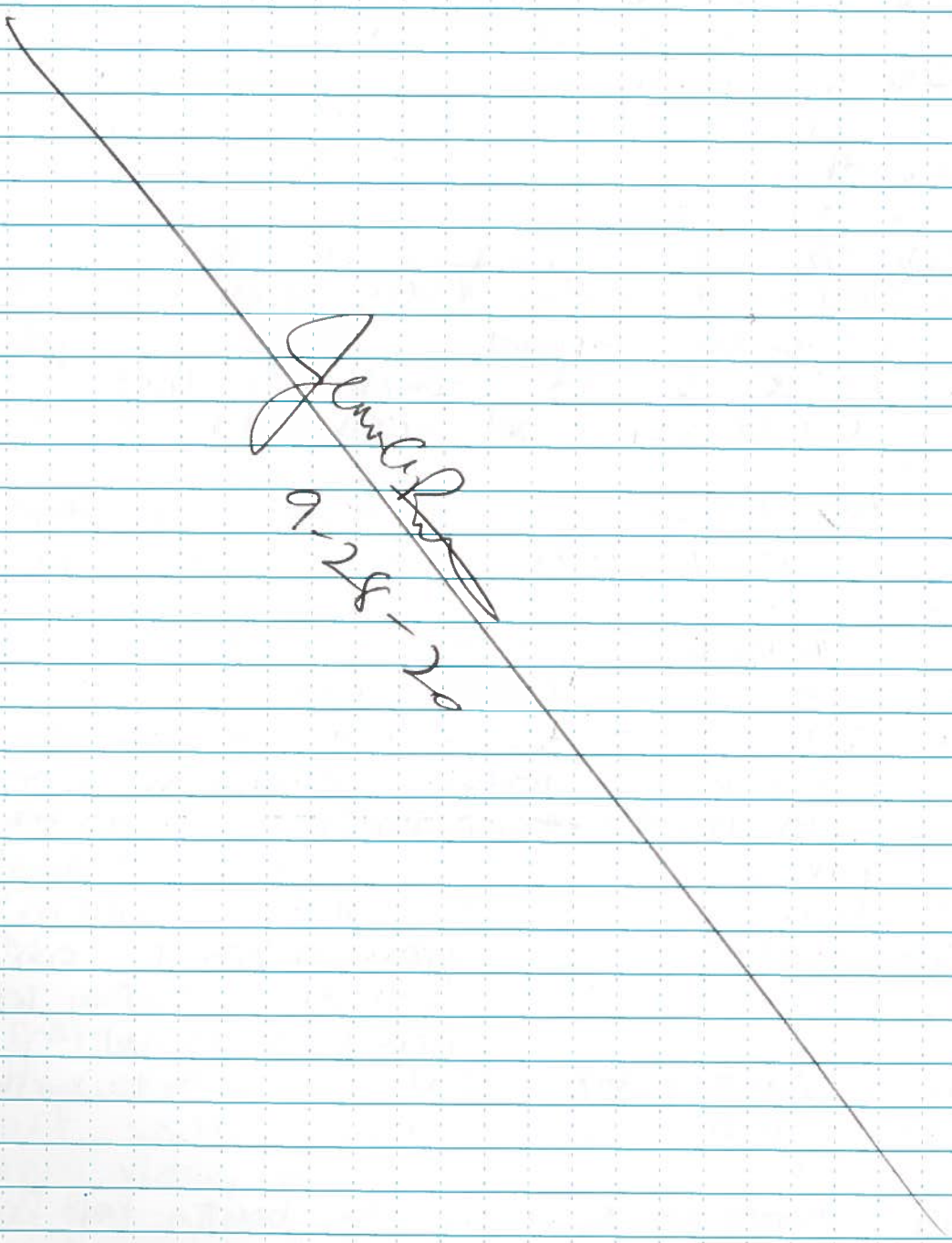
1423 - pull anchor, ROV onboard. Got 1 mini SD card + thumb drive w/ GPS data

1435 - Return to dock



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AECOM: J. Pretare
Gravity: Ed Sloan (captain), Ryan McElieece, Chase Furukie
0630 - meet at boat launch
0640 - Health Assessment + Tailgate Mtg.
0645 - Control point check. Call Port Ops for entry
0650 - Shove off.

Remaining Points
ROV-1 : outside barrier, visit when wind is low. do in afternoon
✓ ROV-10 : to do
✓ ROV-19 - to do, west only
✓ ROV-36
✓ ROV-37
✓ ROV-38 : Done on 9/24 but need to redo

sunny, clear, calm weather today. High in high 70s today.
0700 - Inside the Shipyard
0711 - Arrive ROV-38 which is a redo from 9/24/20 Tied up to barge at North end of basin
0715 - White board photo for ROV-38, deploy ROV - not working correctly. ROV on board + reboot the controller.
0721 - back in water, starting ROV-38 which is mostly north-south because this is a narrow area with ~~a~~ 2 submarines on the east side and a berthing + messing barge on west side
0723 - GPS point, ~~start video~~. 45 feet deep in mid-basin area.
crab
0725 - fish
0728 - hardhat
↓
Ryan didn't record on the way from north to south, so he will do it on the way back from south to North.
0732 - Start video ROV-38 south to north.
crab, shells,
0735 - crab
0739 - approximately even with boat, keep ROV going north. scattered macroalgae at ~40 feet? shells
0740 - stop video for ROV-38. GPS point.
0741 - ROV to begin east-west transect at -30 ft

Scale: 1 square = _____

29 Sept 2020

Bremerton Waterfront Habitat Survey

contour. Start video going east
0743 - flat fish, crab
0744 - crab, shell fragments, fish, wisps of macroalgae.
0745 - stop video, coming back to ~~start~~ previous start point for transect.
0748 - start video - 30 ft contour west

This basin comes into DD3, so there is a flat wall rather than -20 and -10 ft contour.

0749 - single macroalgae, cables, crab
0751 - crab
0752 pilings - end of transect, stop video
Not going to do an east-west leg for ROV-38 because it's too narrow
0804 - ROV on board, depart this location
0814 - tied up on barge on ~~e~~ west side of basin between Pier 5 & 6.
0821 - photo of white board at ROV-37, deploy ROV
Doing east-west transect first. lots of jellyfish and a harbor seal.
0823 - ROV on west side of basin, heading east.
0824 - start recording GPS point ROV-37 west to east, start. 45 feet deep.
0825 - anemone, crabs
0828 - green path on bottom. Hard to tell if it's really macroalgae or not. 45 ft deep
0829 - crab
0831 - debris w/ anemone
0832 - ROV probably under the sub at this point
End transect (GPS point) and video recording for west to east (one-way) transect
Start south transect for ROV-37
0836 - Start video, ROV-37 south
More thin green mats on bottom substrate. Not sure if it's bacteria or algae or macroalgae.
0841 - crab
0842 - crab, debris
0843 - stop video, stop transect GPS pt. cable length: 317 ft.

Scale: 1 square =

Bringing ROV back towards RV-37 point
0846 - back to center point, submerging ROV.
0847 - start video, GPS: RV-37 heading North
Not much biota seen
0854 - crab
0856 - crab
0857 - crab + debris
0858 - crabs
0859 - green material on substrate
0901 - ROV stuck
0903 - arerone
0905 - Stop video, GPS point - End of RV-37 north transect.
0911 - ROV on board, heading to RV-36
0921 - Arrive RV-36, tie up to dock on west side
0922 - Picture of white board deploy ROV, to do east - west transect first.
0924 - begin RV-36 west to east, GPS point
41 feet deep
green mats on bottom substrate. Not sure if its macroalgae or bacteria
0933 - empty shells. Not much biota on this transect.
End video, end transect GPS point.
0936 - ROV in center, begin RV-36 North.
Start GPS point.
0936 - Skate seen
0946 End viedeo, end of RV-36 North. Not much biota seen in this transect
0949 - start RV-36 South, GPS point
0955 - flat fish
End video, GPS point RV-36 south end transect
Completely finished at RV-36, ROV back on board.
1005 - Depart RV-36, head to bathroom break then RV-10
General wildlife notes inside Shipyard: sea lions on floating Security barrier, 1 harbor seal, cormorants on dolphins, gulls.

Scale: 1 square = _____

1045 - ROV-19 West only. White board
all other previous transects on ROV-19 done 9/28/20.
Drive ROV to center point first, then back to the West.
1048 - accidental photo, can delete.
1049 - Start video.
problem with ROV "sensor pod disconnected"
stop video, surface ROV, reboot.
1054 - trying again
1056 - Start video 39 feet.
seapen, shells, sea lettuce / macroalgae; patchy.
20 feet deep. more sea lettuce, crab, fish
10 feet deep - more sea lettuce
1100 - stop video, end west transect ROV-19.
1104 - ROV on board.
1111 - Anchor at ROV-10
1117 - White board picture. Deploy ROV.
GPS: "ROV-10 Act." 43 feet deep
1118 - Start video ROV-10 west
visibility low, anemone
seapens, empty shells.
1126 - video stopped. returning ROV to boat.
1129 ROV-10 east start
crabs, anemone, seapens.
1138 Stop video. ROV headed back to center point
1141 - ROV-10 North. Start video
jellyfish, seapen, crab
1149 - End video for ROV-10 North. ROV back to center
1154 ROV-10 South, start video
Floating security barrier is south of this location, may prevent a full length transect.
crab, seapens, anemone, shells
1200 - Stop transect, stop video
1203 - ROV to boat.
pull anchor at ROV-10.
1223 - Exit Shipyard through gate C-D.
Arrive at ROV-1
Adjusting station a bit to the north where there

Scale: 1 square =

is more room to anchor the boat.
1257 – picture of white board, deploy ROV at ROV-1. 46 ft. deep. GPS point of boat
1259 – start video ROV-1 West. Low visibility anemone
1302 – crab
1303 – man made debris. Likely under adjacent ship. sea cucumber
1304 – stop recording ROV-1 West. ROV to center point
1307 – start recording ROV-1 east
1309 – fish, crab, shell
1311 – sea lettuce, might not be attached. 42 feet deep anchor chain, shell
1313 – End video for ROV-1 east. Fly ROV back to center point.
1315 – start ROV-1 North video
1317 – anemone + crab
1319 – crabs, sea cucumber, shells white nudibranches (?) not sure anemone, fish
1323 – debris, a little bit of sea lettuce, crabs, shells
1325 – End video for ROV-1 North. Back to center.
1331 – Start video for ROV-1 South anemone, shell
1340 – crab
1342 – End video ROV-1 south. GPS pt. ROV back to boat
1411 – Return to very east side of study area near ferry terminal to finish -30 ft contour.
1418 – White board picture, deploy ROV 9 ft tied up adjacent to dock or shoreline; deep at boat
1421 – start -30 ft contour, going north to south
1423 – Debris + a structure? Flying ROV around it. Looks like a ship? Need to review it w/ DEO

1425 - return to bottom substrate
green matter on bottom. Hard to tell what it is.
1428 - shells
1430 - stop video for -30 ft. contour, as far as the cable will go. But the SW corner of the -30 ft contour still needs to be videoed. We will live boat towards the ROV
1440 - start video again on -30 ft contour took GPS point
1442 anemone, shells low visibility
sea lettuce pieces, small, not rooted
1443 End -30 foot contour, north to south, (filling in gap between 2 other transects on -30 ft contour)
1452 ROV back on board
pulling sonar pole up.

30 Sep 2020 Page 64 Bremerton Waterfront Habitat Survey

0730 Met at Port Orchard Public Boat Launch
Gravity: Ed Sloan
Ryan McElicke
Aecom: Linda Howard
Safety Briefing: only 2 - Boat Staff
· Take time, be aware
Air Quality 27 (Good)
Coronavirus

0748 Ryan called Port operations re our work today.

Several ROV points in ferry lane today

0800 Took control point at end of boat launch
* PL1-9302020
Headed to ROV 21

0810 Arrived ROV 21 & anchored
0815 Photo to board ROV21
0816 ROV in water
0818 Start recording ROV 21 West
Seapens
Depth: 43.2'
Coordinates:
anemones, Seapens, English sole
0826 Stop recording at end of ROV 21 West
Return to center
0829 Start Recording ROV 21 East ≈1ft. dia
0832 Seapens, anemones, one spot of red algae, fish, another isolated spot of red algae,
^ ≈1 Ft dia.
0837 Stop recording ROV 21 East
0844 Returned to center. Take ROV out of water.
Headed to ROV 24 & anchor
0850 Photo board for ROV 24
0852 ROV in Water Depth 44.5
0854 Start recording ROV 24 West Coordinates
Seapens, anemone, crab
0901 Stopped recording ROV 24 West

Scale: 1 square =

30 Sep 2020 Page 165 Bremerton Water front Habitat Survey

* Strong current
0907 Start recording ROV 24 East
Sea pens, anemones
0911 Stop recording ROV 24 East
Return to center
0916 ROV back on boat, headed to ROV 29
0922 Anchored at ROV 29 Depth: ~~at~~ 51 ft
Coordinates.
0926 Photo board of ROV 29
0928 Start recording ROV 29 West
Sea pens, crab
View very foggy upon entry - check camera after returning to center, moved camera up and down. Seems clear higher in water column. Lowered camera back down, very murky & difficult to see.
0937 Low visibility
0938 Stop recording ROV 29 West
Return to boat - check camera lense. Nothing on lens.
0943 Return to water & Lower
0944 Start recording ROV 29 East
Crab, Sea pens, anemones
0952 Stop recording ROV 29 East
0958 Return to boat, Headed to ROV 30
1007 Anchor at ROV 30. * Near Waterman Ferry Path. Ryan tried to hail them twice, no response. Will try again if they come near on return trip.

1008 Photo board ROV 30
Put ROV in water, spinning to unwind cable
1014 Start recording ROV 30 West
Sea pens, fish, anemone
1022 Camera got spun around
Sea pens
1024 Stop recording. * Sailboat approaching
1028 Back to center

Scale: 1 square =

1029 Start ROV 34 East
Seapens
anemones.
crabs
Depth 43.6 ft
1033 Small patch of red macroalgae
fish
1036 squid
1038 Stop recording ROV 34 East
1042 Back to boat
Handed to ROV 34
1048 Anchor at ROV 34 Depth 46.8
1051 Photo board at ROV 34 West
1053 Start ROV 34 West
Seapens, anemone
1100 Stop recording ROV 34 West
Start recording ROV 34 East
1108 Lost compass heading
1110 Stop video mid transect due to sensor failure
1111 Start recording again on ROV 34 East
Seapens, anemones, crabs
117 Stop ROV 34 East
121 Return to boat
1130 Anchor at ROV 33
1141 Photo board for ROV 33
1143 Start ROV 33 West
Seapens 1 small patch sea lettuce, jellies
1150 Stop ROV 33 West
1154 Back at boat
1155 Start ROV 33 East
fish, seapens, crab, anemone, fishes
a little sea lettuce
1204 Stop recording ROV East – LAST TRANSECT
Returning Rov to boat
1207 ROV back at boat
Ryan gave Linds SD card for today & Nav files on thumb drive.

Scale: 1 square =

APPENDIX D
Macroalgae Density Categories – Example Images

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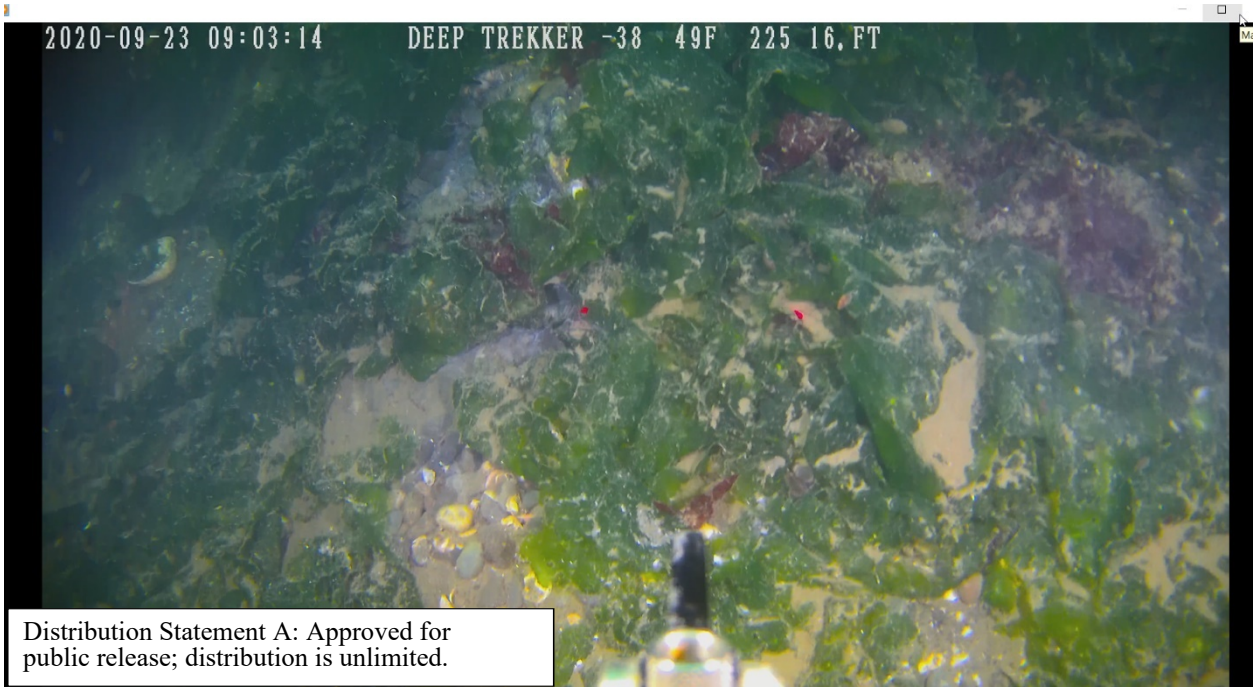
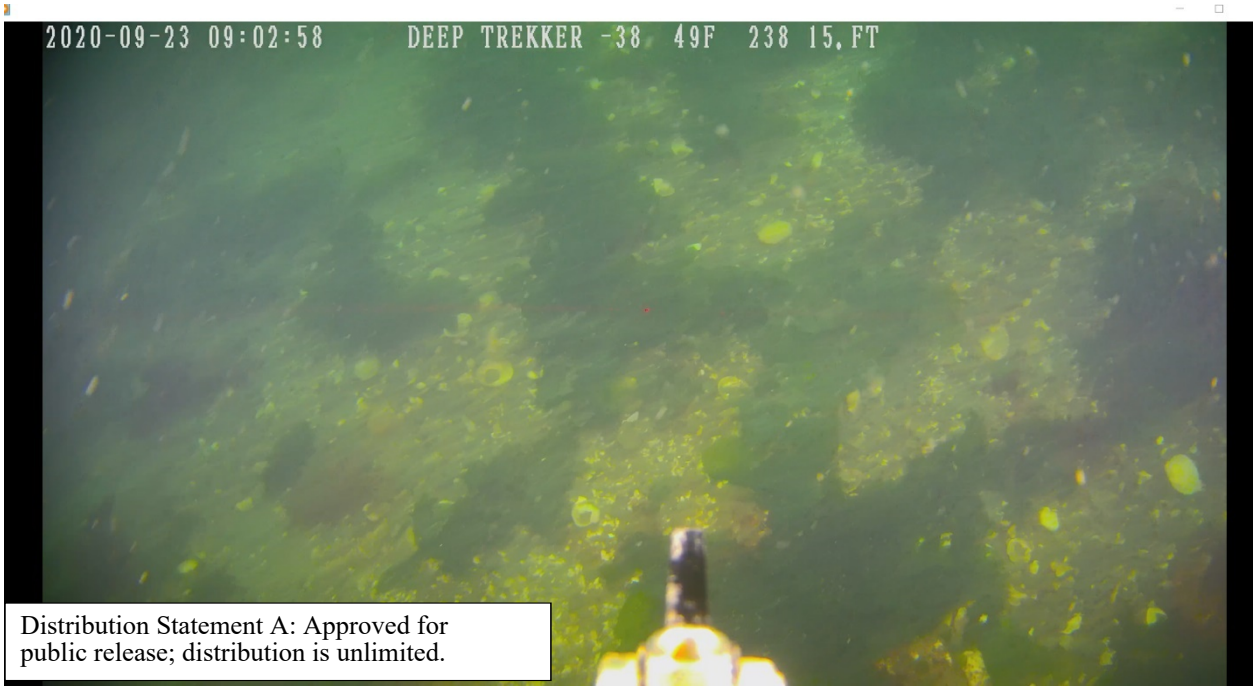
High Density:



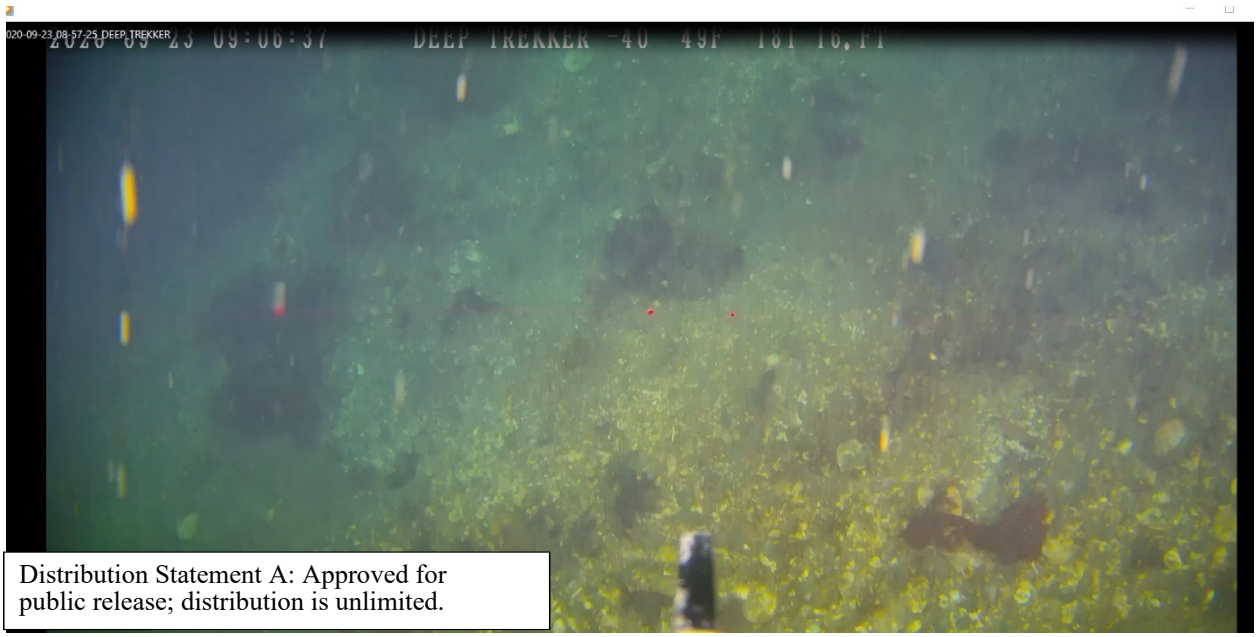
Tide Corrected Depth: -43 feet (-13 meters) Coordinates (UTM): 1194600.7124 E, 208565.979251 N

