Empire Wind Scallop Monitoring Survey
2023 Annual Report

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TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

Figure Page

LIST OF ACRONYMS

AUV	autonomous underwater vehicle
BACI	Before-After Control-Impact
BOEM	Bureau of Ocean Energy Management
CFF	Coonamessett Farm Foundation
cm	centimeter(s)
CO_2	carbon dioxide
DSLR	digital single-lens reflex
Empire	Empire Offshore Wind LLC
FBMP	Fisheries and Benthic Monitoring Plan
ft	feet
GPS	global positioning system
km	kilometer(s)
m	meter(s)
MB	megabyte
mi	mile(s)
NEF	Nikon electronic format
NEFSC	Northeast Fisheries Science Center
NJDEP	New Jersey Department of Environmental Protection
nm	nautical mile(s)
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	NOAA National Marine Fisheries Service
NYSERDA	New York State Energy Research and Development Authority
OSW	offshore wind
PV	plan view
ROSA	Responsible Offshore Science Alliance
R/V	Research Vessel
SMAST	University of Massachusetts Dartmouth School for Marine Science and Technology
VIMS	Virginia Institute of Marine Science
VMS	Vessel Monitoring System

1.0 INTRODUCTION

Empire Offshore Wind LLC (Empire) proposes to construct and operate an offshore wind farm located in the designated Renewable Energy Lease Area OCS-A 0512. The Empire Wind Lease Area covers approximately 79,350 acres (32,112 hectares) and is located approximately 14 statute miles (mi) (12 nautical miles [nm], 22 kilometers [km]) south of Long Island, New York and 19.5 mi (16.9 nm, 31.4 km) east of Long Branch, New Jersey (Figure 1-1). The Empire Wind Lease Area will be developed as two wind farms, known as Empire Wind 1 and Empire Wind 2, which will consist of up to 174 wind turbines. Monitoring efforts are combined for the proposed wind farms, covering the entire Empire Wind Lease Area as described in the Empire Wind Fisheries and Benthic Monitoring Plan (FBMP) (INSPIRE Environmental 2023a). The results provided in this report pertain to samples collected across the entire Empire Wind Lease Area.

The New York Bight supports diverse fish and invertebrate assemblages (Guida et al. 2017; Thorne et al. 2020; NJDEP 2022). Fisheries monitoring was designed to assess potential impacts of construction and operation activities within the Empire Wind Lease Area on these biological communities. A monitoring plan was developed in accordance with recommendations made by the Bureau of Ocean Energy Management's (BOEM) *Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf* (BOEM 2019), New York State Energy Research and Development Authority's (NYSERDA) *New York State Offshore Wind Master Plan: Fish and Fisheries Study* (NYSERDA 2017), and the Responsible Offshore Science Alliance's (ROSA's) O*ffshore Wind Project Monitoring Framework and Guidelines* (ROSA 2021). This FBMP was created using an iterative process with the Empire Wind team coordinating with regional fishing organizations, working groups, and individual fishermen. In addition, through the permitting and development process the Empire Wind team consulted with state and federal fisheries resource management agencies and solicited feedback directly from stakeholders. Due in part to the concerns of local fishing interests, one component of the FBMP (INSPIRE Environmental 2023a) is a survey designed to document the distribution and abundance of Atlantic sea scallops (*Placopecten magellanicus*) in the Empire Wind Lease Area and at a designated reference location during baseline, construction, and post-construction time periods.

1.1 Study Organism

The Atlantic sea scallop occurs on the Northwestern Atlantic continental shelf from Cape Hatteras, North Carlonia to the northern Gulf of St. Lawrence, Canada (Posgay 1957; Squires 1962) and supports a valuable commercial fishery in the U.S. with annual landings worth $669 million dollars in 2021 (ex-vessel value; NOAA 2022a). The scallop dredge fleet is moderately active in the eastern portion of the Empire Wind Lease Area, with the highest vessel activity

over 18 mi (30 km) from the eastern boundary of the Empire Wind Lease Area (Figure 1-2). The Atlantic sea scallop dredge fishery accounted for the highest revenue of any commercial fisheries within the Empire Wind Lease Area from 2008 to 2019 (INSPIRE Environmental 2023a). Across all fisheries, commercial fishing vessel activity within the Empire Wind Lease Area steadily decreased from 2008 to 2019 (NOAA 2022b).

Atlantic sea scallops were identified as an understudied, commercial fishery species of particular concern that may be susceptible to impacts from the development of the offshore wind (OSW) industry (Hogan et al. 2023). In particular, potential responses of Atlantic sea scallops to the effects of electromagnetic fields was identified as a knowledge gap relevant to assessing OSW farm impacts (Hogan et al. 2023).