Medium Density:



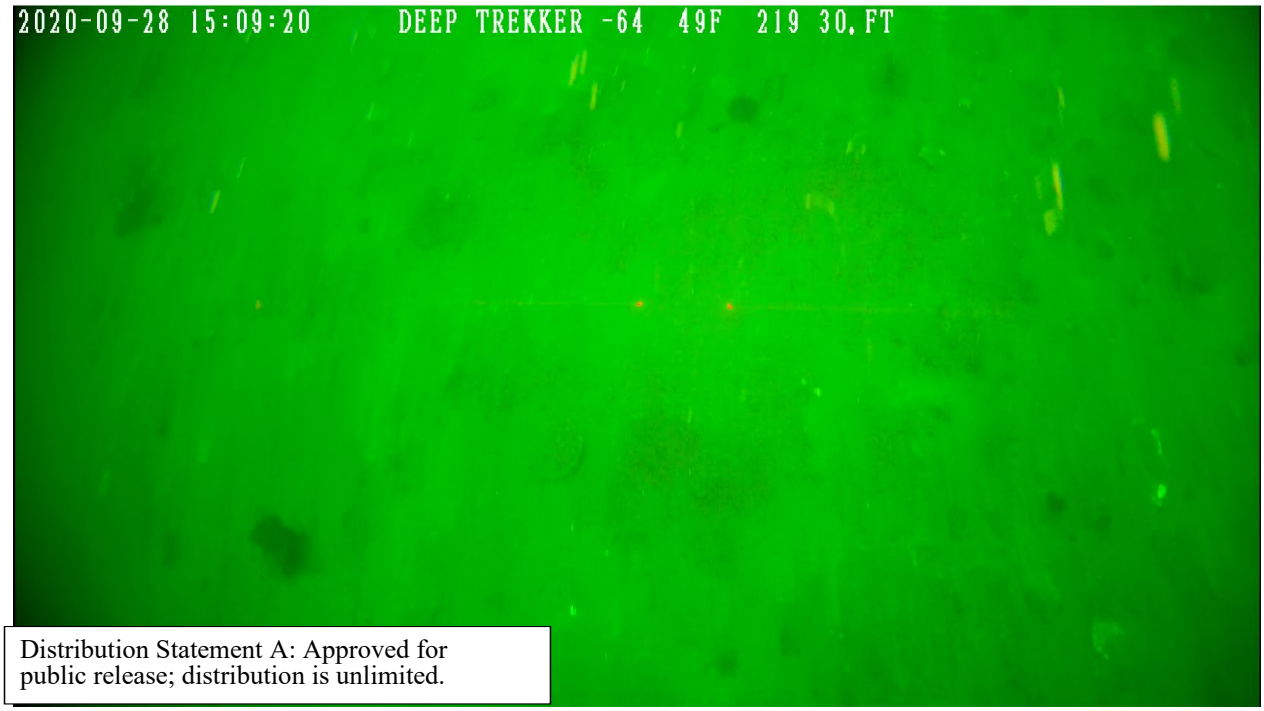
Tide Corrected Depth: -43 feet (-13 meters) Coordinates (UTM): 1194615.04635 E, 208590.974533 N

Low Density:



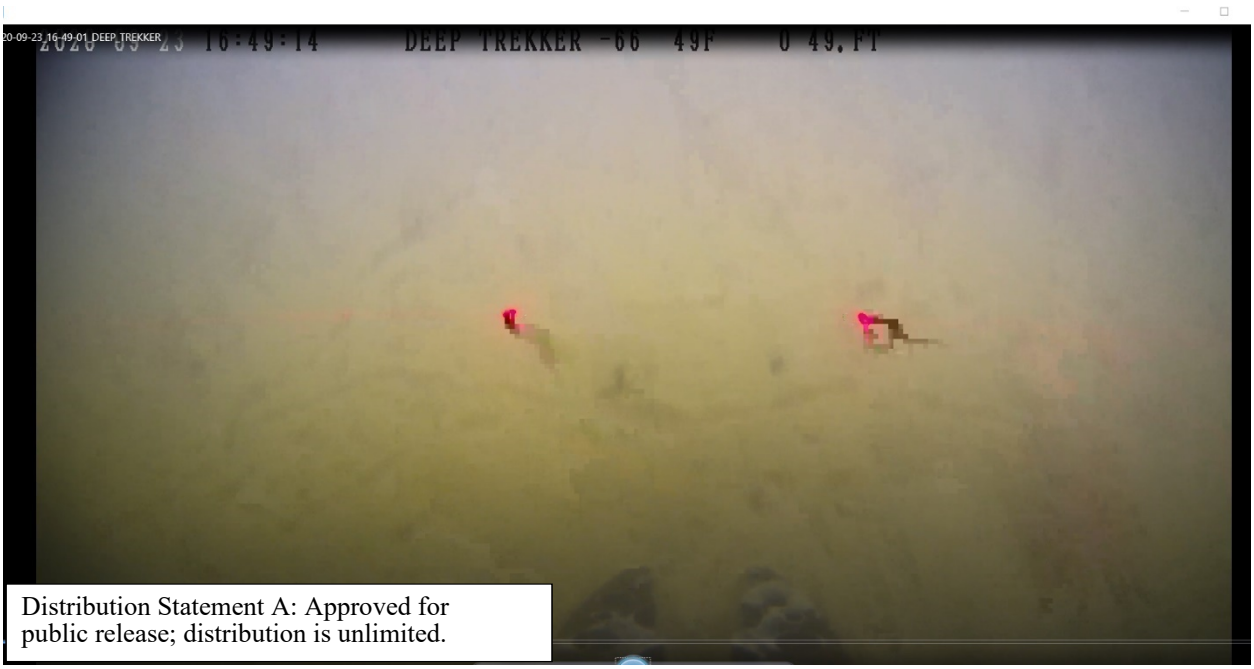
Tide Corrected Depth: -43 feet (-13 meters) Coordinates (UTM): 1194581.27397 E, 208481.823429 N

Trace:



Tide Corrected Depth: -10 feet (-3 meters) Coordinates (UTM): 1197596.30222 E, 209491.6463229 N

None:



Tide Corrected Depth: -42 feet (-13 meters) Coordinates (UTM): 1191702.90999 E, 206438.72 N

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APPENDIX E
Data Deliverable Structure

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1.	Habitat Survey Hydroacoustic Data	File Size: 130 GB
	Raw Data Files (July 2020)	
	Yyyymmdd-DNXXX_RH	
	POSAC	
	ShorelineEelgrass Sites	
2.	Bathymetry Raw Files	File Size: 148 MB
	Bremerton_bathymetry_contour files	
	Bremerton_bathymetry_depth zone files	
	Multibeam bathymetry files	
3.	ROV Imagery Video Files	File Size: 404 GB
	Raw Imagery Video Files	
	Edited Imagery Video Files with Department of Defense Disclaimer	
4.	Data Analysis Files	File Size: 98 MB
	Field Logbooks	
	Vessel Navigation Files	
	ROV Imagery Data Analysis Excel Workbook	
	ROV Spatial Data Excel Workbook	
	Combined ROV Data (Imagery Analysis and Spatial Data) Excel Workbook	
	Various GIS Maps	

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APPENDIX F
Photographic Log

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CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
1	**9/21/20**

Description:

Typical red and green macroalgae, with a sea cucumber next to some underwater debris. Near shoreline between Pier D and Mooring E.

Tide Corrected Depth: -39 feet (-12 meters)

Coordinates (UTM): 1191426.22475 E 208045.185383 N

Distribution Statement A: Approved for public release; distribution is unlimited.

CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
2	**9/28/20**

Description:

Typical macroalgae growing on a cable, east of Pier 7.

Tide Corrected Depth: -10 feet (-3 meters)

Coordinates (UTM): 1197446.86299 E 209401.082414 N

Distribution Statement A: Approved for public release; distribution is unlimited.

CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
3	**9/28/20**

Description:

Kelp, east of Pier 7.

Tide Corrected Depth: -10 feet (-3 meters)

Coordinates (UTM): 1197560.40216 E 209466.80845 N

Distribution Statement A: Approved for public release; distribution is unlimited.

CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
4	**9/22/20**

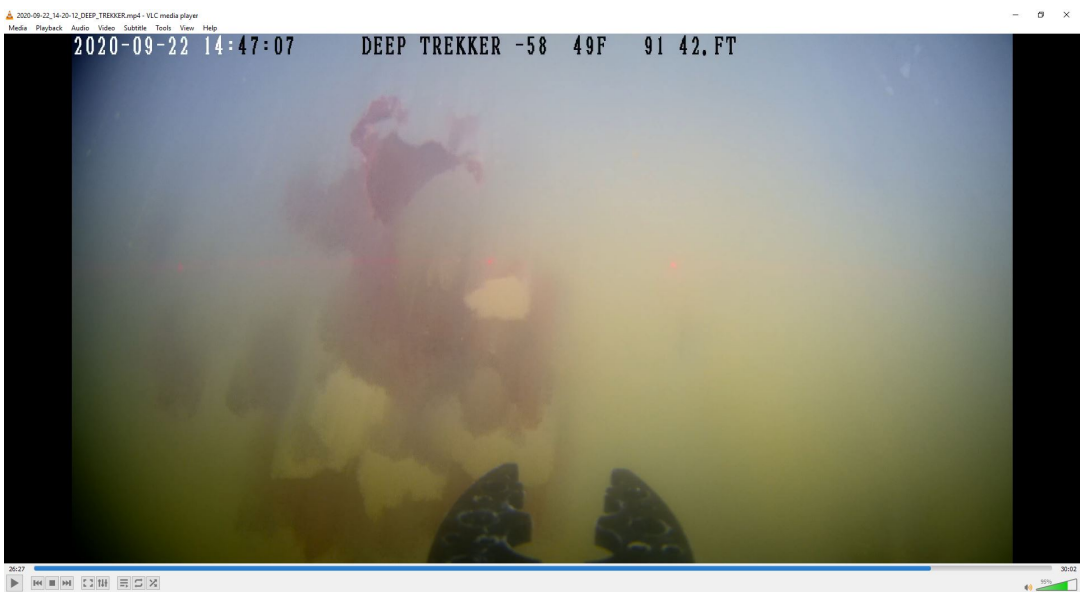
Description:

Typical macroalgae, near ROV-14.

Tide Corrected Depth: -46 feet (-14 meters)

Coordinates (UTM): 1194482.3867599 E 204178.816831 N

Distribution Statement A: Approved for public release; distribution is unlimited.



CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
5	**9/28/20**

Description:

Typical macroalgae east of Pier 7.

Tide Corrected Depth: -35 feet (-11 meters)

Coordinates (UTM): 1197581.93346 E 209569.976468 N

Distribution Statement A: Approved for public release; distribution is unlimited.

CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
6	**9/19/20**

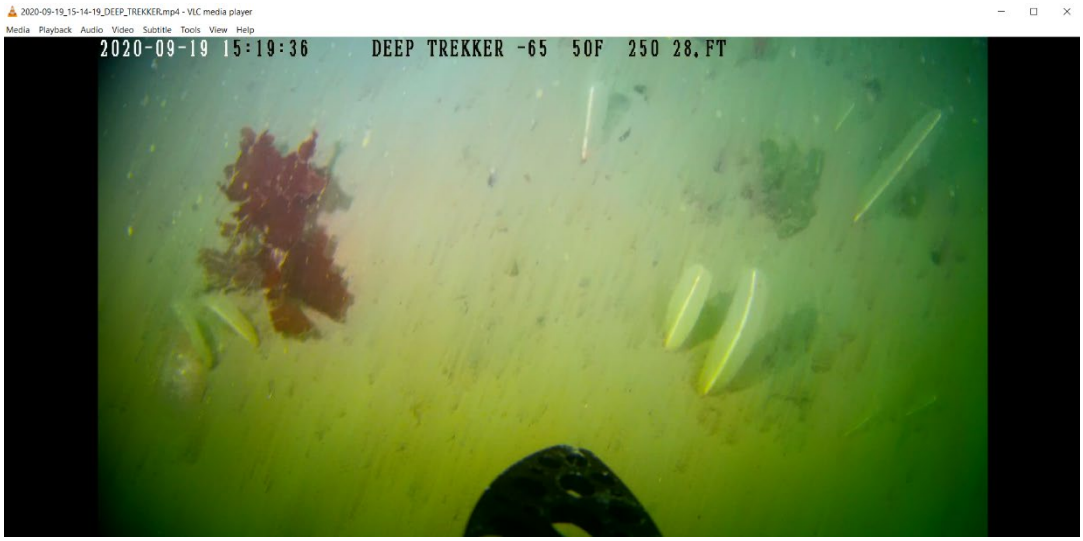
Description:

Typical macroalgae on the south side of Sinclair Inlet

Tide Corrected Depth: -50 feet (-15 feet)

Coordinates (UTM): 1197900.65909 E 205399.686363 N

Distribution Statement A: Approved for public release; distribution is unlimited.



CARDNO AECOM
A JOINT VENTURE

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Contract & Task Order:
NAVFAC Naval Facilities Engineering Command	**PSNS & IMF AND SINCLAIR INLET, BREMERTON**	N62742-18-D-1802 & N4425520F4153

Photo No.	Date:
7	9/19/20

Description:

Typical macroalgae on the south side of Sinclair Inlet

Tide Corrected Depth: -51 feet (-16 feet)

Coordinates (UTM): 1197888.63091 E 205395.683636 N

Distribution Statement A: Approved for public release; distribution is unlimited.

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APPENDIX G
Macroalgae Density and Water Depth by Location

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Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-43.07	None	YES	DD-5 Contours	1194657.9316	208730.2496	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.45	Low	YES	DD-5 Contours	1194646.9761	208702.8467	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.35	Low	YES	DD-5 Contours	1194641.7601	208673.9140	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-44.22	Medium	YES	DD-5 Contours	1194636.4857	208645.2101	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.48	Medium	YES	DD-5 Contours	1194623.3488	208618.9597	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.17	Medium	YES	DD-5 Contours	1194615.0464	208590.9745	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.92	Medium	YES	DD-5 Contours	1194600.7124	208565.9793	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.45	Medium	YES	DD-5 Contours	1194590.4335	208538.7440	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.57	Medium	YES	DD-5 Contours	1194585.8061	208510.6908	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.51	Medium	YES	DD-5 Contours	1194581.2740	208481.8234	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.69	Medium	YES	DD-5 Contours	1194581.4682	208453.2988	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.40	N/A	YES	DD-5 Contours	1194584.8503	208424.2436	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.46	Low	YES	DD-5 Contours	1194581.0891	208395.3912	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.11	Medium	YES	DD-5 Contours	1194577.4015	208366.9235	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-42.07	Low	YES	DD-5 Contours	1194575.1186	208337.9388	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.78	Medium	YES	DD-5 Contours	1194572.2078	208308.7540	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.36	Medium	YES	DD-5 Contours	1194557.5009	208283.9312	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.86	Medium	YES	DD-5 Contours	1194544.9285	208257.5067	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.74	Low	YES	DD-5 Contours	1194564.8425	208254.5905	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.19	Low	YES	DD-5 Contours	1194586.4786	208294.6605	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.30	Medium	YES	DD-5 Contours	1194598.3363	208339.6965	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.31	Medium	YES	DD-5 Contours	1194605.2237	208382.1577	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.69	Low	YES	DD-5 Contours	1194602.8246	208421.6939	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.15	N/A	YES	DD-5 Contours	1194611.7538	208458.3575	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.78	Medium	YES	DD-5 Contours	1194607.5930	208498.7047	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.97	N/A	YES	DD-5 Contours	1194620.6975	208528.1058	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-43.70	N/A	YES	DD-5 Contours	1194632.3027	208570.1262	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-41.67	N/A	YES	DD-5 Contours	1194656.7266	208607.0215	2020-09-23_08-57-25_DEEP_TREKKER.mp4	9/23/2020
-41.97	N/A	YES	DD-5 Contours	1194677.2175	208646.7475	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-41.83	N/A	YES	DD-5 Contours	1194679.3734	208659.4198	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-42.19	Medium	YES	DD-5 Contours	1194672.3050	208668.9543	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-42.54	Medium	YES	DD-5 Contours	1194663.9844	208678.2303	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-42.85	Medium	YES	DD-5 Contours	1194665.1880	208690.7716	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-42.98	Medium	YES	DD-5 Contours	1194669.8896	208702.7777	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-43.78	Medium	YES	DD-5 Contours	1194675.8072	208714.2539	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-43.56	Medium	YES	DD-5 Contours	1194683.8914	208724.2765	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-43.47	Medium	YES	DD-5 Contours	1194695.2827	208729.5366	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-43.63	Medium	YES	DD-5 Contours	1194707.7044	208732.6218	2020-09-23_09-27-27_DEEP_TREKKER.mp4	9/23/2020
-43.63	N/A	YES	DD-5 Contours	1194677.2175	208646.7475	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-44.25	Low	YES	DD-5 Contours	1194663.6931	208679.1192	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.97	Low	YES	DD-5 Contours	1194676.8606	208715.7934	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.42	Medium	YES	DD-5 Contours	1194709.3671	208734.5438	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.78	None	YES	DD-5 Contours	1194728.8045	208719.0901	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.47	Trace	YES	DD-5 Contours	1194727.2138	208693.9134	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-41.66	None	YES	DD-5 Contours	1194718.5269	208669.7750	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-41.91	Trace	YES	DD-5 Contours	1194704.5984	208647.4882	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.49	Low	YES	DD-5 Contours	1194707.9594	208621.3639	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.28	Low	YES	DD-5 Contours	1194689.4594	208604.4238	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.44	Low	YES	DD-5 Contours	1194669.8683	208587.1406	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.31	Low	YES	DD-5 Contours	1194656.8732	208564.7215	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.81	N/A	YES	DD-5 Contours	1194647.8975	208541.7838	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.79	Low	YES	DD-5 Contours	1194644.0644	208516.1826	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.11	Low	YES	DD-5 Contours	1194643.0333	208490.8507	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-41.61	Medium	YES	DD-5 Contours	1194641.1282	208464.9501	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-41.58	Low	YES	DD-5 Contours	1194631.6970	208440.8943	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-41.57	Trace	YES	DD-5 Contours	1194636.5850	208417.1568	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-41.70	N/A	YES	DD-5 Contours	1194644.5089	208392.1145	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-41.62	Low	YES	DD-5 Contours	1194643.5889	208366.3962	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.31	Medium	YES	DD-5 Contours	1194632.5805	208344.0755	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-43.26	Low	YES	DD-5 Contours	1194622.1350	208326.6441	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.93	N/A	YES	DD-5 Contours	1194628.6363	208312.6073	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.73	Medium	YES	DD-5 Contours	1194618.2166	208288.8832	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.53	Medium	YES	DD-5 Contours	1194613.4734	208263.7401	2020-09-23_09-41-03_DEEP_TREKKER.mp4	9/23/2020
-42.06	Medium	YES	DD-5 Contours	1194665.1674	208744.9079	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.03	Medium	YES	DD-5 Contours	1194670.8924	208753.0789	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.17	Medium	YES	DD-5 Contours	1194679.8665	208757.6751	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.08	Medium	YES	DD-5 Contours	1194684.8251	208766.4567	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-43.31	Medium	YES	DD-5 Contours	1194687.0003	208776.5125	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.97	Medium	YES	DD-5 Contours	1194689.1754	208786.5682	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.63	High	YES	DD-5 Contours	1194691.3506	208796.6240	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.63	High	YES	DD-5 Contours	1194693.5257	208806.6798	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.33	N/A	YES	DD-5 Contours	1194695.7009	208816.7356	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-42.14	N/A	YES	DD-5 Contours	1194698.1291	208826.3373	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-41.51	N/A	YES	DD-5 Contours	1194704.2454	208834.5212	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-40.29	N/A	YES	DD-5 Contours	1194709.2643	208843.4309	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-40.19	High	YES	DD-5 Contours	1194715.8845	208851.2883	2020-09-23_10-39-15_DEEP_TREKKER.mp4	9/23/2020
-40.16	Low	YES	DD-5 Contours	1194708.4299	208787.3020	2020-09-23_11-11-39_DEEP_TREKKER.mp4	9/23/2020
-40.56	Low	YES	DD-5 Contours	1194712.7326	208806.4196	2020-09-23_11-11-39_DEEP_TREKKER.mp4	9/23/2020
-43.01	Low	YES	DD-5 Contours	1194716.1859	208825.5898	2020-09-23_11-11-39_DEEP_TREKKER.mp4	9/23/2020
-42.97	Low	YES	DD-5 Contours	1194728.2050	208840.9901	2020-09-23_11-11-39_DEEP_TREKKER.mp4	9/23/2020
-43.05	Low	YES	DD-5 Contours	1194743.2648	208853.4518	2020-09-23_11-11-39_DEEP_TREKKER.mp4	9/23/2020
-34.70	High		East of Pier 7 contours -10 ft east to west, south to north	1197319.2787	209442.9997	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.66	High		East of Pier 7 contours -10 ft east to west, south to north	1197343.1580	209428.2389	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.55	High		East of Pier 7 contours -10 ft east to west, south to north	1197356.8137	209450.1438	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.60	N/A		East of Pier 7 contours -10 ft east to west, south to north	1197378.4344	209467.7648	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.61	Medium		East of Pier 7 contours -10 ft east to west, south to north	1197406.3630	209475.8597	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.78	Medium		East of Pier 7 contours -10 ft east to west, south to north	1197431.0375	209490.5937	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.82	High		East of Pier 7 contours -10 ft east to west, south to north	1197455.8612	209505.5623	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.85	High		East of Pier 7 contours -10 ft east to west, south to north	1197478.0284	209522.4265	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.99	High		East of Pier 7 contours -10 ft east to west, south to north	1197503.2427	209536.9234	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-35.08	High		East of Pier 7 contours -10 ft east to west, south to north	1197529.4237	209548.2003	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-35.15	Medium		East of Pier 7 contours -10 ft east to west, south to north	1197557.0944	209556.0261	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-35.11	High		East of Pier 7 contours -10 ft east to west, south to north	1197581.9335	209569.9765	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.61	Medium		East of Pier 7 contours -10 ft east to west, south to north	1197609.0218	209579.2622	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.65	High		East of Pier 7 contours -10 ft east to west, south to north	1197634.1314	209593.2377	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.77	High		East of Pier 7 contours -10 ft east to west, south to north	1197662.6995	209592.8323	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-34.82	Medium		East of Pier 7 contours -10 ft east to west, south to north	1197689.0110	209604.7623	2020-09-28_15-35-52_DEEP_TREKKER.mp4	9/28/2020
-10.00	Trace		East of Pier 7 contours -20 ft	1197677.2940	209544.3010	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.12	Trace		East of Pier 7 contours -20 ft	1197647.9185	209530.8682	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.03	Trace		East of Pier 7 contours -20 ft	1197619.8694	209514.1524	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.08	Trace		East of Pier 7 contours -20 ft	1197596.3022	209491.6463	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.97	Trace		East of Pier 7 contours -20 ft	1197589.8510	209479.6295	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.91	Trace		East of Pier 7 contours -20 ft	1197560.4022	209466.8085	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.12	Low		East of Pier 7 contours -20 ft	1197534.5806	209446.4446	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.93	Trace		East of Pier 7 contours -20 ft	1197506.7683	209428.5035	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.11	Low		East of Pier 7 contours -20 ft	1197477.2353	209413.8531	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.93	Trace		East of Pier 7 contours -20 ft	1197446.8630	209401.0824	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.00	Trace		East of Pier 7 contours -20 ft	1197414.9710	209396.8200	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-10.10	Trace		East of Pier 7 contours -20 ft	1197391.3476	209410.4950	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.96	Trace		East of Pier 7 contours -20 ft	1197375.3897	209383.9327	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-10.07	None		East of Pier 7 contours -20 ft	1197370.5342	209351.2504	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.90	Trace		East of Pier 7 contours -20 ft	1197366.7470	209318.6216	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.95	Trace		East of Pier 7 contours -20 ft	1197358.7933	209286.4657	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-9.94	Trace		East of Pier 7 contours -20 ft	1197350.8271	209254.5341	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-34.61	Low		East of Pier 7 contours -20 ft	1197324.9005	209239.4073	2020-09-28_15-06-42_DEEP_TREKKER.mp4	9/28/2020
-35.01	Trace		East of Pier 7 contours -30 ft east to west	1197671.1707	209434.2627	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.15	Trace		East of Pier 7 contours -30 ft east to west	1197647.4717	209411.3909	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.24	Trace		East of Pier 7 contours -30 ft east to west	1197635.0947	209392.4296	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.27	Trace		East of Pier 7 contours -30 ft east to west	1197605.9526	209377.7370	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.35	Trace		East of Pier 7 contours -30 ft east to west	1197581.4718	209355.2185	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.75	Low		East of Pier 7 contours -30 ft east to west	1197556.3833	209333.3874	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-36.18	Low		East of Pier 7 contours -30 ft east to west	1197530.2412	209312.8309	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-36.59	Low		East of Pier 7 contours -30 ft east to west	1197504.4578	209291.8426	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-37.16	N/A		East of Pier 7 contours -30 ft east to west	1197478.3397	209271.2689	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-37.50	Low		East of Pier 7 contours -30 ft east to west	1197449.6937	209254.4640	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-34.61	Low		East of Pier 7 contours -30 ft east to west	1197419.1864	209242.2783	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-34.83	Low		East of Pier 7 contours -30 ft east to west	1197386.4695	209239.4311	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.20	Low		East of Pier 7 contours -30 ft east to west	1197356.7139	209225.9845	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-35.55	Trace		East of Pier 7 contours -30 ft east to west	1197324.3051	209220.7531	2020-09-28_16-03-13_DEEP_TREKKER.mp4	9/28/2020
-47.57	N/A		East of Pier 7 contours -30 ft north to south	1197242.8891	209567.4935	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-46.31	Trace		East of Pier 7 contours -30 ft north to south	1197252.1714	209542.1602	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-45.71	N/A		East of Pier 7 contours -30 ft north to south	1197256.6998	209515.5639	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-46.54	N/A		East of Pier 7 contours -30 ft north to south	1197257.5866	209488.6045	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-46.55	None		East of Pier 7 contours -30 ft north to south	1197258.0629	209461.5799	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-43.80	None		East of Pier 7 contours -30 ft north to south	1197261.5956	209434.8039	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-43.56	None		East of Pier 7 contours -30 ft north to south	1197262.5418	209407.8286	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-44.40	None		East of Pier 7 contours -30 ft north to south	1197263.5056	209380.8283	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-43.31	Trace		East of Pier 7 contours -30 ft north to south	1197262.6674	209353.8058	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-44.36	None		East of Pier 7 contours -30 ft north to south	1197263.8875	209326.8398	2020-09-29_14-21-36_DEEP_TREKKER.mp4	9/29/2020
-45.19	N/A		East of Pier 7 contours -30 ft north to south	1197262.9841	209363.8800	2020-09-29_14-40-18_DEEP_TREKKER.mp4	9/29/2020
-44.10	Trace		East of Pier 7 contours -30 ft north to south	1197265.2249	209307.6164	2020-09-29_14-40-18_DEEP_TREKKER.mp4	9/29/2020
-43.20	Trace		East of Pier 7 contours -30 ft north to south	1197267.5031	209251.3223	2020-09-29_14-40-18_DEEP_TREKKER.mp4	9/29/2020
-43.70	Trace		East of Pier 7 contours -30 ft north to south	1197307.3167	209220.1219	2020-09-29_14-40-18_DEEP_TREKKER.mp4	9/29/2020
-36.89	Low	YES	Mooring A/DD-6 Contours	1193824.7700	207144.8400	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-36.86	Low	YES	Mooring A/DD-6 Contours	1193824.9141	207169.3424	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-36.72	Low	YES	Mooring A/DD-6 Contours	1193825.0582	207193.8447	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-36.63	Trace	YES	Mooring A/DD-6 Contours	1193825.2023	207218.3471	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-36.63	Trace	YES	Mooring A/DD-6 Contours	1193825.3465	207242.8494	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.65	Trace	YES	Mooring A/DD-6 Contours	1193825.4906	207267.3518	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-38.05	Trace	YES	Mooring A/DD-6 Contours	1193825.6347	207291.8541	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.95	Trace	YES	Mooring A/DD-6 Contours	1193825.7788	207316.3565	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-38.50	None	YES	Mooring A/DD-6 Contours	1193825.9229	207340.8588	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-38.61	Trace	YES	Mooring A/DD-6 Contours	1193826.0671	207365.3612	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-38.93	Trace	YES	Mooring A/DD-6 Contours	1193826.2112	207389.8635	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-39.06	Low	YES	Mooring A/DD-6 Contours	1193826.3553	207414.3659	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-39.06	Trace	YES	Mooring A/DD-6 Contours	1193826.4994	207438.8682	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-39.27	Trace	YES	Mooring A/DD-6 Contours	1193826.6435	207463.3706	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.65	Trace	YES	Mooring A/DD-6 Contours	1193826.7877	207487.8729	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.73	Trace	YES	Mooring A/DD-6 Contours	1193826.9318	207512.3753	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.73	Trace	YES	Mooring A/DD-6 Contours	1193827.0759	207536.8776	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-38.12	Trace	YES	Mooring A/DD-6 Contours	1193803.8602	207557.4124	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-40.92	Trace	YES	Mooring A/DD-6 Contours	1193803.3947	207537.2866	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-41.30	Trace	YES	Mooring A/DD-6 Contours	1193804.4128	207517.2330	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-41.61	Trace	YES	Mooring A/DD-6 Contours	1193806.6133	207497.2425	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-41.64	Trace	YES	Mooring A/DD-6 Contours	1193806.3331	207477.1266	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-42.14	N/A	YES	Mooring A/DD-6 Contours	1193804.3840	207457.0905	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.65	N/A	YES	Mooring A/DD-6 Contours	1193799.5851	207437.5728	2020-09-22_11-27-49_DEEP_TREKKER.mp4	9/22/2020
-37.48	N/A	YES	Mooring A/DD-6 Contours	1193769.0118	207145.7975	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-37.48	Medium	YES	Mooring A/DD-6 Contours	1193772.4444	207191.9092	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-37.48	Medium	YES	Mooring A/DD-6 Contours	1193770.2152	207238.2161	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-37.48	Medium	YES	Mooring A/DD-6 Contours	1193770.9397	207284.2034	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-37.48	Medium	YES	Mooring A/DD-6 Contours	1193769.2164	207330.4781	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-38.69	Low	YES	Mooring A/DD-6 Contours	1193771.6864	207376.6799	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-39.23	Low	YES	Mooring A/DD-6 Contours	1193771.9509	207423.0261	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-39.47	Low	YES	Mooring A/DD-6 Contours	1193779.0207	207468.6659	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-39.60	Low	YES	Mooring A/DD-6 Contours	1193774.5442	207514.5894	2020-09-22_12-05-04_DEEP_TREKKER.mp4	9/22/2020
-39.56	None	YES	Mooring A/DD-6 Contours	1193770.8887	207560.6483	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-39.81	None	YES	Mooring A/DD-6 Contours	1193803.8602	207557.4124	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-40.18	Trace	YES	Mooring A/DD-6 Contours	1193803.6894	207522.9501	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.69	Trace	YES	Mooring A/DD-6 Contours	1193806.7968	207488.6447	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.60	Trace	YES	Mooring A/DD-6 Contours	1193804.0059	207454.2807	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.54	Trace	YES	Mooring A/DD-6 Contours	1193796.8248	207420.6899	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.56	Trace	YES	Mooring A/DD-6 Contours	1193796.6246	207386.2770	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.59	Trace	YES	Mooring A/DD-6 Contours	1193798.7059	207352.0339	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.57	Trace	YES	Mooring A/DD-6 Contours	1193796.8281	207317.5952	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.71	Trace	YES	Mooring A/DD-6 Contours	1193797.2870	207283.1067	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.68	Trace	YES	Mooring A/DD-6 Contours	1193796.1736	207248.8519	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-38.69	Trace	YES	Mooring A/DD-6 Contours	1193799.9407	207214.6096	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-39.41	Trace	YES	Mooring A/DD-6 Contours	1193800.6130	207180.2247	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-40.07	Trace	YES	Mooring A/DD-6 Contours	1193796.5435	207145.9744	2020-09-22_12-14-06_DEEP_TREKKER.mp4	9/22/2020
-42.73	Low	YES	Mooring A/DD-6 Contours	1193784.2690	207912.8810	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.25	Low	YES	Mooring A/DD-6 Contours	1193783.7274	207880.7573	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.29	Trace	YES	Mooring A/DD-6 Contours	1193780.9368	207848.7103	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.28	Low	YES	Mooring A/DD-6 Contours	1193780.2741	207816.5673	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.42	Trace	YES	Mooring A/DD-6 Contours	1193779.2235	207784.4414	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	Low	YES	Mooring A/DD-6 Contours	1193776.9756	207752.4332	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	Low	YES	Mooring A/DD-6 Contours	1193774.8004	207720.4899	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	Low	YES	Mooring A/DD-6 Contours	1193774.3744	207688.4242	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	Low	YES	Mooring A/DD-6 Contours	1193776.4372	207656.4157	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	Low	YES	Mooring A/DD-6 Contours	1193775.0383	207624.4383	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	N/A	YES	Mooring A/DD-6 Contours	1193773.2296	207592.3458	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-38.69	Trace	YES	Mooring A/DD-6 Contours	1193770.8887	207560.6483	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.45	Trace	YES	Mooring A/DD-6 Contours	1193803.8602	207557.4124	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.90	Trace	YES	Mooring A/DD-6 Contours	1193805.1841	207596.6455	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.95	Trace	YES	Mooring A/DD-6 Contours	1193807.7176	207635.7953	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.18	Trace	YES	Mooring A/DD-6 Contours	1193808.2847	207675.0101	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.86	Trace	YES	Mooring A/DD-6 Contours	1193808.8210	207714.1273	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.23	Trace	YES	Mooring A/DD-6 Contours	1193810.3423	207753.2740	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.10	Low	YES	Mooring A/DD-6 Contours	1193812.5892	207792.4407	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.75	N/A	YES	Mooring A/DD-6 Contours	1193810.3225	207831.4777	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.36	Low	YES	Mooring A/DD-6 Contours	1193814.9297	207870.3599	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.45	N/A	YES	Mooring A/DD-6 Contours	1193813.3847	207909.5337	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.09	Low	YES	Mooring A/DD-6 Contours	1193841.5318	207915.4786	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-42.94	Low	YES	Mooring A/DD-6 Contours	1193840.2548	207893.7104	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.41	N/A	YES	Mooring A/DD-6 Contours	1193842.3808	207871.9886	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020
-43.60	N/A	YES	Mooring A/DD-6 Contours	1193841.4788	207850.1649	2020-09-22_12-44-45_DEEP_TREKKER.mp4	9/22/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-43.20	N/A	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193848.0390	207953.1856	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.03	Trace	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193854.4544	207964.5267	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.32	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193861.6192	207975.3988	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.46	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193868.1232	207986.6556	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.35	Trace	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193873.6977	207998.4172	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.27	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193883.1178	208007.1128	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.10	Trace	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193895.3551	208011.5001	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.17	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193908.2721	208013.2231	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.46	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193920.7618	208016.4906	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.41	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193929.9410	208025.6298	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.40	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193940.4404	208033.2204	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.24	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193952.6236	208037.6729	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.40	None	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193939.6374	208060.0125	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.66	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193925.2233	208047.4415	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.66	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193911.1934	208035.2590	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.55	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193893.2651	208028.3075	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.41	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193875.0498	208022.4794	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-43.52	Trace	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193856.1268	208019.9975	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-47.53	Medium	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193841.3116	208009.6704	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-47.15	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193834.5737	207991.6723	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-46.98	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193823.7894	207975.8171	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-46.09	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193858.0161	208038.1123	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-45.96	Low	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193881.2170	208042.2968	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
No bathymetric coverage	Medium	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193900.8358	208056.0245	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-9.97	Medium	YES	Mooring A/DD-6 Contours -30 feet, -20 feet, and -10 feet	1193920.1548	208070.1100	2020-09-28_09-12-40_DEEP_TREKKER.mp4	9/28/2020
-35.07	High	YES	Mooring E/F Contours	1191197.7289	207577.9939	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-35.22	High	YES	Mooring E/F Contours	1191208.9300	207600.5059	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.73	High	YES	Mooring E/F Contours	1191219.8598	207620.9342	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.76	High	YES	Mooring E/F Contours	1191235.7787	207640.5212	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.74	High	YES	Mooring E/F Contours	1191248.4245	207663.1654	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.87	High	YES	Mooring E/F Contours	1191260.4126	207686.1723	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.83	High	YES	Mooring E/F Contours	1191262.7125	207712.0132	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.08	Medium	YES	Mooring E/F Contours	1191269.5686	207736.8198	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.96	Low	YES	Mooring E/F Contours	1191271.4401	207641.6596	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.08	Medium	YES	Mooring E/F Contours	1191322.6995	207700.4453	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.18	High	YES	Mooring E/F Contours	1191314.0648	207677.2859	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.73	High	YES	Mooring E/F Contours	1191292.3339	207659.9994	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.73	High	YES	Mooring E/F Contours	1191246.8082	207592.2355	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-37.81	High	YES	Mooring E/F Contours	1191238.3379	207565.7645	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.22	High	YES	Mooring E/F Contours	1191204.3267	207584.8867	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.39	High	YES	Mooring E/F Contours	1191186.1516	207569.3225	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.56	Medium	YES	Mooring E/F Contours	1191162.2882	207568.0716	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.69	High	YES	Mooring E/F Contours	1191151.5716	207547.3930	2020-09-23_14-25-35_DEEP_TREKKER.mp4	9/23/2020
-38.75	High	YES	Mooring E/F Contours	1191132.7883	207534.2685	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-38.95	High	YES	Mooring E/F Contours	1191116.7701	207543.3225	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-39.06	High	YES	Mooring E/F Contours	1191105.8681	207558.7181	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-37.73	High	YES	Mooring E/F Contours	1191089.1050	207567.3524	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-37.35	High	YES	Mooring E/F Contours	1191070.3872	207567.9921	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-37.03	High	YES	Mooring E/F Contours	1191051.5408	207569.1297	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-36.53	High	YES	Mooring E/F Contours	1191033.1505	207567.1093	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-36.76	High	YES	Mooring E/F Contours	1191014.6783	207563.6207	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-36.56	Low	YES	Mooring E/F Contours	1190984.7968	207494.7737	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.95	Low	YES	Mooring E/F Contours	1191009.5156	207496.9927	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-44.24	Low	YES	Mooring E/F Contours	1191034.1105	207498.1512	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-44.35	Trace	YES	Mooring E/F Contours	1191059.2550	207498.7591	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-44.24	Low	YES	Mooring E/F Contours	1191084.0185	207495.2165	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-44.69	Low	YES	Mooring E/F Contours	1191108.5527	207489.9632	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.40	Medium	YES	Mooring E/F Contours	1191133.4800	207486.3572	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.69	Low	YES	Mooring E/F Contours	1191158.1944	207489.8945	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.95	Low	YES	Mooring E/F Contours	1191181.8394	207498.5799	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.94	Medium	YES	Mooring E/F Contours	1191201.9694	207512.7943	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.81	Medium	YES	Mooring E/F Contours	1191219.4848	207530.8627	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.44	Trace	YES	Mooring E/F Contours	1191233.8609	207550.6499	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.51	Low	YES	Mooring E/F Contours	1191229.3587	207455.7599	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.22	Trace	YES	Mooring E/F Contours	1191198.3964	207463.9816	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.39	Low	YES	Mooring E/F Contours	1191166.4574	207461.7548	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.39	Low	YES	Mooring E/F Contours	1191134.5320	207459.5505	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-43.44	Trace	YES	Mooring E/F Contours	1191102.5379	207461.7691	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-45.34	Trace	YES	Mooring E/F Contours	1191070.5862	207461.7089	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-42.49	None	YES	Mooring E/F Contours	1191039.2701	207455.1273	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-40.90	None	YES	Mooring E/F Contours	1191009.7959	207443.0391	2020-09-23_14-55-37_DEEP_TREKKER.mp4	9/23/2020
-34.70	N/A	YES	Pier B/C Contours	1192837.0118	208064.4719	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-34.60	N/A	YES	Pier B/C Contours	1192813.6820	208059.6349	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-34.58	None	YES	Pier B/C Contours	1192790.9068	208066.9547	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-34.28	None	YES	Pier B/C Contours	1192768.6958	208075.9675	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-34.60	None	YES	Pier B/C Contours	1192746.2082	208084.4058	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-34.86	None	YES	Pier B/C Contours	1192722.7407	208089.3971	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-34.92	Trace	YES	Pier B/C Contours	1192698.7453	208090.2357	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-35.15	Low	YES	Pier B/C Contours	1192680.4800	208104.7100	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-35.29	Low	YES	Pier B/C Contours	1192719.8071	208112.4500	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-35.20	Low	YES	Pier B/C Contours	1192759.8338	208106.5109	2020-09-22_10-10-59_DEEP_TREKKER.mp4	9/22/2020
-35.31	Trace	YES	Pier B/C Contours	1192872.9353	208070.5682	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-34.28	None	YES	Pier B/C Contours	1192911.7988	208072.3898	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-34.00	Trace	YES	Pier B/C Contours	1192949.8894	208064.5101	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-33.93	None	YES	Pier B/C Contours	1192987.3384	208056.3592	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-33.91	None	YES	Pier B/C Contours	1193025.5121	208063.8984	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-33.60	Trace	YES	Pier B/C Contours	1193064.2647	208066.6544	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
No bathymetric coverage	Trace	YES	Pier B/C Contours	1193103.1551	208065.2691	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
No bathymetric coverage	None	YES	Pier B/C Contours	1193140.6583	208056.1736	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-37.65	Trace	YES	Pier B/C Contours	1193132.6400	208102.9300	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-37.52	Low	YES	Pier B/C Contours	1193085.3500	208099.5700	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-37.37	Low	YES	Pier B/C Contours	1193038.0600	208096.2100	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-37.22	Low	YES	Pier B/C Contours	1192990.7700	208092.8500	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-36.93	Low	YES	Pier B/C Contours	1192943.4800	208089.4900	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-37.10	Low	YES	Pier B/C Contours	1192896.1900	208086.1300	2020-09-22_10-28-15_DEEP_TREKKER.mp4	9/22/2020
-20.03	N/A	YES	Pier D/C Contours	1192367.1481	208101.9864	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-20.07	Trace	YES	Pier D/C Contours	1192377.7376	208102.3579	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-20.03	None	YES	Pier D/C Contours	1192388.3207	208101.9696	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-19.98	None	YES	Pier D/C Contours	1192398.8861	208101.1768	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-19.91	None	YES	Pier D/C Contours	1192409.3175	208099.3899	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-20.01	Trace	YES	Pier D/C Contours	1192419.7336	208097.7558	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-19.96	Trace	YES	Pier D/C Contours	1192430.2380	208098.8378	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-20.02	None	YES	Pier D/C Contours	1192440.7690	208098.0417	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-20.12	None	YES	Pier D/C Contours	1192451.2747	208097.0352	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.93	Trace	YES	Pier D/C Contours	1192461.7346	208095.3825	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.28	Low	YES	Pier D/C Contours	1192472.1281	208093.3826	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.05	N/A	YES	Pier D/C Contours	1192482.3301	208090.5402	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.70	Trace	YES	Pier D/C Contours	1192491.6929	208085.6305	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-29.97	N/A	YES	Pier D/C Contours	1192499.3800	208078.4688	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.11	N/A	YES	Pier D/C Contours	1192504.0590	208069.0895	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.08	Low	YES	Pier D/C Contours	1192507.5974	208059.4800	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.67	Low	YES	Pier D/C Contours	1192513.3890	208114.3099	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.87	Low	YES	Pier D/C Contours	1192464.4101	208117.3132	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.03	Low	YES	Pier D/C Contours	1192415.2476	208118.2362	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.87	Low	YES	Pier D/C Contours	1192366.3173	208121.7308	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.89	Low	YES	Pier D/C Contours	1192318.4225	208118.4429	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.05	Trace	YES	Pier D/C Contours	1192269.6122	208121.9593	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.36	Trace	YES	Pier D/C Contours	1192220.7608	208123.3126	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.05	Low	YES	Pier D/C Contours	1192171.6647	208124.3610	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.14	Low	YES	Pier D/C Contours	1192122.8434	208120.4744	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.13	Low	YES	Pier D/C Contours	1192073.6688	208122.1500	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-29.90	Trace	YES	Pier D/C Contours	1192025.1750	208125.3394	2020-09-21_14-25-08_DEEP_TREKKER.mp4	9/21/2020
-30.56	N/A	YES	Pier D/C Contours	1192027.7933	208104.9239	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-30.02	Trace	YES	Pier D/C Contours	1192065.1841	208105.6213	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-19.83	None	YES	Pier D/C Contours	1192102.9394	208103.8171	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-19.98	N/A	YES	Pier D/C Contours	1192140.8128	208103.0090	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-19.13	Trace	YES	Pier D/C Contours	1192177.8801	208110.2668	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-20.49	Trace	YES	Pier D/C Contours	1192215.6971	208108.5167	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-20.70	Trace	YES	Pier D/C Contours	1192253.5549	208108.4983	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-20.32	N/A	YES	Pier D/C Contours	1192291.2274	208104.2974	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-20.00	N/A	YES	Pier D/C Contours	1192328.5635	208100.6902	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-19.95	Trace	YES	Pier D/C Contours	1192366.3817	208101.9578	2020-09-21_14-55-11_DEEP_TREKKER.mp4	9/21/2020
-30.05	Low	YES	Pier D/E Contours	1191532.7300	208082.9900	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-29.46	Medium	YES	Pier D/E Contours	1191565.9212	208109.9264	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-10.04	N/A	YES	Pier D/E Contours	1191608.6641	208114.0107	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-9.97	Trace	YES	Pier D/E Contours	1191651.3282	208118.8138	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-19.83	None	YES	Pier D/E Contours	1191693.9402	208124.0916	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-20.16	None	YES	Pier D/E Contours	1191736.5522	208129.3693	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-43.62	None	YES	Pier D/E Contours	1191779.3065	208125.6827	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-43.52	None	YES	Pier D/E Contours	1191820.8875	208132.3830	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-43.28	N/A	YES	Pier D/E Contours	1191861.7500	208145.5700	2020-09-21_10-39-38_DEEP_TREKKER.mp4	9/21/2020
-43.07	Low	YES	Pier D/E Contours	1191855.1508	208095.1879	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-43.04	Low	YES	Pier D/E Contours	1191855.1508	208095.1879	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-42.82	N/A	YES	Pier D/E Contours	1191834.7600	208094.9641	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-42.27	Low	YES	Pier D/E Contours	1191814.3692	208094.7403	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-41.69	N/A	YES	Pier D/E Contours	1191793.9784	208094.5164	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-41.49	Low	YES	Pier D/E Contours	1191773.5876	208094.2926	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-41.40	N/A	YES	Pier D/E Contours	1191753.2051	208093.6719	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-41.53	Trace	YES	Pier D/E Contours	1191732.8226	208093.0480	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-41.49	Trace	YES	Pier D/E Contours	1191712.4401	208092.4242	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-41.66	Trace	YES	Pier D/E Contours	1191692.0577	208091.7980	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-43.95	N/A	YES	Pier D/E Contours	1191671.6879	208090.8472	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-44.21	None	YES	Pier D/E Contours	1191651.3180	208089.8963	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-43.89	Trace	YES	Pier D/E Contours	1191630.9482	208088.9455	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-43.50	None	YES	Pier D/E Contours	1191610.5783	208087.9946	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-42.66	None	YES	Pier D/E Contours	1191591.0409	208082.7644	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-42.86	None	YES	Pier D/E Contours	1191571.8000	208076.0100	2020-09-21_10-51-37_DEEP_TREKKER.mp4	9/21/2020
-43.03	None	YES	Pier D/E Contours	1191532.5500	208056.3900	2020-09-21_11-10-12_DEEP_TREKKER.mp4	9/21/2020
-43.41	Trace	YES	Pier D/E Contours	1191534.0600	207999.0275	2020-09-21_11-10-12_DEEP_TREKKER.mp4	9/21/2020
-43.06	None	YES	Pier D/E Contours	1191535.5700	207941.6650	2020-09-21_11-10-12_DEEP_TREKKER.mp4	9/21/2020
-43.10	Trace	YES	Pier D/E Contours	1191537.0800	207884.3025	2020-09-21_11-10-12_DEEP_TREKKER.mp4	9/21/2020
-43.18	Trace	YES	Pier D/E Contours	1191538.5900	207826.9400	2020-09-21_11-10-12_DEEP_TREKKER.mp4	9/21/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-43.11	N/A	YES	Pier D/E Contours	1191525.0100	208128.8400	2020-09-21_11-16-23_DEEP_TREKKER.mp4	9/21/2020
-41.88	Trace	YES	Pier D/E Contours	1191497.9577	208107.7514	2020-09-21_11-16-23_DEEP_TREKKER.mp4	9/21/2020
-44.23	None	YES	Pier D/E Contours	1191470.9055	208086.6629	2020-09-21_11-16-23_DEEP_TREKKER.mp4	9/21/2020
-38.42	Low	YES	Pier D/E Contours	1191470.9055	208086.6629	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-23.87	Low	YES	Pier D/E Contours	1191427.1580	208065.8116	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-5.85	Low	YES	Pier D/E Contours	1191377.6769	208059.0926	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-42.62	Low	YES	Pier D/E Contours	1191353.6932	208017.7734	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-42.58	Medium	YES	Pier D/E Contours	1191345.2987	207968.6754	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-42.29	Medium	YES	Pier D/E Contours	1191303.3917	207942.9527	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-41.33	Medium	YES	Pier D/E Contours	1191369.5300	207973.3600	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-40.93	Medium	YES	Pier D/E Contours	1191375.7098	208009.1666	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-39.95	Low	YES	Pier D/E Contours	1191390.4408	208039.9451	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-39.16	Low	YES	Pier D/E Contours	1191426.2248	208045.1854	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-42.58	Low	YES	Pier D/E Contours	1191462.3416	208048.8135	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-42.64	Low	YES	Pier D/E Contours	1191497.8400	208044.3100	2020-09-21_11-22-01_DEEP_TREKKER.mp4	9/21/2020
-42.63	Low	YES	Pier D/Mooring E Contours	1191282.4300	207953.6400	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-41.85	Medium	YES	Pier D/Mooring E Contours	1191305.3751	207976.6969	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-41.63	Medium	YES	Pier D/Mooring E Contours	1191326.2295	208000.2997	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-41.88	Medium	YES	Pier D/Mooring E Contours	1191332.6998	208032.8763	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-41.86	High	YES	Pier D/Mooring E Contours	1191345.0316	208063.7006	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-41.61	Low	YES	Pier D/Mooring E Contours	1191369.0083	208085.5199	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-41.99	Low	YES	Pier D/Mooring E Contours	1191370.5278	208055.8072	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-42.25	Trace	YES	Pier D/Mooring E Contours	1191359.0350	208038.8542	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-42.08	N/A	YES	Pier D/Mooring E Contours	1191353.8491	208018.7293	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.64	N/A	YES	Pier D/Mooring E Contours	1191351.8557	207997.9330	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.39	N/A	YES	Pier D/Mooring E Contours	1191349.5984	207977.1778	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.31	N/A	YES	Pier D/Mooring E Contours	1191338.1981	207960.7519	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.39	N/A	YES	Pier D/Mooring E Contours	1191319.0993	207952.3400	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.64	N/A	YES	Pier D/Mooring E Contours	1191342.9561	207939.4111	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-34.42	N/A	YES	Pier D/Mooring E Contours	1191359.5117	207948.6742	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.86	N/A	YES	Pier D/Mooring E Contours	1191368.5412	207964.3058	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.16	N/A	YES	Pier D/Mooring E Contours	1191371.9726	207982.8843	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.23	Low	YES	Pier D/Mooring E Contours	1191373.9809	208001.7767	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-32.98	N/A	YES	Pier D/Mooring E Contours	1191376.8825	208020.5565	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-32.97	N/A	YES	Pier D/Mooring E Contours	1191384.4702	208037.6417	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.64	Medium	YES	Pier D/Mooring E Contours	1191276.6500	207943.3534	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-34.86	Medium	YES	Pier D/Mooring E Contours	1191270.2697	207909.9047	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.64	Medium	YES	Pier D/Mooring E Contours	1191269.0565	207875.7770	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.32	Low	YES	Pier D/Mooring E Contours	1191263.5148	207841.8994	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-33.04	Low	YES	Pier D/Mooring E Contours	1191271.2418	207808.6831	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-32.65	N/A	YES	Pier D/Mooring E Contours	1191270.9603	207774.8142	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
-32.46	N/A	YES	Pier D/Mooring E Contours	1191325.0639	207764.0389	2020-09-22_08-54-24_DEEP_TREKKER.mp4	9/22/2020
No bathymetric coverage	None	YES	Pier D/Mooring E Contours	1191328.0189	207788.6552	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
No bathymetric coverage	N/A	YES	Pier D/Mooring E Contours	1191328.0189	207788.6552	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-35.54	N/A	YES	Pier D/Mooring E Contours	1191322.0557	207811.0450	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-35.53	Medium	YES	Pier D/Mooring E Contours	1191300.9781	207824.0879	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-35.47	Medium	YES	Pier D/Mooring E Contours	1191290.8255	207846.4568	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-34.43	Medium	YES	Pier D/Mooring E Contours	1191290.1682	207871.3556	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-34.48	Medium	YES	Pier D/Mooring E Contours	1191289.9249	207896.3361	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-34.46	Low	YES	Pier D/Mooring E Contours	1191291.7931	207921.2461	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-34.73	N/A	YES	Pier D/Mooring E Contours	1191303.3917	207942.9527	2020-09-22_09-24-26_DEEP_TREKKER.mp4	9/22/2020
-34.63	N/A	YES	Pier D/Mooring E Contours	1191375.4000	208007.3200	2020-09-22_09-45-25_DEEP_TREKKER.mp4	9/22/2020
-34.61	N/A	YES	Pier D/Mooring E Contours	1191364.3981	207958.7072	2020-09-22_09-45-25_DEEP_TREKKER.mp4	9/22/2020
-37.56	None		ROV02	1190929.1509	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-37.38	None		ROV02	1190891.6509	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.27	None		ROV02	1190854.1509	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.30	None		ROV02	1190816.6508	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.22	None		ROV02	1190779.1508	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.06	None		ROV02	1190741.6508	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
No bathymetric coverage	None		ROV02	1190704.1508	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
No bathymetric coverage	None		ROV02	1190666.6508	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
No bathymetric coverage	None		ROV02	1190629.1508	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.56	N/A		ROV02	1190929.1509	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.64	None		ROV02	1190972.0081	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.78	None		ROV02	1191014.8652	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-40.28	None		ROV02	1191057.7224	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-41.87	None		ROV02	1191100.5795	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-41.30	None		ROV02	1191143.4367	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-42.05	None		ROV02	1191186.2939	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-41.10	N/A		ROV02	1191229.1510	205828.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.56	None		ROV02	1190929.1509	205828.0060	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.69	Trace		ROV02	1190929.1509	205865.5061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.80	Trace		ROV02	1190929.1509	205903.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.66	None		ROV02	1190929.1509	205940.5061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.68	None		ROV02	1190929.1509	205978.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.58	None		ROV02	1190929.1509	206015.5061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.76	None		ROV02	1190929.1509	206053.0061	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.76	None		ROV02	1190929.1509	206090.5062	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.76	None		ROV02	1190929.1509	206128.0062	2020-09-20_11-07-19_DEEP_TREKKER.mp4	9/20/2020
-37.56	N/A		ROV02	1190929.1509	205828.0060	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.49	N/A		ROV02	1190929.1509	205800.7333	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.49	N/A		ROV02	1190929.1509	205773.4606	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.36	N/A		ROV02	1190929.1509	205746.1878	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.22	None		ROV02	1190929.1509	205718.9151	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.30	N/A		ROV02	1190929.1509	205691.6424	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.18	None		ROV02	1190929.1509	205664.3696	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.09	None		ROV02	1190929.1509	205637.0969	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.05	None		ROV02	1190929.1509	205609.8241	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-37.11	None		ROV02	1190929.1509	205582.5514	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-36.93	None		ROV02	1190929.1509	205555.2787	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-36.86	None		ROV02	1190929.1509	205528.0059	2020-09-20_11-37-22_DEEP_TREKKER.mp4	9/20/2020
-19.88	N/A		ROV07	1191984.8100	205789.6400	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-20.25	None		ROV07	1191947.3100	205789.6400	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-19.72	None		ROV07	1191909.8099	205789.6400	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-20.12	None		ROV07	1191872.3099	205789.6400	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-20.12	None		ROV07	1191834.8099	205789.6400	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-20.15	None		ROV07	1191797.3099	205789.6400	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-20.23	None		ROV07	1191759.8099	205789.6399	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-30.34	None		ROV07	1191722.3098	205789.6399	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-28.74	None		ROV07	1191684.8098	205789.6399	2020-09-20_12-07-11_DEEP_TREKKER.mp4	9/20/2020
-30.35	N/A		ROV07	1191984.8100	205789.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.15	None		ROV07	1192044.8100	205789.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-29.74	None		ROV07	1192104.8100	205789.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.12	None		ROV07	1192164.8100	205789.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-29.66	None		ROV07	1192224.8100	205789.6401	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-29.79	None		ROV07	1192284.8100	205789.6401	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.03	N/A		ROV07	1191984.8100	205789.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-24.83	None		ROV07	1191984.8100	205849.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-19.88	None		ROV07	1191984.8099	205909.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-20.16	None		ROV07	1191984.8099	205969.6401	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.07	None		ROV07	1191984.8099	206029.6401	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.25	None		ROV07	1191984.8098	206089.6401	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.23	N/A		ROV07	1191984.8100	205789.6400	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.60	None		ROV07	1191984.8100	205746.7828	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-29.99	None		ROV07	1191984.8100	205703.9257	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-29.87	None		ROV07	1191984.8100	205661.0685	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-29.62	None		ROV07	1191984.8100	205618.2114	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-30.22	None		ROV07	1191984.8100	205575.3542	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
No bathymetric coverage	None		ROV07	1191984.8100	205532.4970	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-17.97	None		ROV07	1191984.8100	205489.6399	2020-09-20_12-22-09_DEEP_TREKKER.mp4	9/20/2020
-45.34	N/A		ROV08	1191679.8331	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-46.46	N/A		ROV08	1191656.7562	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-47.82	None		ROV08	1191633.6793	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-48.00	N/A		ROV08	1191610.6024	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-47.34	None		ROV08	1191587.5255	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-44.35	None		ROV08	1191564.4486	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-44.69	None		ROV08	1191541.3717	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-45.34	None		ROV08	1191518.2947	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.21	None		ROV08	1191495.2178	206438.7201	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-43.14	Trace		ROV08	1191472.1409	206438.7201	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.45	None		ROV08	1191449.0640	206438.7201	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.29	Trace		ROV08	1191425.9871	206438.7201	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.13	Trace		ROV08	1191402.9102	206438.7201	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.39	N/A		ROV08	1191702.9100	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.67	None		ROV08	1191730.1827	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.45	None		ROV08	1191757.4554	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.29	None		ROV08	1191784.7282	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.24	None		ROV08	1191812.0009	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.38	None		ROV08	1191839.2736	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.31	None		ROV08	1191866.5463	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.59	None		ROV08	1191893.8190	206438.7200	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.36	None		ROV08	1191921.0918	206438.7199	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-42.84	None		ROV08	1191948.3645	206438.7199	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-43.25	None		ROV08	1191975.6372	206438.7199	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-43.44	N/A		ROV08	1192002.9099	206438.7199	2020-09-23_16-02-32_DEEP_TREKKER.mp4	9/23/2020