Sea scallop stock assessments and many research studies have monitored scallop abundances using modified scallop dredges that integrate the catch along the path of the tow, which loses information on the spacing of individuals relative to each other (Harris et al. 2018). The spatial distributions of scallop concentrations (e.g., nearest-neighbor distances) can affect important biological processes such as broadcast spawning, competition for food and space, and predator prey interactions. To better understand individual spacing and to limit individual mortality via extractive sampling, optical surveys have been employed to document individual scallop locations within a quadrat or transect. Scallop density and abundance have been assessed through optical surveys that obtained images of the seafloor at stations using video cameras (e.g., Stokesbury et al. 2022) and still cameras (e.g., Stokesbury and Bethoney 2020). An autonomous underwater vehicle was deployed to obtain photographs of sea scallops that were not captured during dredge sampling to estimate dredge-induced incidental mortality (Ferraro et al. 2017). In this survey, downward facing plan view (PV) imagery is used to maximize information gathered concerning scallop distribution patterns and to minimize disturbance to the benthic habitat and scallop mortality.

1.2 Study Objectives

This report provides results of the first year of pre-construction scallop monitoring (June 2023) in the Empire Wind Lease Area and Reference Area to satisfy the following goals of providing:

- Site-specific information about Atlantic sea scallop baseline densities in the Empire Wind Lease Area;
- Baseline data to be used to examine potential shifts in scallop distributions in the Empire Wind Lease Area that may be associated with wind farm construction and/or operation; and
- Baseline data to be used to examine potential changes in scallop densities in the Empire Wind Lease Area during either the construction or post-construction time periods.

Plans for the Empire Wind scallop survey include two years of monitoring prior to offshore construction, sampling during construction, and two years of post-construction monitoring in accordance with the guidance of NYSERDA (NYSERDA 2017) and ROSA (ROSA 2021).

2.0 METHODS

The sea scallop monitoring survey conducted in the Empire Wind Lease Area and Reference Area is based on seafloor imagery using a PV camera system. Several long-term fisheries-independent scallop surveys utilize similar methods to assess the distribution and density of scallops in the region. The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries (NOAA Fisheries) partners with the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) and the Coonamesset Farm Foundation to survey assigned areas using a Habitat Mapping Camera (HabCam). Non-extractive optical-based surveys may provide more accurate estimates of the sea scallop populations compared with dredge surveys, particularly in areas with substantial contributions of recently settled juvenile scallops that evade survey dredges (Rudders 2015). In addition, impacts from disturbance of bottom habitat is relatively small in optical surveys compared to dredge surveys that, in addition to physical disruption, can also result in aqueous carbon dioxide (CO_2) emissions from increased carbon metabolism following sediment disturbance (Atwood et al. 2020; Sala et al. 2021).

The Reference Area was selected to be within the vicinity of the Empire Wind Lease Area but distant from any potential direct effects of offshore wind construction and operation. A common goal in reference area selection for monitoring studies is to locate areas with similar habitat type (e.g., water depth and seafloor complexity) to the area where the disturbance is expected to occur. The Reference Area used in the scallop survey is the same Reference Area proposed for the Empire Wind bottom trawl survey and will serve as a regional proxy for sea scallop abundances.

2.1 Sampling Design

A power analysis based on estimated scallop densities in the Empire Wind Lease Area in 2012 was conducted using data provided by Kevin Stokesbury (recently detailed in Stokesbury et al. 2022). This analysis indicated a maximum of 60 stations in each area (Lease and Reference) was needed to achieve at least an 80% power to detect a 50% temporal and/or spatial change in scallop density for moderate coefficient of variation estimates (0.4 – 0.6) (INSPIRE Environmental 2023a). Results of this power analysis were used to inform the sampling design.

The Empire Wind Lease Area and the Reference Area both have water depths that range from 72 to 138 feet (ft) (22 to 42 meters [m]). The survey was stratified by depth with an even number (n = 30) of stations assigned to a “shallow” depth stratum (<115 ft [<35 m]) and a “deep” stratum

(>115 ft [>35 m]) in each area. Therefore, the PV survey sampled 120 total stations, 60 stations in each area that were distributed among grid cells to achieve one station per 0.9 mi^2 (2.4 km^2) in the Empire Wind Lease Area (Figure 2-1) and Reference Area (Figure 2-2). Replicate images were collected at each station while the vessel was slowly moving in order to collect multiple PV images across the 98-ft (30-m) watch circle in rapid succession (Appendix A).