-41.79	N/A		ROV08	1191702.9100	206438.7200	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-41.53	None		ROV08	1191702.9100	206488.7200	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-41.45	None		ROV08	1191702.9101	206538.7200	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-41.22	None		ROV08	1191702.9101	206588.7199	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-41.09	None		ROV08	1191702.9101	206638.7199	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-40.65	None		ROV08	1191702.9101	206688.7199	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-10.16	None		ROV08	1191702.9101	206738.7198	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-9.76	N/A		ROV08	1191702.9100	206438.7200	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-10.00	N/A		ROV08	1191702.9100	206395.8629	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-10.24	None		ROV08	1191702.9100	206353.0058	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-10.18	None		ROV08	1191702.9100	206310.1486	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-9.44	None		ROV08	1191702.9100	206267.2915	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-10.25	None		ROV08	1191702.9100	206224.4344	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-10.08	None		ROV08	1191702.9100	206181.5773	2020-09-23_16-49-01_DEEP_TREKKER.mp4	9/23/2020
-9.97	N/A		ROV08	1191702.9100	206181.5773	2020-09-23_17-05-19_DEEP_TREKKER.mp4	9/23/2020
-9.80	N/A		ROV08	1191702.9100	206138.7202	2020-09-23_17-05-19_DEEP_TREKKER.mp4	9/23/2020
-10.18	N/A		ROV09	1192282.0400	207570.6200	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-9.65	N/A		ROV09	1192232.0809	207568.6095	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.07	None		ROV09	1192182.1219	207566.5990	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.06	None		ROV09	1192132.1628	207564.5885	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.62	None		ROV09	1192082.2038	207562.5780	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-20.08	None		ROV09	1192032.2447	207560.5675	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-20.43	None		ROV09	1191982.2856	207558.5569	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-21.03	None		ROV09	1192282.0400	207570.6200	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-19.76	N/A		ROV09	1192315.5057	207571.7959	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-20.52	N/A		ROV09	1192348.9715	207572.9719	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-19.87	None		ROV09	1192382.4372	207574.1478	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.23	None		ROV09	1192415.9029	207575.3238	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.43	None		ROV09	1192449.3687	207576.4997	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.74	None		ROV09	1192482.8344	207577.6757	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.87	None		ROV09	1192516.3001	207578.8516	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.07	None		ROV09	1192549.7658	207580.0275	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.95	N/A		ROV09	1192583.2316	207581.2035	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.83	N/A		ROV09	1192282.0400	207570.6200	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.49	N/A		ROV09	1192281.7115	207608.1843	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.61	None		ROV09	1192281.3830	207645.7485	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-10.71	None		ROV09	1192281.0546	207683.3128	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.90	None		ROV09	1192280.7261	207720.8770	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-9.21	None		ROV09	1192280.3976	207758.4413	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-20.04	None		ROV09	1192280.0691	207796.0055	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-20.07	None		ROV09	1192279.7406	207833.5698	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-19.96	N/A		ROV09	1192279.4121	207871.1340	2020-09-21_13-23-12_DEEP_TREKKER.mp4	9/21/2020
-45.43	N/A	YES	ROV1	1191135.0600	207191.5200	2020-09-29_12-59-19_DEEP_TREKKER.mp4	9/29/2020
-45.92	None	YES	ROV1	1191095.5400	207192.9720	2020-09-29_12-59-19_DEEP_TREKKER.mp4	9/29/2020
-46.19	None	YES	ROV1	1191056.0200	207194.4240	2020-09-29_12-59-19_DEEP_TREKKER.mp4	9/29/2020
-46.44	Trace	YES	ROV1	1191016.5000	207195.8760	2020-09-29_12-59-19_DEEP_TREKKER.mp4	9/29/2020
-47.93	Trace	YES	ROV1	1190976.9800	207197.3280	2020-09-29_12-59-19_DEEP_TREKKER.mp4	9/29/2020
-48.09	Trace	YES	ROV1	1190937.4600	207198.7800	2020-09-29_12-59-19_DEEP_TREKKER.mp4	9/29/2020
-46.55	N/A	YES	ROV1	1191120.6800	207170.5100	2020-09-29_13-07-15_DEEP_TREKKER.mp4	9/29/2020
-44.39	None	YES	ROV1	1191160.0460	207171.5560	2020-09-29_13-07-15_DEEP_TREKKER.mp4	9/29/2020
-43.16	None	YES	ROV1	1191199.4120	207172.6020	2020-09-29_13-07-15_DEEP_TREKKER.mp4	9/29/2020
-42.30	None	YES	ROV1	1191238.7780	207173.6480	2020-09-29_13-07-15_DEEP_TREKKER.mp4	9/29/2020
-41.79	Trace	YES	ROV1	1191278.1440	207174.6940	2020-09-29_13-07-15_DEEP_TREKKER.mp4	9/29/2020
-41.37	Trace	YES	ROV1	1191317.5100	207175.7400	2020-09-29_13-07-15_DEEP_TREKKER.mp4	9/29/2020
-41.34	N/A	YES	ROV1	1191120.6800	207170.5100	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-41.16	None	YES	ROV1	1191124.1350	207199.9300	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-40.07	None	YES	ROV1	1191127.5900	207229.3500	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-39.71	None	YES	ROV1	1191131.0450	207258.7700	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-38.92	None	YES	ROV1	1191134.5000	207288.1900	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-38.92	None	YES	ROV1	1191137.9550	207317.6100	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-38.27	None	YES	ROV1	1191141.4100	207347.0300	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-37.21	None	YES	ROV1	1191144.8650	207376.4500	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-36.01	None	YES	ROV1	1191148.3200	207405.8700	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-33.87	Trace	YES	ROV1	1191151.7750	207435.2900	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-31.93	None	YES	ROV1	1191155.2300	207464.7100	2020-09-29_13-15-35_DEEP_TREKKER.mp4	9/29/2020
-48.60	N/A	YES	ROV1	1191133.2400	207218.6700	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-47.36	None	YES	ROV1	1191133.6880	207186.2080	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-47.16	None	YES	ROV1	1191134.1360	207153.7460	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-47.21	Trace	YES	ROV1	1191134.5840	207121.2840	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-46.81	None	YES	ROV1	1191135.0320	207088.8220	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-46.58	Trace	YES	ROV1	1191135.4800	207056.3600	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-46.66	None	YES	ROV1	1191135.9280	207023.8980	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-46.60	None	YES	ROV1	1191136.3760	206991.4360	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-46.66	None	YES	ROV1	1191136.8240	206958.9740	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-49.75	None	YES	ROV1	1191137.2720	206926.5120	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-48.99	Trace	YES	ROV1	1191137.7200	206894.0500	2020-09-29_13-31-24_DEEP_TREKKER.mp4	9/29/2020
-43.59	N/A	YES	ROV10	1192615.7100	206886.3300	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.87	N/A	YES	ROV10	1192572.8900	206886.6000	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.33	None	YES	ROV10	1192530.0700	206886.8700	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.39	None	YES	ROV10	1192487.2500	206887.1400	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.15	None	YES	ROV10	1192444.4300	206887.4100	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.56	None	YES	ROV10	1192401.6100	206887.6800	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.00	None	YES	ROV10	1192358.7900	206887.9500	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-30.40	None	YES	ROV10	1192315.9700	206888.2200	2020-09-29_11-18-48_DEEP_TREKKER.mp4	9/29/2020
-41.41	N/A	YES	ROV10	1192612.8700	206867.4200	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.66	None	YES	ROV10	1192648.0656	206866.4744	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.98	None	YES	ROV10	1192683.2611	206865.5289	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-42.15	None	YES	ROV10	1192718.4567	206864.5833	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.57	None	YES	ROV10	1192753.6522	206863.6378	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.01	None	YES	ROV10	1192788.8478	206862.6922	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.35	None	YES	ROV10	1192824.0433	206861.7467	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-40.80	None	YES	ROV10	1192859.2389	206860.8011	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-40.72	None	YES	ROV10	1192894.4344	206859.8556	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.19	None	YES	ROV10	1192929.6300	206858.9100	2020-09-29_11-29-21_DEEP_TREKKER.mp4	9/29/2020
-41.49	N/A	YES	ROV10	1192628.0000	206879.7100	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-41.44	None	YES	ROV10	1192625.9517	206926.1983	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-42.36	None	YES	ROV10	1192623.9033	206972.6867	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-42.37	None	YES	ROV10	1192621.8550	207019.1750	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-43.78	None	YES	ROV10	1192619.8067	207065.6633	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-44.78	None	YES	ROV10	1192617.7583	207112.1517	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-45.36	None	YES	ROV10	1192615.7100	207158.6400	2020-09-29_11-42-35_DEEP_TREKKER.mp4	9/29/2020
-49.26	N/A	YES	ROV10	1192601.5200	206890.1100	2020-09-29_11-54-32_DEEP_TREKKER.mp4	9/29/2020
-49.36	None	YES	ROV10	1192602.6560	206857.7720	2020-09-29_11-54-32_DEEP_TREKKER.mp4	9/29/2020
-20.08	None	YES	ROV10	1192603.7920	206825.4340	2020-09-29_11-54-32_DEEP_TREKKER.mp4	9/29/2020
-20.14	None	YES	ROV10	1192604.9280	206793.0960	2020-09-29_11-54-32_DEEP_TREKKER.mp4	9/29/2020
-20.03	None	YES	ROV10	1192606.0640	206760.7580	2020-09-29_11-54-32_DEEP_TREKKER.mp4	9/29/2020
-19.98	None	YES	ROV10	1192607.2000	206728.4200	2020-09-29_11-54-32_DEEP_TREKKER.mp4	9/29/2020
-20.43	None		ROV11	1192705.9764	206095.0434	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-18.88	None		ROV11	1192668.7531	206094.9905	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-19.72	None		ROV11	1192631.5298	206094.9376	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-22.58	None		ROV11	1192594.3064	206094.8846	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-28.56	None		ROV11	1192557.0831	206094.8317	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-29.49	None		ROV11	1192519.8598	206094.7788	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-30.76	None		ROV11	1192482.6365	206094.7258	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-30.89	None		ROV11	1192445.4132	206094.6729	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-31.57	N/A		ROV11	1192408.1898	206094.6200	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-31.22	N/A		ROV11	1192282.0400	207570.6200	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-30.38	N/A		ROV11	1192282.5530	207527.7663	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-29.83	N/A		ROV11	1192283.0661	207484.9126	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-29.84	N/A		ROV11	1192705.9764	206095.0434	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-30.37	None		ROV11	1192283.5791	207442.0590	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-30.11	None		ROV11	1192739.5557	206094.9964	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-29.06	None		ROV11	1192284.0921	207399.2053	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-28.60	None		ROV11	1192773.1350	206094.9493	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-29.53	None		ROV11	1192284.6052	207356.3516	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-30.10	None		ROV11	1192806.7143	206094.9023	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-19.81	None		ROV11	1192285.1182	207313.4979	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-19.97	None		ROV11	1192840.2936	206094.8552	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-20.31	None		ROV11	1192285.6313	207270.6442	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-20.03	None		ROV11	1192873.8729	206094.8082	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-20.17	None		ROV11	1192907.4522	206094.7611	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-20.24	None		ROV11	1192941.0315	206094.7141	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-20.24	None		ROV11	1192974.6108	206094.6671	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-10.12	None		ROV11	1193008.1901	206094.6200	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-9.85	N/A		ROV11	1192705.9764	206095.0434	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-9.91	N/A		ROV11	1192705.8613	206142.5405	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-10.23	N/A		ROV11	1192705.7462	206190.0375	2020-09-20_13-43-12_DEEP_TREKKER.mp4	9/20/2020
-10.10	None		ROV11	1192705.6312	206237.5346	2020-09-20_14-13-14_DEEP_TREKKER.mp4	9/20/2020
-9.90	N/A		ROV11	1192705.6312	206237.5346	2020-09-20_14-13-14_DEEP_TREKKER.mp6	9/20/2020
-9.82	N/A		ROV11	1192706.4841	206289.8964	2020-09-20_14-13-14_DEEP_TREKKER.mp7	9/20/2020
-9.67	N/A		ROV11	1192707.3370	206342.2583	2020-09-20_14-13-14_DEEP_TREKKER.mp8	9/20/2020
-19.81	N/A		ROV11	1192708.1900	206394.6201	2020-09-20_14-13-14_DEEP_TREKKER.mp9	9/20/2020
-19.92	N/A		ROV11	1192705.9764	206095.0434	2020-09-20_14-13-14_DEEP_TREKKER.mp10	9/20/2020
-19.90	None		ROV11	1192706.3453	206044.9728	2020-09-20_14-13-14_DEEP_TREKKER.mp11	9/20/2020
-19.78	None		ROV11	1192706.7143	205994.9022	2020-09-20_14-13-14_DEEP_TREKKER.mp12	9/20/2020
-20.02	None		ROV11	1192707.0832	205944.8316	2020-09-20_14-13-14_DEEP_TREKKER.mp13	9/20/2020
-20.10	None		ROV11	1192707.4521	205894.7610	2020-09-20_14-13-14_DEEP_TREKKER.mp14	9/20/2020
-19.77	None		ROV11	1192707.8211	205844.6904	2020-09-20_14-13-14_DEEP_TREKKER.mp15	9/20/2020
-20.01	N/A		ROV11	1192708.1900	205794.6199	2020-09-20_14-13-14_DEEP_TREKKER.mp16	9/20/2020
-29.52	N/A		ROV12	1193021.7200	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-9.77	N/A		ROV12	1192971.7200	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-9.71	None		ROV12	1192921.7199	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-9.68	None		ROV12	1192871.7199	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-10.12	None		ROV12	1192821.7199	205052.3799	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-9.59	None		ROV12	1192771.7199	205052.3799	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-10.03	None		ROV12	1192721.7198	205052.3799	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-20.13	Trace		ROV12	1193021.7200	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-19.94	None		ROV12	1193064.5772	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-20.31	None		ROV12	1193107.4343	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-20.33	None		ROV12	1193150.2914	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-19.90	None		ROV12	1193193.1486	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-19.69	None		ROV12	1193236.0057	205052.3801	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-20.46	None		ROV12	1193278.8629	205052.3801	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-30.01	None		ROV12	1193321.7200	205052.3801	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-30.15	N/A		ROV12	1193021.7200	205052.3800	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-29.68	N/A		ROV12	1193021.7200	205095.2372	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-30.22	None		ROV12	1193021.7200	205138.0943	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-29.96	None		ROV12	1193021.7199	205180.9515	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-30.10	None		ROV12	1193021.7199	205223.8086	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-29.81	None		ROV12	1193021.7199	205266.6658	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-9.96	None		ROV12	1193021.7199	205309.5229	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-10.28	None		ROV12	1193021.7198	205352.3801	2020-09-20_09-40-01_DEEP_TREKKER.mp4	9/20/2020
-10.24	N/A		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020
-10.23	None		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020
-9.42	None		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020
-9.60	None		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020
-19.88	None		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020
-20.03	None		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020
-20.03	None		ROV12	1193021.7200	205052.3800	2020-09-20_10-10-04_DEEP_TREKKER.mp4	9/20/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-35.79	None		ROV13	1193311.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.82	None		ROV13	1193281.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.69	None		ROV13	1193251.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.83	N/A		ROV13	1193221.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.53	None		ROV13	1193191.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.57	None		ROV13	1193161.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.47	None		ROV13	1193131.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.62	None		ROV13	1193101.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.73	None		ROV13	1193071.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.71	None		ROV13	1193041.9459	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.69	N/A		ROV13	1193011.9459	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.79	N/A		ROV13	1193311.9458	204369.5712	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.87	None		ROV13	1193349.4458	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.95	None		ROV13	1193386.9457	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-36.04	None		ROV13	1193424.4457	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-36.12	None		ROV13	1193461.9457	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-36.11	None		ROV13	1193499.4457	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-36.10	None		ROV13	1193536.9456	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-36.12	None		ROV13	1193574.4456	204369.5713	2020-09-19_13-42-01_DEEP_TREKKER.mp4	9/19/2020
-35.79	None		ROV13	1193311.9458	204369.5712	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-36.11	None		ROV13	1193311.9458	204444.5712	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-36.35	None		ROV13	1193311.9457	204519.5712	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-36.61	None		ROV13	1193311.9457	204594.5711	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-36.94	None		ROV13	1193311.9456	204669.5711	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-35.79	None		ROV13	1193311.9458	204369.5712	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-35.43	None		ROV13	1193311.9458	204294.5713	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-35.15	None		ROV13	1193311.9458	204219.5713	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-34.59	None		ROV13	1193311.9458	204144.5713	2020-09-19_14-11-49_DEEP_TREKKER.mp4	9/19/2020
-19.77	N/A		ROV14	1194251.6200	204178.2600	2020-09-22_14-20-12_DEEP_TREKKER.mp4	9/22/2020
-10.49	N/A		ROV14	1194229.8116	204177.9652	2020-09-22_14-20-12_DEEP_TREKKER.mp4	9/22/2020
-9.86	N/A		ROV14	1194208.0033	204177.6703	2020-09-22_14-20-12_DEEP_TREKKER.mp5	9/22/2020
-10.08	N/A		ROV14	1194186.1949	204177.3754	2020-09-22_14-20-12_DEEP_TREKKER.mp6	9/22/2020
-10.11	N/A		ROV14	1194164.3865	204177.0806	2020-09-22_14-20-12_DEEP_TREKKER.mp7	9/22/2020
-42.54	N/A		ROV14	1194142.5782	204176.7858	2020-09-22_14-20-12_DEEP_TREKKER.mp8	9/22/2020
-42.42	None		ROV14	1194120.7698	204176.4909	2020-09-22_14-20-12_DEEP_TREKKER.mp9	9/22/2020
-41.11	None		ROV14	1194098.9614	204176.1961	2020-09-22_14-20-12_DEEP_TREKKER.mp10	9/22/2020
-42.01	None		ROV14	1194077.1531	204175.9012	2020-09-22_14-20-12_DEEP_TREKKER.mp11	9/22/2020
-41.30	None		ROV14	1194055.3447	204175.6064	2020-09-22_14-20-12_DEEP_TREKKER.mp12	9/22/2020
-42.57	None		ROV14	1194033.5363	204175.3115	2020-09-22_14-20-12_DEEP_TREKKER.mp13	9/22/2020
-42.39	None		ROV14	1194011.7280	204175.0167	2020-09-22_14-20-12_DEEP_TREKKER.mp14	9/22/2020
-42.09	None		ROV14	1193989.9196	204174.7218	2020-09-22_14-20-12_DEEP_TREKKER.mp15	9/22/2020
-41.82	None		ROV14	1193968.1112	204174.4270	2020-09-22_14-20-12_DEEP_TREKKER.mp16	9/22/2020
-41.87	None		ROV14	1193946.3029	204174.1321	2020-09-22_14-20-12_DEEP_TREKKER.mp17	9/22/2020
-41.04	N/A		ROV14	1194251.6200	204178.2600	2020-09-22_14-20-12_DEEP_TREKKER.mp20	9/22/2020
-39.88	N/A		ROV14	1194274.6967	204178.3157	2020-09-22_14-20-12_DEEP_TREKKER.mp21	9/22/2020
-38.89	None		ROV14	1194297.7733	204178.3714	2020-09-22_14-20-12_DEEP_TREKKER.mp22	9/22/2020
-36.72	None		ROV14	1194320.8500	204178.4270	2020-09-22_14-20-12_DEEP_TREKKER.mp23	9/22/2020
-28.13	None		ROV14	1194343.9267	204178.4827	2020-09-22_14-20-12_DEEP_TREKKER.mp24	9/22/2020
-42.56	None		ROV14	1194367.0034	204178.5384	2020-09-22_14-20-12_DEEP_TREKKER.mp25	9/22/2020
-45.28	None		ROV14	1194390.0801	204178.5941	2020-09-22_14-20-12_DEEP_TREKKER.mp26	9/22/2020
-46.49	None		ROV14	1194413.1567	204178.6498	2020-09-22_14-20-12_DEEP_TREKKER.mp27	9/22/2020
-46.70	None		ROV14	1194436.2334	204178.7055	2020-09-22_14-20-12_DEEP_TREKKER.mp28	9/22/2020
-46.45	None		ROV14	1194459.3101	204178.7611	2020-09-22_14-20-12_DEEP_TREKKER.mp29	9/22/2020
-45.58	Trace		ROV14	1194482.3868	204178.8168	2020-09-22_14-20-12_DEEP_TREKKER.mp30	9/22/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-44.80	Trace		ROV14	1194505.4634	204178.8725	2020-09-22_14-20-12_DEEP_TREKKER.mp31	9/22/2020
-44.14	N/A		ROV14	1194528.5401	204178.9282	2020-09-22_14-20-12_DEEP_TREKKER.mp32	9/22/2020
-43.33	N/A		ROV14	1194551.6168	204178.9839	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-45.28	N/A		ROV14	1194251.6200	204178.2600	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-49.74	N/A		ROV14	1194251.6200	204208.2600	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-50.20	None		ROV14	1194251.6200	204238.2600	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-50.52	None		ROV14	1194251.6200	204268.2600	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-49.44	N/A		ROV14	1194251.6200	204298.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-48.70	None		ROV14	1194251.6200	204328.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-44.01	None		ROV14	1194251.6200	204358.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-45.28	None		ROV14	1194251.6200	204388.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-41.89	None		ROV14	1194251.6200	204418.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-41.20	None		ROV14	1194251.6200	204448.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-41.63	N/A		ROV14	1194251.6199	204478.2601	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-42.10	N/A		ROV14	1194251.6200	204178.2600	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-40.67	None		ROV14	1194251.3378	204161.3159	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-33.26	None		ROV14	1194251.0557	204144.3719	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-29.26	None		ROV14	1194250.7735	204127.4278	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-31.10	None		ROV14	1194250.4913	204110.4838	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-32.08	None		ROV14	1194250.2091	204093.5397	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-45.28	Trace		ROV14	1194249.9270	204076.5956	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-45.99	None		ROV14	1194249.6448	204059.6516	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-46.07	None		ROV14	1194249.3626	204042.7075	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-46.78	None		ROV14	1194249.0805	204025.7635	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-46.90	Trace		ROV14	1194248.7983	204008.8194	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-47.38	None		ROV14	1194248.5161	203991.8753	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-47.64	Trace		ROV14	1194248.2340	203974.9313	2020-09-22_14-50-15_DEEP_TREKKER.mp4	9/22/2020
-48.31	None		ROV14	1194248.2340	203974.9313	2020-09-22_15-20-17_DEEP_TREKKER.mp4	9/22/2020
-48.78	None		ROV14	1194248.6329	203954.9344	2020-09-22_15-20-17_DEEP_TREKKER.mp4	9/22/2020
-30.12	None		ROV14	1194249.0318	203934.9376	2020-09-22_15-20-17_DEEP_TREKKER.mp4	9/22/2020
-30.40	Trace		ROV14	1194249.4307	203914.9408	2020-09-22_15-20-17_DEEP_TREKKER.mp4	9/22/2020
-30.24	None		ROV14	1194249.8296	203894.9439	2020-09-22_15-20-17_DEEP_TREKKER.mp4	9/22/2020
-29.83	None		ROV14	1194250.2285	203874.9471	2020-09-22_15-20-17_DEEP_TREKKER.mp4	9/22/2020
-29.85	N/A		ROV15	1193962.9600	204821.8200	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.08	None		ROV15	1193925.4612	204822.1211	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.34	None		ROV15	1193887.9625	204822.4223	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-29.70	None		ROV15	1193850.4637	204822.7234	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.29	None		ROV15	1193812.9650	204823.0245	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.32	Trace		ROV15	1193775.4662	204823.3257	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.06	None		ROV15	1193737.9675	204823.6268	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.12	None		ROV15	1193700.4687	204823.9279	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-30.20	None		ROV15	1193662.9700	204824.2291	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-29.98	None		ROV15	1193962.9600	204821.8200	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-29.95	None		ROV15	1193993.0130	204821.7768	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-29.90	None		ROV15	1194023.0661	204821.7336	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-19.93	None		ROV15	1194053.1191	204821.6904	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-19.67	None		ROV15	1194083.1722	204821.6472	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-20.06	None		ROV15	1194113.2252	204821.6040	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-20.33	None		ROV15	1194143.2783	204821.5608	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-20.04	None		ROV15	1194173.3313	204821.5176	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-20.39	Trace		ROV15	1194203.3844	204821.4744	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-20.14	N/A		ROV15	1194233.4374	204821.4312	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-19.64	N/A		ROV15	1194263.4904	204821.3880	2020-09-22_15-51-32_DEEP_TREKKER.mp4	9/22/2020
-20.32	None		ROV15	1193962.9600	204821.8200	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-19.51	None		ROV15	1193962.9600	204859.3200	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-20.35	None		ROV15	1193962.9600	204896.8200	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.10	None		ROV15	1193962.9600	204934.3200	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.45	None		ROV15	1193962.9600	204971.8199	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.33	None		ROV15	1193962.9601	205009.3199	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-29.70	None		ROV15	1193962.9601	205046.8199	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.35	None		ROV15	1193962.9601	205084.3199	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.22	None		ROV15	1193962.9601	205121.8199	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.20	N/A		ROV15	1193962.9600	204821.8200	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-29.78	None		ROV15	1193962.1571	204771.8266	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.43	None		ROV15	1193961.3542	204721.8332	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-30.12	None		ROV15	1193960.5513	204671.8397	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-40.07	None		ROV15	1193959.7485	204621.8463	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-40.56	Trace		ROV15	1193958.9456	204571.8529	2020-09-22_16-37-01_DEEP_TREKKER.mp4	9/22/2020
-29.82	None		ROV16	1193754.1200	205427.2200	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-29.75	None		ROV16	1193704.1202	205427.2889	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-30.10	None		ROV16	1193654.1203	205427.3577	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-29.92	None		ROV16	1193604.1205	205427.4266	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-10.05	None		ROV16	1193554.1206	205427.4954	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-8.95	None		ROV16	1193504.1208	205427.5643	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-9.90	None		ROV16	1193454.1210	205427.6332	2020-09-20_16-10-43_DEEP_TREKKER.mp4	9/20/2020
-19.79	None		ROV17	1193542.1400	206150.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-20.25	None		ROV17	1193576.9100	206150.4097	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-20.03	None		ROV17	1193611.6801	206150.5494	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.90	None		ROV17	1193646.4501	206150.6891	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-10.01	None		ROV17	1193681.2201	206150.8288	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.84	None		ROV17	1193715.9901	206150.9685	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-10.09	None		ROV17	1193750.7602	206151.1083	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.86	None		ROV17	1193785.5302	206151.2480	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.94	None		ROV17	1193820.3002	206151.3877	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.98	None		ROV17	1193542.1400	206150.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.76	None		ROV17	1193542.1400	206187.7700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-10.15	None		ROV17	1193542.1400	206225.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-10.08	None		ROV17	1193542.1400	206262.7700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-10.24	None		ROV17	1193542.1400	206300.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-9.67	None		ROV17	1193542.1400	206337.7700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-19.81	None		ROV17	1193542.1401	206375.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-19.93	None		ROV17	1193542.1401	206412.7700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-20.25	None		ROV17	1193542.1401	206450.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-19.99	None		ROV17	1193542.1400	206150.2700	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-19.80	None		ROV17	1193542.3312	206074.4400	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-19.90	None		ROV17	1193542.5224	205998.6099	2020-09-20_14-57-45_DEEP_TREKKER.mp4	9/20/2020
-20.11	None		ROV17	1193542.5224	205998.6099	2020-09-20_15-27-47_DEEP_TREKKER.mp4	9/20/2020
-19.90	None		ROV17	1193544.0408	205949.1769	2020-09-20_15-27-47_DEEP_TREKKER.mp4	9/20/2020
-19.98	None		ROV17	1193545.5592	205899.7438	2020-09-20_15-27-47_DEEP_TREKKER.mp4	9/20/2020
-19.93	None		ROV17	1193547.0776	205850.3108	2020-09-20_15-27-47_DEEP_TREKKER.mp4	9/20/2020
-40.53	None		ROV18	1192833.7500	207617.6200	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.30	None		ROV18	1192794.5138	207618.1187	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.64	None		ROV18	1192755.2776	207618.6173	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-33.35	N/A		ROV18	1192716.0414	207619.1160	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.07	None		ROV18	1192676.8053	207619.6147	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-46.29	N/A		ROV18	1192637.5691	207620.1133	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-47.50	N/A		ROV18	1192833.7500	207617.6200	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-49.84	N/A		ROV18	1192883.7495	207617.6311	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
No bathymetric coverage	N/A		ROV18	1192933.7490	207617.6422	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
No bathymetric coverage	None		ROV18	1192983.7485	207617.6533	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
No bathymetric coverage	N/A		ROV18	1193033.7480	207617.6643	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.07	N/A		ROV18	1193083.7475	207617.6754	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.96	N/A		ROV18	1193133.7470	207617.6865	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.97	N/A		ROV18	1192833.7500	207617.6200	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.02	N/A		ROV18	1192833.5058	207655.3666	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.50	None		ROV18	1192833.2616	207693.1131	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.71	None		ROV18	1192833.0174	207730.8597	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.77	None		ROV18	1192832.7733	207768.6062	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.50	None		ROV18	1192832.5291	207806.3528	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-39.30	None		ROV18	1192832.2849	207844.0994	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.07	None		ROV18	1192832.0407	207881.8459	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.25	Trace		ROV18	1192831.7965	207919.5925	2020-09-23_12-31-39_DEEP_TREKKER.mp4	9/23/2020
-40.72	N/A		ROV18	1192833.7500	207617.6200	2020-09-23_13-01-41_DEEP_TREKKER.mp4	9/23/2020
-41.20	None		ROV18	1192834.1478	207567.3990	2020-09-23_13-01-41_DEEP_TREKKER.mp4	9/23/2020
-41.41	None		ROV18	1192834.5456	207517.1780	2020-09-23_13-01-41_DEEP_TREKKER.mp4	9/23/2020
-40.91	None		ROV18	1192834.9434	207466.9569	2020-09-23_13-01-41_DEEP_TREKKER.mp4	9/23/2020
-39.74	None		ROV18	1192835.3412	207416.7359	2020-09-23_13-01-41_DEEP_TREKKER.mp4	9/23/2020
-40.32	None		ROV18	1192835.7390	207366.5149	2020-09-23_13-01-41_DEEP_TREKKER.mp4	9/23/2020
-43.40	N/A	YES	ROV19 East	1193950.4400	207113.9600	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-43.39	None	YES	ROV19 East	1193997.4083	207113.0567	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-43.51	None	YES	ROV19 East	1194044.3767	207112.1533	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-42.99	None	YES	ROV19 East	1194091.3450	207111.2500	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-42.40	None	YES	ROV19 East	1194138.3133	207110.3467	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-42.40	None	YES	ROV19 East	1194185.2817	207109.4433	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-42.37	None	YES	ROV19 East	1194232.2500	207108.5400	2020-09-28_13-28-34_DEEP_TREKKER.mp4	9/28/2020
-37.67	N/A	YES	ROV19 North	1193950.4400	207113.9600	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-37.92	None	YES	ROV19 North	1193950.5340	207143.0950	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-38.26	None	YES	ROV19 North	1193950.6280	207172.2300	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.24	None	YES	ROV19 North	1193950.7220	207201.3650	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.39	None	YES	ROV19 North	1193950.8160	207230.5000	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.66	None	YES	ROV19 North	1193950.9100	207259.6350	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.94	None	YES	ROV19 North	1193951.0040	207288.7700	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.93	None	YES	ROV19 North	1193951.0980	207317.9050	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.98	Trace	YES	ROV19 North	1193951.1920	207347.0400	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.99	None	YES	ROV19 North	1193951.2860	207376.1750	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-39.98	None	YES	ROV19 North	1193951.3800	207405.3100	2020-09-28_12-59-55_DEEP_TREKKER.mp4	9/28/2020
-40.11	None	YES	ROV19 South	1193950.4400	207113.9600	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-40.20	None	YES	ROV19 South	1193951.2583	207066.9067	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-40.12	Trace	YES	ROV19 South	1193952.0767	207019.8533	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-40.20	None	YES	ROV19 South	1193952.8950	206972.8000	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-40.27	None	YES	ROV19 South	1193953.7133	206925.7467	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-40.55	None	YES	ROV19 South	1193954.5317	206878.6933	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-43.56	None	YES	ROV19 South	1193955.3500	206831.6400	2020-09-28_13-17-13_DEEP_TREKKER.mp4	9/28/2020
-42.04	N/A	YES	ROV19 west side only	1193952.9100	207151.4300	2020-09-29_10-56-13_DEEP_TREKKER.mp4	9/29/2020
-42.69	None	YES	ROV19 west side only	1193903.9150	207147.0850	2020-09-29_10-56-13_DEEP_TREKKER.mp4	9/29/2020
-43.44	Trace	YES	ROV19 west side only	1193854.9200	207142.7400	2020-09-29_10-56-13_DEEP_TREKKER.mp4	9/29/2020
-43.50	Low	YES	ROV19 west side only	1193805.9250	207138.3950	2020-09-29_10-56-13_DEEP_TREKKER.mp4	9/29/2020
-43.83	Medium	YES	ROV19 west side only	1193756.9300	207134.0500	2020-09-29_10-56-13_DEEP_TREKKER.mp4	9/29/2020
-43.49	N/A		ROV20 west to east	1194021.7000	206238.6500	20200925_141422A.mp4	9/25/2020
-43.29	None		ROV20 west to east	1194149.2527	206284.7348	20200925_141422A.mp4	9/25/2020
-43.02	N/A		ROV20 west to east	1194276.8054	206330.8196	20200925_141422A.mp4	9/25/2020
-42.93	None		ROV20 west to east	1194404.3581	206376.9044	20200925_141422A.mp4	9/25/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-29.91	None		ROV20 west to east	1194531.9108	206422.9892	20200925_141422A.mp4	9/25/2020
-30.17	None		ROV20 west to east	1194659.4635	206469.0741	20200925_141422A.mp4	9/25/2020
-30.21	None		ROV20 west to east	1194787.0162	206515.1589	20200925_141422A.mp4	9/25/2020
-29.90	None		ROV20 west to east	1194917.3145	206552.1534	20200925_141422A.mp4	9/25/2020
-30.13	None		ROV20 west to east	1195049.0522	206584.3817	20200925_141422A.mp4	9/25/2020
-32.18	N/A		ROV21	1194657.0100	205459.3900	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-33.88	None		ROV21	1194618.7800	205455.5675	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-35.01	None		ROV21	1194580.5500	205451.7450	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-35.18	None		ROV21	1194542.3200	205447.9225	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-35.61	None		ROV21	1194504.0900	205444.1000	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-36.06	None		ROV21	1194465.8600	205440.2775	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-36.78	None		ROV21	1194427.6300	205436.4550	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-37.14	None		ROV21	1194389.4000	205432.6325	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-42.94	None		ROV21	1194351.1700	205428.8100	2020-09-30_08-17-55_DEEP_TREKKER.mp4	9/30/2020
-43.62	N/A		ROV21	1194646.8100	205447.5000	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-44.63	None		ROV21	1194682.9150	205459.1812	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-44.56	None		ROV21	1194719.0200	205470.8625	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-46.10	Trace		ROV21	1194755.1250	205482.5438	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-45.34	Trace		ROV21	1194791.2300	205494.2250	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-41.43	Trace		ROV21	1194827.3350	205505.9063	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-41.26	Trace		ROV21	1194863.4400	205517.5875	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-41.28	None		ROV21	1194899.5450	205529.2687	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-41.45	None		ROV21	1194935.6500	205540.9500	2020-09-30_08-29-44_DEEP_TREKKER.mp4	9/30/2020
-19.53	None		ROV21 south to north	1194516.5233	206139.1717	20200925_095713A.mp4	9/25/2020
-19.59	None		ROV21 south to north	1194497.0562	206235.4792	20200925_095713A.mp4	9/25/2020
-19.51	None		ROV21 south to north	1194476.6637	206332.0241	20200925_095713A.mp4	9/25/2020
-20.58	None		ROV21 south to north	1194448.2268	206426.4662	20200925_095713A.mp4	9/25/2020
-19.89	None		ROV21 south to north	1194420.2298	206521.0116	20200925_095713A.mp4	9/25/2020
-30.07	None		ROV22 east to west	1195230.4900	204715.5300	20200925_160138A.mp4	9/25/2020
-29.88	None		ROV22 east to west	1195127.7805	204713.3740	20200925_160138A.mp4	9/25/2020
-30.47	None		ROV22 east to west	1195025.0710	204711.2181	20200925_160138A.mp4	9/25/2020
-29.91	None		ROV22 east to west	1194923.0714	204722.4365	20200925_160138A.mp4	9/25/2020
-29.70	None		ROV22 east to west	1194821.1671	204735.4522	20200925_160138A.mp4	9/25/2020
-30.02	None		ROV22 east to west	1194722.5048	204717.3525	20200925_160138A.mp4	9/25/2020
-30.26	None		ROV22 east to west	1194625.7014	204751.7470	20200925_160138A.mp4	9/25/2020
-29.76	None		ROV22 east to west	1194523.3705	204749.7553	20200925_160138A.mp4	9/25/2020
-9.32	N/A		ROV22 south to north	1194862.2766	204423.5807	20200925_093908A.mp4	9/25/2020
-9.55	N/A		ROV22 south to north	1194852.1548	204521.6611	20200925_093908A.mp4	9/25/2020
-9.54	None		ROV22 south to north	1194837.0134	204618.0586	20200925_093908A.mp4	9/25/2020
-11.43	None		ROV22 south to north	1194786.4239	204702.7786	20200925_093908A.mp4	9/25/2020
-8.89	None		ROV22 south to north	1194730.0066	204783.6390	20200925_093908A.mp4	9/25/2020
-10.64	None		ROV22 south to north	1194692.7157	204874.4235	20200925_093908A.mp4	9/25/2020
-10.66	None		ROV22 south to north	1194690.2137	204972.8997	20200925_093908A.mp4	9/25/2020
-10.01	None		ROV22 south to north	1194686.5481	205071.4230	20200925_093908A.mp4	9/25/2020
-20.07	None		ROV22 south to north	1194679.7801	205169.8657	20200925_093908A.mp4	9/25/2020
-20.05	None		ROV22 south to north	1194665.4384	205267.1272	20200925_093908A.mp4	9/25/2020
-21.64	None		ROV22 south to north	1194650.5552	205364.6734	20200925_093908A.mp4	9/25/2020
-19.49	None		ROV22 south to north	1194644.2929	205463.0145	20200925_093908A.mp4	9/25/2020
-20.38	None		ROV22 south to north	1194640.2249	205561.6057	20200925_093908A.mp4	9/25/2020
-18.68	None		ROV22 south to north	1194629.1153	205659.4857	20200925_093908A.mp4	9/25/2020
-19.30	None		ROV22 south to north	1194613.9070	205756.9817	20200925_093908A.mp4	9/25/2020
-19.21	None		ROV22 south to north	1194593.3240	205853.2825	20200925_093908A.mp4	9/25/2020
-19.54	None		ROV22 south to north	1194567.7238	205948.5789	20200925_093908A.mp4	9/25/2020
-19.72	None		ROV22 south to north	1194542.1235	206043.8753	20200925_093908A.mp4	9/25/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-39.28	None		ROV23 east to west	1196004.2200	205553.8200	20200925_155141A.mp4	9/25/2020
-39.40	Trace		ROV23 east to west	1195883.9734	205480.1329	20200925_155141A.mp4	9/25/2020
-39.49	Trace		ROV23 east to west	1195744.9872	205460.8219	20200925_155141A.mp4	9/25/2020
-38.97	Trace		ROV23 east to west	1195607.1652	205431.0266	20200925_155141A.mp4	9/25/2020
-39.12	Trace		ROV23 east to west	1195468.0775	205407.9750	20200925_155141A.mp4	9/25/2020
-43.31	Trace		ROV23 east to west	1195341.6681	205356.3307	20200925_155141A.mp4	9/25/2020
-20.15	N/A		ROV24	1195267.3700	206197.1600	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-19.78	None		ROV24	1195234.5211	206192.0633	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-20.10	None		ROV24	1195201.6722	206186.9667	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-20.01	None		ROV24	1195168.8233	206181.8700	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-20.07	None		ROV24	1195135.9744	206176.7733	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-20.05	None		ROV24	1195103.1256	206171.6767	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-19.95	None		ROV24	1195070.2767	206166.5800	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-20.08	None		ROV24	1195037.4278	206161.4833	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-19.88	N/A		ROV24	1195004.5789	206156.3867	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-20.07	N/A		ROV24	1194971.7300	206151.2900	2020-09-30_08-54-16_DEEP_TREKKER.mp4	9/30/2020
-19.96	None		ROV24	1195270.7700	206200.5600	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-19.86	None		ROV24	1195320.6100	206202.5433	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-20.69	None		ROV24	1195370.4500	206204.5267	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-9.67	None		ROV24	1195420.2900	206206.5100	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-9.63	None		ROV24	1195470.1300	206208.4933	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-9.83	None		ROV24	1195519.9700	206210.4767	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-10.13	None		ROV24	1195569.8100	206212.4600	2020-09-30_09-04-39_DEEP_TREKKER.mp4	9/30/2020
-29.57	None		ROV24 north to south	1195470.3289	205690.8340	20200925_102607A.mp4	9/25/2020
-30.14	Trace		ROV24 north to south	1195529.1772	205604.7631	20200925_102607A.mp4	9/25/2020
-30.81	Trace		ROV24 north to south	1195588.0256	205518.6921	20200925_102607A.mp4	9/25/2020
-30.46	Trace		ROV24 north to south	1195647.2487	205432.8987	20200925_102607A.mp4	9/25/2020
-29.44	None		ROV24 north to south	1195712.4225	205351.5125	20200925_102607A.mp4	9/25/2020
-30.74	Trace		ROV24 north to south	1195777.5962	205270.1262	20200925_102607A.mp4	9/25/2020
-20.06	None		ROV25 north to south	1194956.6000	207325.5700	20200925_100802A.mp4	9/25/2020
-20.25	None		ROV25 north to south	1194942.4200	207222.2730	20200925_100802A.mp4	9/25/2020
-20.19	None		ROV25 north to south	1194928.2401	207118.9760	20200925_100802A.mp4	9/25/2020
-20.05	None		ROV25 north to south	1194946.3940	207018.1951	20200925_100802A.mp4	9/25/2020
-19.26	None		ROV25 north to south	1194997.3937	206931.2376	20200925_100802A.mp4	9/25/2020
-19.53	None		ROV25 north to south	1195072.8891	206859.3225	20200925_100802A.mp4	9/25/2020
-19.94	None		ROV25 north to south	1195118.8758	206767.2259	20200925_100802A.mp4	9/25/2020
-19.98	None		ROV25 north to south	1195158.5179	206670.7903	20200925_100802A.mp4	9/25/2020
-19.52	None		ROV25 north to south	1195186.6609	206571.3025	20200925_100802A.mp4	9/25/2020
-30.17	None		ROV25 north to south	1195200.0597	206467.9013	20200925_100802A.mp4	9/25/2020
-29.99	None		ROV25 north to south	1195213.4584	206364.5000	20200925_100802A.mp4	9/25/2020
-30.17	None		ROV25 north to south	1195242.0243	206264.2890	20200925_100802A.mp4	9/25/2020
-29.85	None		ROV25 north to south	1195271.4152	206164.2514	20200925_100802A.mp4	9/25/2020
-29.83	None		ROV25 north to south	1195296.2801	206063.0028	20200925_100802A.mp4	9/25/2020
-29.62	None		ROV25 north to south	1195353.8258	205977.6506	20200925_100802A.mp4	9/25/2020
-29.91	Trace		ROV25 north to south	1195400.7795	205886.4179	20200925_100802A.mp4	9/25/2020
-30.06	None		ROV25 north to south	1195432.2366	205787.0107	20200925_100802A.mp4	9/25/2020
-30.83	Trace		ROV25 north to south	1195470.3289	205690.8340	20200925_100802A.mp4	9/25/2020
-46.29	N/A	YES	ROV26	1194880.8700	208017.8900	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-46.08	None	YES	ROV26	1194840.4443	208015.5443	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-46.51	None	YES	ROV26	1194800.0186	208013.1986	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-46.55	None	YES	ROV26	1194759.5929	208010.8529	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-47.17	None	YES	ROV26	1194719.1671	208008.5071	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-48.21	None	YES	ROV26	1194678.7414	208006.1614	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-47.73	None	YES	ROV26	1194638.3157	208003.8157	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-47.55	None	YES	ROV26	1194597.8900	208001.4700	2020-09-28_11-48-23_DEEP_TREKKER.mp4	9/28/2020
-46.23	N/A	YES	ROV26	1194880.8700	208017.8900	2020-09-28_12-03-38_DEEP_TREKKER.mp4	9/28/2020
-46.01	None	YES	ROV26	1194931.8540	208025.2060	2020-09-28_12-03-38_DEEP_TREKKER.mp4	9/28/2020
-47.42	None	YES	ROV26	1194982.8380	208032.5220	2020-09-28_12-03-38_DEEP_TREKKER.mp4	9/28/2020
-48.29	None	YES	ROV26	1195033.8220	208039.8380	2020-09-28_12-03-38_DEEP_TREKKER.mp4	9/28/2020
-39.16	None	YES	ROV26	1195084.8060	208047.1540	2020-09-28_12-03-38_DEEP_TREKKER.mp4	9/28/2020
-40.53	None	YES	ROV26	1195135.7900	208054.4700	2020-09-28_12-03-38_DEEP_TREKKER.mp4	9/28/2020
-42.84	N/A	YES	ROV26	1194880.8700	208017.8900	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-45.37	None	YES	ROV26	1194885.1567	208067.0450	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-46.46	None	YES	ROV26	1194889.4433	208116.2000	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-49.16	Trace	YES	ROV26	1194893.7300	208165.3550	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-53.24	None	YES	ROV26	1194898.0167	208214.5100	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-55.36	None	YES	ROV26	1194902.3033	208263.6650	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-55.55	None	YES	ROV26	1194906.5900	208312.8200	2020-09-28_12-15-32_DEEP_TREKKER.mp4	9/28/2020
-54.63	N/A	YES	ROV26	1194880.8700	208017.8900	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-53.75	None	YES	ROV26	1194880.6782	207996.4036	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-53.54	None	YES	ROV26	1194880.4864	207974.9173	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-54.04	None	YES	ROV26	1194880.2946	207953.4309	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-39.16	None	YES	ROV26	1194880.1027	207931.9445	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-38.91	None	YES	ROV26	1194879.9109	207910.4582	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-39.50	None	YES	ROV26	1194879.7191	207888.9718	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-40.20	None	YES	ROV26	1194879.5273	207867.4855	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-40.56	None	YES	ROV26	1194879.3354	207845.9991	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-39.16	None	YES	ROV26	1194879.1436	207824.5127	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-38.89	None	YES	ROV26	1194878.9518	207803.0264	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-37.95	None	YES	ROV26	1194878.7600	207781.5400	2020-09-28_12-25-47_DEEP_TREKKER.mp4	9/28/2020
-29.85	None	YES	ROV27	1195533.0300	208981.7900	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-45.57	None	YES	ROV27	1195514.1817	208976.5300	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-46.46	None	YES	ROV27	1195495.3333	208971.2700	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-47.71	None	YES	ROV27	1195476.4850	208966.0100	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-48.00	None	YES	ROV27	1195457.6367	208960.7500	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-48.77	None	YES	ROV27	1195438.7883	208955.4900	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-48.31	None	YES	ROV27	1195419.9400	208950.2300	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-47.41	None	YES	ROV27	1195401.0917	208944.9700	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-46.67	None	YES	ROV27	1195382.2433	208939.7100	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-46.03	None	YES	ROV27	1195363.3950	208934.4500	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-45.63	None	YES	ROV27	1195344.5467	208929.1900	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-45.90	None	YES	ROV27	1195325.6983	208923.9300	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-46.82	N/A	YES	ROV27	1195306.8500	208918.6700	2020-09-28_10-07-08_DEEP_TREKKER.mp4	9/28/2020
-46.86	N/A	YES	ROV27	1195533.0300	208981.7900	2020-09-28_10-26-07_DEEP_TREKKER.mp4	9/28/2020
-46.82	None	YES	ROV27	1195587.1900	208978.8150	2020-09-28_10-26-07_DEEP_TREKKER.mp4	9/28/2020
-46.40	None	YES	ROV27	1195641.3500	208975.8400	2020-09-28_10-26-07_DEEP_TREKKER.mp4	9/28/2020
-46.68	None	YES	ROV27	1195695.5100	208972.8650	2020-09-28_10-26-07_DEEP_TREKKER.mp4	9/28/2020
-47.38	None	YES	ROV27	1195749.6700	208969.8900	2020-09-28_10-26-07_DEEP_TREKKER.mp4	9/28/2020
-47.31	None	YES	ROV27	1195533.0300	208981.7900	2020-09-28_10-36-12_DEEP_TREKKER.mp4	9/28/2020
-47.09	Trace	YES	ROV27	1195550.9320	209039.7100	2020-09-28_10-36-12_DEEP_TREKKER.mp4	9/28/2020
-47.33	None	YES	ROV27	1195568.8340	209097.6300	2020-09-28_10-36-12_DEEP_TREKKER.mp4	9/28/2020
-48.97	Trace	YES	ROV27	1195586.7360	209155.5500	2020-09-28_10-36-12_DEEP_TREKKER.mp4	9/28/2020
-49.05	None	YES	ROV27	1195604.6380	209213.4700	2020-09-28_10-36-12_DEEP_TREKKER.mp4	9/28/2020
-49.23	None	YES	ROV27	1195622.5400	209271.3900	2020-09-28_10-36-12_DEEP_TREKKER.mp4	9/28/2020
-49.47	N/A	YES	ROV27	1195536.6850	208964.9907	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-50.08	None	YES	ROV27	1195540.3400	208948.1914	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-50.74	None	YES	ROV27	1195543.9950	208931.3921	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-51.58	Trace	YES	ROV27	1195547.6500	208914.5929	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-52.33	Trace	YES	ROV27	1195551.3050	208897.7936	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-53.44	None	YES	ROV27	1195554.9600	208880.9943	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-49.47	Trace	YES	ROV27	1195558.6150	208864.1950	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-49.26	None	YES	ROV27	1195562.2700	208847.3957	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-49.31	None	YES	ROV27	1195565.9250	208830.5964	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-49.72	None	YES	ROV27	1195569.5800	208813.7971	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-48.20	N/A	YES	ROV27	1195573.2350	208796.9979	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-47.78	None	YES	ROV27	1195576.8900	208780.1986	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-46.80	None	YES	ROV27	1195580.5450	208763.3993	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-46.73	None	YES	ROV27	1195584.2000	208746.6000	2020-09-28_10-48-21_DEEP_TREKKER.mp4	9/28/2020
-43.65	N/A		ROV28 east to west	1195117.2635	207061.4699	20200925_135831A.mp4	9/25/2020
-43.76	None		ROV28 east to west	1194999.4364	207030.2854	20200925_135831A.mp4	9/25/2020
-43.51	None		ROV28 east to west	1194876.9624	207030.2915	20200925_135831A.mp4	9/25/2020
-43.68	None		ROV28 east to west	1194768.4005	206974.2187	20200925_135831A.mp4	9/25/2020
-43.65	None		ROV28 east to west	1194778.9100	206863.7300	20200925_135831A.mp4	9/25/2020
-9.96	N/A		ROV29	1195914.0300	206811.3700	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-9.70	None		ROV29	1195884.2450	206810.9100	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-9.62	None		ROV29	1195854.4600	206810.4500	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-9.77	None		ROV29	1195824.6750	206809.9900	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-9.23	None		ROV29	1195794.8900	206809.5300	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-10.01	None		ROV29	1195765.1050	206809.0700	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-10.10	N/A		ROV29	1195735.3200	206808.6100	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-10.29	N/A		ROV29	1195705.5350	206808.1500	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-10.90	N/A		ROV29	1195675.7500	206807.6900	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-10.27	N/A		ROV29	1195645.9650	206807.2300	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-30.07	N/A		ROV29	1195616.1800	206806.7700	2020-09-30_09-28-06_DEEP_TREKKER.mp4	9/30/2020
-30.05	None		ROV29	1195922.0800	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.98	None		ROV29	1195957.8738	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.99	None		ROV29	1195993.6675	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-30.04	None		ROV29	1196029.4612	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.98	None		ROV29	1196065.2550	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.99	None		ROV29	1196101.0488	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.88	None		ROV29	1196136.8425	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.98	None		ROV29	1196172.6363	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-29.97	None		ROV29	1196208.4300	206813.6700	2020-09-30_09-44-08_DEEP_TREKKER.mp4	9/30/2020
-42.02	None		ROV3	1191026.5900	204848.9515	2020-09-19_11-33-41_DEEP_TREKKER.mp4	9/19/2020
-44.24	None		ROV3	1191026.5900	204806.0944	2020-09-19_11-33-41_DEEP_TREKKER.mp4	9/19/2020
-46.07	None		ROV3	1191026.5900	204763.2373	2020-09-19_11-33-41_DEEP_TREKKER.mp4	9/19/2020
-41.92	N/A		ROV30	1196357.1900	206279.4700	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.46	None		ROV30	1196319.7575	206280.2238	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.29	None		ROV30	1196282.3250	206280.9775	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.44	None		ROV30	1196244.8925	206281.7313	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.01	None		ROV30	1196207.4600	206282.4850	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-40.98	None		ROV30	1196170.0275	206283.2387	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.39	None		ROV30	1196132.5950	206283.9925	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.66	None		ROV30	1196095.1625	206284.7463	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.47	None		ROV30	1196057.7300	206285.5000	2020-09-30_10-16-24_DEEP_TREKKER.mp4	9/30/2020
-41.47	N/A		ROV30	1196364.4400	206292.7500	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-41.75	None		ROV30	1196396.7744	206290.0667	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-41.85	Trace		ROV30	1196429.1089	206287.3833	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-41.99	None		ROV30	1196461.4433	206284.7000	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-48.84	Trace		ROV30	1196493.7778	206282.0167	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-48.81	None		ROV30	1196526.1122	206279.3333	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-48.51	Trace		ROV30	1196558.4467	206276.6500	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020

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-48.67	Trace		ROV30	1196590.7811	206273.9667	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-48.58	None		ROV30	1196623.1156	206271.2833	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-48.28	Trace		ROV30	1196655.4500	206268.6000	2020-09-30_10-28-59_DEEP_TREKKER.mp4	9/30/2020
-29.87	None		ROV30 south to north	1195774.3022	207033.3740	20200925_105903A.mp4	9/25/2020
-29.62	None		ROV30 south to north	1195606.0400	207364.3100	20200925_105903A.mp4	9/25/2020
-30.13	None		ROV30 south to north	1195600.7768	207451.5906	20200925_105903A.mp4	9/25/2020
-29.93	None		ROV30 south to north	1195593.8230	207538.7334	20200925_105903A.mp4	9/25/2020
-30.13	None		ROV30 south to north	1195584.8752	207625.7135	20200925_105903A.mp4	9/25/2020
-30.10	None		ROV30 south to north	1195575.9274	207712.6936	20200925_105903A.mp4	9/25/2020
-10.08	None		ROV30 south to north	1195576.6640	207800.1247	20200925_105903A.mp4	9/25/2020
-43.70	None		ROV31 south to north	1196787.7100	205419.7400	20200925_103724A.mp4	9/25/2020
-42.13	Trace		ROV31 south to north	1196769.4556	205506.5222	20200925_103724A.mp4	9/25/2020
-42.02	None		ROV31 south to north	1196751.2013	205593.3043	20200925_103724A.mp4	9/25/2020
-42.29	Trace		ROV31 south to north	1196732.9469	205680.0865	20200925_103724A.mp4	9/25/2020
-41.97	Trace		ROV31 south to north	1196699.4228	205762.1091	20200925_103724A.mp4	9/25/2020
-42.02	None		ROV31 south to north	1196650.6298	205834.6081	20200925_103724A.mp4	9/25/2020
-42.09	None		ROV31 south to north	1196590.7118	205899.9855	20200925_103724A.mp4	9/25/2020
-41.38	None		ROV31 south to north	1196530.7939	205965.3629	20200925_103724A.mp4	9/25/2020
-42.71	None		ROV31 south to north	1196488.1326	206042.4297	20200925_103724A.mp4	9/25/2020
-42.42	None		ROV31 south to north	1196449.6459	206122.3242	20200925_103724A.mp4	9/25/2020
-43.00	None		ROV31 south to north	1196411.1592	206202.2188	20200925_103724A.mp4	9/25/2020
-42.72	None		ROV31 south to north	1196366.4912	206278.7476	20200925_103724A.mp4	9/25/2020
-42.92	None		ROV31 south to north	1196320.2664	206354.4287	20200925_103724A.mp4	9/25/2020
-43.10	None		ROV31 south to north	1196251.7457	206410.6441	20200925_103724A.mp4	9/25/2020
-29.75	None		ROV31 south to north	1196182.9932	206466.6571	20200925_103724A.mp4	9/25/2020
-32.66	None		ROV31 south to north	1196117.3354	206526.2622	20200925_103724A.mp4	9/25/2020
-35.13	None		ROV31 south to north	1196051.7680	206585.9721	20200925_103724A.mp4	9/25/2020
-35.95	None		ROV31 south to north	1195986.2005	206645.6820	20200925_103724A.mp4	9/25/2020
-36.80	N/A		ROV31 south to north	1195938.6252	206719.7066	20200925_103724A.mp4	9/25/2020
-39.14	Low		ROV32 east to west	1198010.2600	205771.4800	20200925_153725A.mp4	9/25/2020
-39.24	Low		ROV32 east to west	1197867.6470	205754.8099	20200925_153725A.mp4	9/25/2020
-39.51	Low		ROV32 east to west	1197724.3747	205760.2031	20200925_153725A.mp4	9/25/2020
-39.84	Low		ROV32 east to west	1197580.9869	205767.5927	20200925_153725A.mp4	9/25/2020
-40.06	Low		ROV32 east to west	1197437.9916	205768.0828	20200925_153725A.mp4	9/25/2020
-40.35	Low		ROV32 east to west	1197298.9885	205732.1036	20200925_153725A.mp4	9/25/2020
-40.21	Low		ROV32 east to west	1197156.1887	205717.2875	20200925_153725A.mp4	9/25/2020
-40.32	Low		ROV32 east to west	1197013.2806	205703.4472	20200925_153725A.mp4	9/25/2020
-40.32	Trace		ROV32 east to west	1196870.1236	205692.3822	20200925_153725A.mp4	9/25/2020
-39.23	Low		ROV32 east to west	1196727.4002	205677.0424	20200925_153725A.mp4	9/25/2020
-39.11	Trace		ROV32 east to west	1196585.1953	205657.3620	20200925_153725A.mp4	9/25/2020
-39.11	Low		ROV32 east to west	1196443.5376	205633.9210	20200925_153725A.mp4	9/25/2020
-39.35	Low		ROV32 east to west	1196301.8800	205610.4800	20200925_153725A.mp4	9/25/2020
-37.71	Trace		ROV32 south to north	1197582.3300	205523.4800	20200925_120528A.mp4	9/25/2020
-38.88	None		ROV32 south to north	1197599.8913	205631.4484	20200925_120528A.mp4	9/25/2020
-40.35	Trace		ROV32 south to north	1197617.4527	205739.4169	20200925_120528A.mp4	9/25/2020
-41.35	Low		ROV32 south to north	1197635.0140	205847.3853	20200925_120528A.mp4	9/25/2020
-42.64	Trace		ROV32 south to north	1197614.9552	205954.1682	20200925_120528A.mp4	9/25/2020
-42.54	Trace		ROV32 south to north	1197590.6307	206060.8167	20200925_120528A.mp4	9/25/2020
-43.35	Trace		ROV32 south to north	1197538.8507	206156.9588	20200925_120528A.mp4	9/25/2020
-43.57	Trace		ROV32 south to north	1197490.0171	206253.7862	20200925_120528A.mp4	9/25/2020
-43.91	Trace		ROV32 south to north	1197485.9759	206363.0989	20200925_120528A.mp4	9/25/2020
-45.45	Trace		ROV32 south to north	1197481.9347	206472.4115	20200925_120528A.mp4	9/25/2020
-46.75	Trace		ROV32 south to north	1197483.6194	206581.7821	20200925_120528A.mp4	9/25/2020
-47.91	None		ROV32 south to north	1197485.4461	206691.1542	20200925_120528A.mp4	9/25/2020

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-48.11	Trace		ROV32 south to north	1197487.2728	206800.5262	20200925_120528A.mp4	9/25/2020
-48.74	Trace		ROV32 south to north	1197488.3302	206909.8391	20200925_120528A.mp4	9/25/2020
-30.12	None		ROV32 south to north	1197469.7952	207017.6447	20200925_120528A.mp4	9/25/2020
-30.15	None		ROV32 south to north	1197451.2602	207125.4502	20200925_120528A.mp4	9/25/2020
-29.93	None		ROV32 south to north	1197432.7252	207233.2558	20200925_120528A.mp4	9/25/2020
-29.92	None		ROV32 south to north	1197377.8625	207321.4010	20200925_120528A.mp4	9/25/2020
-29.91	None		ROV32 south to north	1197297.7467	207395.8795	20200925_120528A.mp4	9/25/2020
-48.76	N/A		ROV33	1197438.5100	206512.5900	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-49.02	Trace		ROV33	1197389.3817	206507.4150	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-48.78	Trace		ROV33	1197340.2533	206502.2400	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-48.55	Trace		ROV33	1197291.1250	206497.0650	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-48.17	Low		ROV33	1197241.9967	206491.8900	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-48.98	Trace		ROV33	1197192.8683	206486.7150	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-49.44	Trace		ROV33	1197143.7400	206481.5400	2020-09-30_11-43-38_DEEP_TREKKER.mp4	9/30/2020
-49.14	N/A		ROV33	1197435.8400	206488.5500	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-48.86	Low		ROV33	1197479.0714	206494.7257	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-48.65	Trace		ROV33	1197522.3029	206500.9014	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-47.84	Trace		ROV33	1197565.5343	206507.0771	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-47.11	Trace		ROV33	1197608.7657	206513.2529	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-46.66	Trace		ROV33	1197651.9971	206519.4286	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-46.53	Trace		ROV33	1197695.2286	206525.6043	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-46.77	Trace		ROV33	1197738.4600	206531.7800	2020-09-30_11-56-02_DEEP_TREKKER.mp4	9/30/2020
-9.89	None		ROV33 south to north	1197297.7467	207395.8795	20200925_122332A.mp4	9/25/2020
-30.25	None		ROV33 south to north	1197221.4380	207473.6322	20200925_122332A.mp4	9/25/2020
-49.88	None		ROV33 south to north	1197173.0764	207565.9887	20200925_122332A.mp4	9/25/2020
-48.75	None		ROV33 south to north	1197205.4431	207670.4779	20200925_122332A.mp4	9/25/2020
-43.38	None		ROV33 south to north	1197237.8098	207774.9670	20200925_122332A.mp4	9/25/2020
-43.02	None		ROV33 south to north	1197270.1765	207879.4562	20200925_122332A.mp4	9/25/2020
-42.63	None		ROV33 south to north	1197306.1047	207982.7706	20200925_122332A.mp4	9/25/2020
-41.59	None		ROV33 south to north	1197342.2572	208086.0110	20200925_122332A.mp4	9/25/2020
-41.02	None		ROV33 south to north	1197378.4096	208189.2514	20200925_122332A.mp4	9/25/2020
-38.52	None		ROV33 south to north	1197414.5620	208292.4919	20200925_122332A.mp4	9/25/2020
-30.54	None		ROV33 south to north	1197434.4572	208400.0515	20200925_122332A.mp4	9/25/2020
-30.03	None		ROV33 south to north	1197454.3136	208507.6216	20200925_122332A.mp4	9/25/2020
-29.93	None		ROV33 south to north	1197473.0757	208615.3502	20200925_122332A.mp4	9/25/2020
-30.11	None		ROV33 south to north	1197484.5871	208724.1302	20200925_122332A.mp4	9/25/2020
-30.13	None		ROV33 south to north	1197496.0986	208832.9101	20200925_122332A.mp4	9/25/2020
-29.88	N/A		ROV34	1196789.7100	206970.8500	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-29.84	None		ROV34	1196739.8900	206963.6200	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-30.36	Trace		ROV34	1196690.0700	206956.3900	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-53.16	None		ROV34	1196640.2500	206949.1600	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-54.04	None		ROV34	1196590.4300	206941.9300	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-53.62	None		ROV34	1196540.6100	206934.7000	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-53.83	None		ROV34	1196490.7900	206927.4700	2020-09-30_10-53-16_DEEP_TREKKER.mp4	9/30/2020
-55.39	N/A		ROV34	1196786.6300	206984.2200	2020-09-30_11-04-53_DEEP_TREKKER.mp4	9/30/2020
-57.47	None		ROV34	1196819.2325	206988.1450	2020-09-30_11-04-53_DEEP_TREKKER.mp4	9/30/2020
-53.30	None		ROV34	1196851.8350	206992.0700	2020-09-30_11-04-53_DEEP_TREKKER.mp4	9/30/2020
-57.95	None		ROV34	1196884.4375	206995.9950	2020-09-30_11-04-53_DEEP_TREKKER.mp4	9/30/2020
-57.74	None		ROV34	1196917.0400	206999.9200	2020-09-30_11-04-53_DEEP_TREKKER.mp4	9/30/2020
-55.06	N/A		ROV34	1196912.2100	207013.2000	2020-09-30_11-11-41_DEEP_TREKKER.mp4	9/30/2020
-53.91	N/A		ROV34	1196948.1920	207007.4040	2020-09-30_11-11-41_DEEP_TREKKER.mp4	9/30/2020
-53.51	None		ROV34	1196984.1740	207001.6080	2020-09-30_11-11-41_DEEP_TREKKER.mp4	9/30/2020
No bathymetric coverage	None		ROV34	1197020.1560	206995.8120	2020-09-30_11-11-41_DEEP_TREKKER.mp4	9/30/2020
No bathymetric coverage	None		ROV34	1197056.1380	206990.0160	2020-09-30_11-11-41_DEEP_TREKKER.mp4	9/30/2020

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-50.41	None		ROV34	1197092.1200	206984.2200	2020-09-30_11-11-41_DEEP_TREKKER.mp4	9/30/2020
-18.16	None		ROV34 north to south	1196907.8199	206834.1844	20200925_112953A.mp4	9/25/2020
-9.99	None		ROV34 north to south	1196934.5839	206767.7511	20200925_112953A.mp4	9/25/2020
-47.17	None		ROV35 east to west	1196711.9000	207643.8000	20200925_134026A.mp4	9/25/2020
-45.74	N/A		ROV35 east to west	1196590.2818	207629.3470	20200925_134026A.mp4	9/25/2020
-45.72	None		ROV35 east to west	1196470.0017	207643.1947	20200925_134026A.mp4	9/25/2020
-45.19	None		ROV35 east to west	1196350.0231	207665.9254	20200925_134026A.mp4	9/25/2020
-45.03	None		ROV35 east to west	1196227.6626	207660.6557	20200925_134026A.mp4	9/25/2020
-45.53	None		ROV35 east to west	1196108.0352	207643.2529	20200925_134026A.mp4	9/25/2020
-45.42	None		ROV35 east to west	1195995.2343	207595.5473	20200925_134026A.mp4	9/25/2020
-45.53	None		ROV35 east to west	1195873.5177	207595.5646	20200925_134026A.mp4	9/25/2020
-46.43	None		ROV35 east to west	1195753.2469	207615.0825	20200925_134026A.mp4	9/25/2020
-47.22	None		ROV35 east to west	1195632.5456	207626.6955	20200925_134026A.mp4	9/25/2020
-46.33	None		ROV35 east to west	1195510.1801	207621.5402	20200925_134026A.mp4	9/25/2020
-44.91	None		ROV35 east to west	1195387.8147	207616.3849	20200925_134026A.mp4	9/25/2020
-45.10	None		ROV35 east to west	1195267.6170	207607.0863	20200925_134026A.mp4	9/25/2020
-44.65	None		ROV35 east to west	1195250.7385	207501.0571	20200925_134026A.mp4	9/25/2020
-44.16	None		ROV35 east to west	1195301.3233	207390.6422	20200925_134026A.mp4	9/25/2020
-43.94	None		ROV35 east to west	1195326.7874	207271.0124	20200925_134026A.mp4	9/25/2020
-43.64	None		ROV35 east to west	1195327.3509	207160.6118	20200925_134026A.mp4	9/25/2020
-43.60	None		ROV35 east to west	1195236.3925	207089.5716	20200925_134026A.mp4	9/25/2020
-10.25	None		ROV35 north to south	1196150.1600	207865.3200	20200925_111148A.mp4	9/25/2020
-9.46	None		ROV35 north to south	1196197.7847	207810.4224	20200925_111148A.mp4	9/25/2020
No bathymetric coverage	None		ROV35 north to south	1196256.2694	207770.6400	20200925_111148A.mp4	9/25/2020
No bathymetric coverage	None		ROV35 north to south	1196323.4933	207743.0210	20200925_111148A.mp4	9/25/2020
No bathymetric coverage	None		ROV35 north to south	1196366.5422	207687.6030	20200925_111148A.mp4	9/25/2020
-10.68	None		ROV35 north to south	1196403.2233	207624.8626	20200925_111148A.mp4	9/25/2020
-9.85	None		ROV35 north to south	1196439.9044	207562.1222	20200925_111148A.mp4	9/25/2020
-8.95	None		ROV35 north to south	1196476.7115	207499.4719	20200925_111148A.mp4	9/25/2020
-9.97	None		ROV35 north to south	1196524.2348	207444.4866	20200925_111148A.mp4	9/25/2020
-9.26	None		ROV35 north to south	1196558.5644	207381.9121	20200925_111148A.mp4	9/25/2020
-10.09	None		ROV35 north to south	1196582.2004	207313.1866	20200925_111148A.mp4	9/25/2020
-9.75	None		ROV35 north to south	1196612.4267	207247.7074	20200925_111148A.mp4	9/25/2020
-20.07	None		ROV35 north to south	1196652.5082	207187.0830	20200925_111148A.mp4	9/25/2020
-19.50	None		ROV35 north to south	1196692.5898	207126.4585	20200925_111148A.mp4	9/25/2020
-19.89	None		ROV35 north to south	1196732.6713	207065.8340	20200925_111148A.mp4	9/25/2020
-20.28	None		ROV35 north to south	1196772.7529	207005.2095	20200925_111148A.mp4	9/25/2020
-20.59	None		ROV35 north to south	1196816.4860	206947.2576	20200925_111148A.mp4	9/25/2020
-48.97	None		ROV35 north to south	1196862.1530	206890.7210	20200925_111148A.mp4	9/25/2020
-43.56	N/A	YES	ROV36	1195947.1500	209169.9600	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-43.95	None	YES	ROV36	1195982.2256	209173.9844	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-45.08	None	YES	ROV36	1196017.3011	209178.0089	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-45.63	None	YES	ROV36	1196052.3767	209182.0333	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-46.42	None	YES	ROV36	1196087.4522	209186.0578	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-47.20	None	YES	ROV36	1196122.5278	209190.0822	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-43.56	None	YES	ROV36	1196157.6033	209194.1067	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-43.47	None	YES	ROV36	1196192.6789	209198.1311	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-43.35	None	YES	ROV36	1196227.7544	209202.1556	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-42.18	None	YES	ROV36	1196262.8300	209206.1800	2020-09-29_09-24-30_DEEP_TREKKER.mp4	9/29/2020
-41.23	None	YES	ROV36	1196108.8700	209173.8400	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-41.21	None	YES	ROV36	1196105.2480	209204.3720	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-40.79	None	YES	ROV36	1196101.6260	209234.9040	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-43.56	None	YES	ROV36	1196098.0040	209265.4360	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-43.70	None	YES	ROV36	1196094.3820	209295.9680	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-43.90	None	YES	ROV36	1196090.7600	209326.5000	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-44.03	None	YES	ROV36	1196087.1380	209357.0320	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-44.23	None	YES	ROV36	1196083.5160	209387.5640	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-44.86	None	YES	ROV36	1196079.8940	209418.0960	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-44.86	None	YES	ROV36	1196076.2720	209448.6280	2020-09-29_09-36-07_DEEP_TREKKER.mp4	9/29/2020
-44.79	None	YES	ROV36	1196086.8800	209195.8300	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-44.52	None	YES	ROV36	1196091.4083	209148.8250	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-44.42	None	YES	ROV36	1196095.9367	209101.8200	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-44.61	None	YES	ROV36	1196100.4650	209054.8150	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-44.38	None	YES	ROV36	1196104.9933	209007.8100	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-39.83	None	YES	ROV36	1196109.5217	208960.8050	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-43.45	None	YES	ROV36	1196114.0500	208913.8000	2020-09-29_09-49-13_DEEP_TREKKER.mp4	9/29/2020
-34.21	None	YES	ROV37	1196380.1000	208972.2200	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	N/A	YES	ROV37	1196419.2371	208966.5000	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	None	YES	ROV37	1196458.3743	208960.7800	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	Trace	YES	ROV37	1196497.5114	208955.0600	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	None	YES	ROV37	1196536.6486	208949.3400	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	None	YES	ROV37	1196575.7857	208943.6200	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	None	YES	ROV37	1196614.9229	208937.9000	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	None	YES	ROV37	1196654.0600	208932.1800	2020-09-29_08-24-39_DEEP_TREKKER.mp4	9/29/2020
-37.74	N/A	YES	ROV37	1196542.3700	209048.0900	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.86	None	YES	ROV37	1196542.9729	209008.0500	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.72	None	YES	ROV37	1196543.5757	208968.0100	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.76	None	YES	ROV37	1196544.1786	208927.9700	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.75	None	YES	ROV37	1196544.7814	208887.9300	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.76	None	YES	ROV37	1196545.3843	208847.8900	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.90	None	YES	ROV37	1196545.9871	208807.8500	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.74	N/A	YES	ROV37	1196546.5900	208767.8100	2020-09-29_08-36-47_DEEP_TREKKER.mp4	9/29/2020
-37.75	None	YES	ROV37	1196551.8940	209030.2556	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-37.61	None	YES	ROV37	1196550.3116	209051.2664	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-36.96	None	YES	ROV37	1196548.7291	209072.2772	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-35.70	None	YES	ROV37	1196547.1467	209093.2880	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-35.29	Trace	YES	ROV37	1196545.5642	209114.2988	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-35.87	Trace	YES	ROV37	1196543.9818	209135.3096	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-36.37	None	YES	ROV37	1196542.3993	209156.3204	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-37.41	None	YES	ROV37	1196540.8169	209177.3312	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-37.83	None	YES	ROV37	1196539.2344	209198.3420	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-38.56	None	YES	ROV37	1196537.6520	209219.3528	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-38.21	None	YES	ROV37	1196536.0695	209240.3636	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-38.23	None	YES	ROV37	1196534.4871	209261.3744	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-38.86	None	YES	ROV37	1196532.9047	209282.3852	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-39.23	None	YES	ROV37	1196531.3222	209303.3960	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-39.53	None	YES	ROV37	1196529.7398	209324.4068	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-39.93	Trace	YES	ROV37	1196528.1573	209345.4176	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-40.21	Trace	YES	ROV37	1196526.5749	209366.4284	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-40.78	None	YES	ROV37	1196524.9924	209387.4392	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-41.08	None	YES	ROV37	1196523.4100	209408.4500	2020-09-29_08-47-00_DEEP_TREKKER.mp4	9/29/2020
-35.77	None	YES	ROV38	1196998.1600	209124.5500	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-35.93	None	YES	ROV38	1196993.8262	209186.7475	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-36.08	None	YES	ROV38	1196989.4925	209248.9450	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-36.11	None	YES	ROV38	1196985.1587	209311.1425	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-36.13	None	YES	ROV38	1196980.8250	209373.3400	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-36.13	None	YES	ROV38	1196976.4913	209435.5375	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-35.98	None	YES	ROV38	1196972.1575	209497.7350	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-34.61	None	YES	ROV38	1196967.8238	209559.9325	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-34.52	None	YES	ROV38	1196963.4900	209622.1300	2020-09-29_07-32-43_DEEP_TREKKER.mp4	9/29/2020
-34.46	None	YES	ROV38	1196972.2537	209624.0290	2020-09-29_07-41-52_DEEP_TREKKER.mp4	9/29/2020
-34.53	None	YES	ROV38	1197000.8151	209617.3606	2020-09-29_07-41-52_DEEP_TREKKER.mp4	9/29/2020
-34.50	Trace	YES	ROV38	1197030.8211	209611.5106	2020-09-29_07-41-52_DEEP_TREKKER.mp4	9/29/2020
-34.49	Trace	YES	ROV38	1197060.0765	209603.0294	2020-09-29_07-41-52_DEEP_TREKKER.mp4	9/29/2020
-34.42	Trace	YES	ROV38	1196938.3268	209631.7812	2020-09-29_07-48-05_DEEP_TREKKER.mp4	9/29/2020
-34.52	None	YES	ROV38	1196911.5184	209614.7311	2020-09-29_07-48-05_DEEP_TREKKER.mp4	9/29/2020
-34.22	None	YES	ROV38	1196879.7201	209609.7974	2020-09-29_07-48-05_DEEP_TREKKER.mp4	9/29/2020
-34.22	None	YES	ROV38	1196856.9543	209588.9044	2020-09-29_07-48-05_DEEP_TREKKER.mp4	9/29/2020
-34.19	None	YES	ROV38	1196847.3017	209558.2682	2020-09-29_07-48-05_DEEP_TREKKER.mp4	9/29/2020
No bathymetric coverage	N/A		ROV39 east to west	1197741.4700	208639.9600	20200925_131916A.mp4	9/25/2020
-30.10	N/A		ROV39 east to west	1197655.5853	208594.1301	20200925_131916A.mp4	9/25/2020
-30.24	None		ROV39 east to west	1197567.7010	208552.4482	20200925_131916A.mp4	9/25/2020
-29.80	None		ROV39 east to west	1197478.3506	208513.8080	20200925_131916A.mp4	9/25/2020
-30.12	None		ROV39 east to west	1197389.0001	208475.1678	20200925_131916A.mp4	9/25/2020
-45.34	None		ROV39 east to west	1197320.0231	208407.4569	20200925_131916A.mp4	9/25/2020
-47.01	None		ROV4	1191083.0900	204203.3800	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.15	None		ROV4	1191183.0883	204202.7870	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.85	None		ROV4	1191283.0865	204202.1939	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.87	None		ROV4	1191383.0848	204201.6009	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.53	None		ROV4	1191083.0900	204203.3800	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.42	None		ROV4	1191033.0900	204203.4378	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.84	None		ROV4	1190983.0900	204203.4956	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.73	None		ROV4	1190933.0900	204203.5534	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.81	None		ROV4	1190883.0900	204203.6112	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-46.95	None		ROV4	1190833.0900	204203.6689	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.08	None		ROV4	1190783.0900	204203.7267	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.13	None		ROV4	1191083.0900	204203.3800	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.06	None		ROV4	1191083.0899	204503.3802	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.21	None		ROV4	1191083.0900	204203.3800	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.28	None		ROV4	1191083.1114	204153.3800	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.82	None		ROV4	1191083.1328	204103.3800	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-47.92	None		ROV4	1191083.1542	204053.3799	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-34.49	None		ROV4	1191083.1756	204003.3799	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-36.86	None		ROV4	1191083.1970	203953.3799	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-38.41	None		ROV4	1191083.2184	203903.3799	2020-09-19_10-21-24_DEEP_TREKKER.mp4	9/19/2020
-45.04	None		ROV40 east to west	1197618.1600	207639.0500	20200925_133133A.mp4	9/25/2020
-44.53	None		ROV40 east to west	1197487.5536	207631.6716	20200925_133133A.mp4	9/25/2020
-44.84	None		ROV40 east to west	1197356.9472	207624.2931	20200925_133133A.mp4	9/25/2020
-45.25	Trace		ROV40 east to west	1197226.3408	207616.9147	20200925_133133A.mp4	9/25/2020
-45.98	None		ROV40 east to west	1197095.7641	207621.1707	20200925_133133A.mp4	9/25/2020
-46.24	None		ROV40 east to west	1196965.1971	207629.2154	20200925_133133A.mp4	9/25/2020
-46.24	None		ROV40 east to west	1196834.6300	207637.2600	20200925_133133A.mp4	9/25/2020
-48.10	None		ROV5	1192340.9000	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-47.50	None		ROV5	1192370.9001	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-48.07	None		ROV5	1192400.9001	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-48.76	None		ROV5	1192430.9001	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-49.31	None		ROV5	1192460.9001	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-49.10	None		ROV5	1192490.9001	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-49.01	None		ROV5	1192520.9001	204132.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-48.92	None		ROV5	1192550.9002	204132.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-49.16	N/A		ROV5	1192580.9002	204132.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-49.45	Trace		ROV5	1192280.9000	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
No bathymetric coverage	None		ROV5	1192280.9000	204175.7072	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	None		ROV5	1192280.9000	204218.5643	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-29.71	None		ROV5	1192280.9001	204261.4215	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-29.71	None		ROV5	1192280.9001	204304.2786	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-30.08	None		ROV5	1192280.9001	204347.1358	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-29.95	N/A		ROV5	1192280.9001	204389.9930	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-30.06	N/A		ROV5	1192280.9001	204432.8501	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-30.32	None		ROV5	1192280.9000	204132.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-30.33	None		ROV5	1192280.9000	204082.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	None		ROV5	1192280.9000	204032.8500	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-40.15	None		ROV5	1192280.9000	203982.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-39.11	None		ROV5	1192280.9000	203932.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-39.21	None		ROV5	1192280.9000	203882.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-39.79	None		ROV5	1192280.9000	203832.8499	2020-09-19_12-41-02_DEEP_TREKKER.mp4	9/19/2020
-30.24	None		ROV6	1192167.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.24	None		ROV6	1192137.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.93	None		ROV6	1192107.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.09	None		ROV6	1192077.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.18	None		ROV6	1192047.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-29.71	None		ROV6	1192017.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.41	None		ROV6	1191987.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-31.70	None		ROV6	1191957.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-31.19	None		ROV6	1191927.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.03	None		ROV6	1191897.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.22	N/A		ROV6	1191867.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-31.96	None		ROV6	1192167.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-30.26	None		ROV6	1192204.5900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-29.21	None		ROV6	1192242.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-32.39	None		ROV6	1192279.5900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-32.08	None		ROV6	1192317.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-20.53	None		ROV6	1192354.5900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-22.04	None		ROV6	1192392.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-22.95	None		ROV6	1192429.5900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-23.18	N/A		ROV6	1192467.0899	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-24.77	None		ROV6	1192167.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-16.09	None		ROV6	1192167.0900	205025.2100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-20.87	None		ROV6	1192167.0900	205062.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-19.97	None		ROV6	1192167.0900	205100.2100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-19.97	None		ROV6	1192167.0900	205137.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-20.11	None		ROV6	1192167.0900	205175.2100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-20.33	None		ROV6	1192167.0900	205212.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-20.31	None		ROV6	1192167.0900	205250.2100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-19.57	N/A		ROV6	1192167.0900	205287.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-20.23	None		ROV6	1192167.0900	204987.7100	2020-09-20_08-49-43_DEEP_TREKKER.mp4	9/20/2020
-28.25	None		ROV6	1192167.0900	204912.7100	2020-09-20_09-19-45_DEEP_TREKKER.mp4	9/20/2020
-30.19	Trace		ROV6	1192167.0900	204912.7100	2020-09-20_09-19-45_DEEP_TREKKER.mp4	9/20/2020
-30.65	None		ROV6	1192167.0900	204912.7100	2020-09-20_09-19-45_DEEP_TREKKER.mp4	9/20/2020
-29.31	None		ROV6	1192167.0900	204912.7100	2020-09-20_09-19-45_DEEP_TREKKER.mp4	9/20/2020
-30.17	None		ROV6	1192167.0900	204912.7100	2020-09-20_09-19-45_DEEP_TREKKER.mp4	9/20/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196525.4499	204789.6167	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196566.3822	204823.1946	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196608.5004	204855.5957	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196653.5413	204883.0583	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196700.7747	204907.5173	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196747.3487	204933.3302	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	N/A		South Sinclair Inlet -10 ft contour	1196791.4098	204963.2148	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196831.2639	204998.3779	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196870.3191	205033.6442	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -10 ft contour	1196919.7475	205051.0987	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-9.90	High		South Sinclair Inlet -10 ft contour	1196963.3835	205081.5294	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-10.14	High		South Sinclair Inlet -10 ft contour	1197005.4497	205113.4602	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-9.90	High		South Sinclair Inlet -10 ft contour	1197050.9250	205138.8553	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-9.95	High		South Sinclair Inlet -10 ft contour	1197101.0959	205148.3420	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-10.09	High		South Sinclair Inlet -10 ft contour	1197150.0582	205168.9631	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-10.00	High		South Sinclair Inlet -10 ft contour	1197197.6179	205192.9276	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-9.94	High		South Sinclair Inlet -10 ft contour	1197247.7455	205210.0795	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-19.56	High		South Sinclair Inlet -10 ft contour	1197298.7781	205224.5924	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-20.22	Medium		South Sinclair Inlet -10 ft contour	1197346.4937	205248.0350	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-20.35	High		South Sinclair Inlet -10 ft contour	1197393.7171	205270.6143	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-20.45	High		South Sinclair Inlet -10 ft contour	1197445.5167	205282.6326	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-18.45	High		South Sinclair Inlet -10 ft contour	1197497.8242	205292.2349	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-19.93	High		South Sinclair Inlet -10 ft contour	1197549.7466	205303.1649	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-21.03	High		South Sinclair Inlet -10 ft contour	1197602.6459	205309.1461	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-15.20	High		South Sinclair Inlet -10 ft contour	1197655.4201	205316.2718	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-14.30	High		South Sinclair Inlet -10 ft contour	1197708.4449	205321.0810	2020-09-19_16-05-15_DEEP_TREKKER.mp4	9/19/2020
-48.67	Trace		South Sinclair Inlet -20 ft contour	1197960.8000	205419.7000	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-48.20	Low		South Sinclair Inlet -20 ft contour	1197948.7718	205415.6973	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-48.53	Low		South Sinclair Inlet -20 ft contour	1197936.7436	205411.6945	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-49.12	Medium		South Sinclair Inlet -20 ft contour	1197924.7155	205407.6918	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-49.49	Low		South Sinclair Inlet -20 ft contour	1197912.6873	205403.6891	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-50.21	Medium		South Sinclair Inlet -20 ft contour	1197900.6591	205399.6864	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-50.63	Medium		South Sinclair Inlet -20 ft contour	1197888.6309	205395.6836	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-50.77	Medium		South Sinclair Inlet -20 ft contour	1197876.6027	205391.6809	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-50.77	Medium		South Sinclair Inlet -20 ft contour	1197864.5746	205387.6782	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
-50.71	Medium		South Sinclair Inlet -20 ft contour	1197852.5464	205383.6755	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -20 ft contour	1197840.5182	205379.6727	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -20 ft contour	1197828.4900	205375.6700	2020-09-19_15-14-19_DEEP_TREKKER.mp4	9/19/2020
No bathymetric coverage	High		South Sinclair Inlet -20 ft contour	1197828.4900	205375.6700	2020-09-19_15-25-31_DEEP_TREKKER.mp4	9/19/2020
-29.66	Low		South Sinclair Inlet -30 ft contour	1197911.4200	205404.6800	20200925_144727A.mp4	9/25/2020
-29.71	Low		South Sinclair Inlet -30 ft contour	1197853.1890	205442.8145	20200925_144727A.mp4	9/25/2020
-29.68	Low		South Sinclair Inlet -30 ft contour	1197786.5000	205447.4800	20200925_144727A.mp4	9/25/2020
-29.92	Trace		South Sinclair Inlet -30 ft contour	1197786.5000	205447.4800	20200925_145016A.mp4	9/25/2020
-30.13	Low		South Sinclair Inlet -30 ft contour	1197698.8837	205451.5355	20200925_145016A.mp4	9/25/2020
-30.15	Low		South Sinclair Inlet -30 ft contour	1197611.9327	205443.0248	20200925_145016A.mp4	9/25/2020
-30.38	Low		South Sinclair Inlet -30 ft contour	1197525.2253	205429.8018	20200925_145016A.mp4	9/25/2020
-30.07	Low		South Sinclair Inlet -30 ft contour	1197438.4157	205417.2653	20200925_145016A.mp4	9/25/2020
-30.07	Low		South Sinclair Inlet -30 ft contour	1197351.2521	205409.2270	20200925_145016A.mp4	9/25/2020
-29.93	Low		South Sinclair Inlet -30 ft contour	1197263.5502	205408.0252	20200925_145016A.mp4	9/25/2020
-29.88	Low		South Sinclair Inlet -30 ft contour	1197175.8484	205406.8233	20200925_145016A.mp4	9/25/2020
-29.93	Low		South Sinclair Inlet -30 ft contour	1197088.1465	205405.6215	20200925_145016A.mp4	9/25/2020
-29.97	Low		South Sinclair Inlet -30 ft contour	1197000.5214	205408.2253	20200925_145016A.mp4	9/25/2020
-29.45	Low		South Sinclair Inlet -30 ft contour	1196912.9394	205412.9641	20200925_145016A.mp4	9/25/2020
-30.03	Low		South Sinclair Inlet -30 ft contour	1196825.3575	205417.7030	20200925_145016A.mp4	9/25/2020
-29.94	Low		South Sinclair Inlet -30 ft contour	1196738.0118	205414.1861	20200925_145016A.mp4	9/25/2020
-30.00	Low		South Sinclair Inlet -30 ft contour	1196650.8443	205404.4450	20200925_145016A.mp4	9/25/2020
-29.87	Low		South Sinclair Inlet -30 ft contour	1196563.6768	205394.7038	20200925_145016A.mp4	9/25/2020
-30.15	Low		South Sinclair Inlet -30 ft contour	1196476.4193	205385.8273	20200925_145016A.mp4	9/25/2020
-30.17	Low		South Sinclair Inlet -30 ft contour	1196389.1146	205377.4049	20200925_145016A.mp4	9/25/2020

Elevation (feet) Corrected for Tide	Macroalgae Density	Location Inside PSNS & IMF?	Location ROV Point or Transect	Location X-Coordinate	Location Y-Coordinate	ROV Filename	Date
-30.26	Trace		South Sinclair Inlet -30 ft contour	1196302.6118	205364.8740	20200925_145016A.mp4	9/25/2020
-30.07	Trace		South Sinclair Inlet -30 ft contour	1196218.5497	205339.8417	20200925_145016A.mp4	9/25/2020
-29.96	None		South Sinclair Inlet -30 ft contour	1196218.5497	205339.8417	20200925_150821A.mp4	9/25/2020
-29.98	Trace		South Sinclair Inlet -30 ft contour	1196128.2928	205316.8203	20200925_150821A.mp4	9/25/2020
-30.28	Trace		South Sinclair Inlet -30 ft contour	1196039.1077	205291.0774	20200925_150821A.mp4	9/25/2020
-38.20	Trace		South Sinclair Inlet -30 ft contour	1195957.3923	205246.3684	20200925_150821A.mp4	9/25/2020
-37.31	None		South Sinclair Inlet -30 ft contour	1195904.8510	205172.3098	20200925_150821A.mp4	9/25/2020
-36.41	Low		South Sinclair Inlet -30 ft contour	1195887.0679	205080.9259	20200925_150821A.mp4	9/25/2020
-36.12	Trace		South Sinclair Inlet -30 ft contour	1195806.2915	205034.7457	20200925_150821A.mp4	9/25/2020
-35.87	Trace		South Sinclair Inlet -30 ft contour	1195734.3300	204975.6031	20200925_150821A.mp4	9/25/2020
-35.28	Trace		South Sinclair Inlet -30 ft contour	1195664.4132	204914.1686	20200925_150821A.mp4	9/25/2020
-34.51	Trace		South Sinclair Inlet -30 ft contour	1195597.4748	204849.3956	20200925_150821A.mp4	9/25/2020
-33.87	Trace		South Sinclair Inlet -30 ft contour	1195531.0008	204784.1497	20200925_150821A.mp4	9/25/2020
-33.82	Trace		South Sinclair Inlet -30 ft contour	1195465.0171	204718.4043	20200925_150821A.mp4	9/25/2020
-34.13	N/A		South Sinclair Inlet -30 ft contour	1195398.9488	204652.7441	20200925_150821A.mp4	9/25/2020
-35.42	N/A		South Sinclair Inlet -30 ft contour	1195332.8804	204587.0838	20200925_150821A.mp4	9/25/2020
-36.09	N/A		South Sinclair Inlet -30 ft contour	1195279.5115	204510.7665	20200925_150821A.mp4	9/25/2020
-36.99	Trace		South Sinclair Inlet -30 ft contour	1195226.3149	204434.3046	20200925_150821A.mp4	9/25/2020
-37.38	N/A		South Sinclair Inlet -30 ft contour	1195170.0500	204360.1200	20200925_150821A.mp4	9/25/2020