2.2 Plan View Image Collection and Methods

The sea scallop survey was conducted onboard Northstar Marine's Research Vessel (R/V) Atlantic Surveyor on 17-21 June 2023. Image collection followed the Empire Wind FBMP (INSPIRE Environmental 2023a) and the field survey plan (INSPIRE Environmental 2023b). Survey participants were Kristy Gustafson (Lead Field Scientist/ Site Safety and Health Officer (SSHO)), Chuck Holloway (Field Scientist), Mitchell Kennedy (Field Scientist), Alex Zygmunt (Field Scientist), Sharon Valenta (Field Technician), and the R/V *Atlantic Surveyor* vessel crew.

At each station, a PV camera system was deployed to capture downward facing images of the seafloor. The PV camera system (Figure 2-3) consisted of a high-resolution digital single-lens reflex (DSLR) camera located inside a pressure resistant housing with a dome viewport. A 500-watt flash strobe and a pair of parallel lasers were used to create a properly illuminated scaled image. An adjustable-length stainless-steel trigger cable with a counterweight was attached to a hermetically sealed switch. This apparatus initiated the camera shutter timer when the weight contacted the seafloor. The distance that the weight hangs below the camera frame can be manually adjusted in order to obtain an adequate field of view of the image and/or a properly focused image. For this study, to achieve sufficient field of view, a trigger cable length of 5 ft 10.25 inches (1.8 m) was used. The parallel scaling lasers projected two red dots onto the seafloor which were separated by a distance of ~10.2 inches (in) (26 centimeters [cm]) regardless of the image field of view.

Prior to field operations, the internal clock in the camera was synchronized with the global positioning navigation system (GPS). Each image was assigned a unique time stamp in the digital file attributes by the camera's data logger and cross-checked with the time stamp in the navigational system's computer data file. Images were downloaded frequently during the survey and evaluated for successful image acquisition and image clarity.

The standard operating procedure for PV imaging (INSPIRE Environmental 2019a) was followed throughout the survey. The PV system was deployed from the A-Frame at the transom of the vessel. At least seven images were collected at each station to capture within-station variability given the narrower field of view (0.6 to 24.8 ft^2 [0.06 to 2.3 m^2]) in this study, similar to the field of view obtained from the drop camera surveys conducted by SMAST (6.5 to 26.9 ft^2 [0.6 m^2 to 2.5 m^2]).

During set-up and testing of the PV camera, the laser positions on the PV camera were checked and calibrated to ensure separation of ~10.2 in (26 cm). Test images were also captured to confirm proper camera settings for site conditions. For this survey, the PV camera ISO-equivalent was set at 400, shutter speed was 1/30s and the f-stop was f-11. Images were stored in compressed raw Nikon electronic format (NEF) files (approximately 30 MB each). Images were checked periodically throughout the survey to confirm that the initial camera settings were still resulting in the highest quality images possible. Although, the ability of the PV system to collect usable images is highly dependent on the clarity of the water column. For this study, the field of view averaged 18.5 ft^2 (1.72 m^2). Details of the camera settings for each digital image are available in the associated parameters file embedded in each electronic image file.

2.3 Data Analysis

A Before-After-Control-Impact (BACI) design (Underwood 1991; Smith et al. 1993; Kerr et al. 2019) was planned to assess potential impacts of the wind farm development on sea scallop abundance and distribution in the Empire Wind Lease Area. The total number of scallops observed in the first year of sampling was too small to warrant a statistical analysis, as discussed in Section 3.0, therefore a qualitative discussion of the locations of observed scallops is provided and these scallops are listed in Appendix B.

2.4 Data Quality Assurance and Quality Control

Measures were taken during field data collection for data quality assurance and control in alignment with INSPIRE Environmental's standard operating procedure for sediment profile and PV imaging sample collection (INSPIRE Environmental 2019a). The field work plan and other supporting materials were distributed to all sampling personnel. These included but were not limited to:

- Imaging systems tested prior to and during survey activities to ensure calibration and operation.
- Checks on laser positioning when the camera was onboard and subsequent adjustments to cable length when needed.
- Full backup systems including tools, parts, and electronics were carried in the field.
- Image and data collected were time stamped both digitally and in hand-written logs to ensure proper identification and synchronization with navigational data.
- Image analysis parameters were thoroughly checked by senior scientists to ensure quality and accuracy.
- Quality Assurance/Quality Control checks were performed by INSPIRE Environmental on all replicate images.

3.0 RESULTS

A complete set of PV images were collected from 120 stations on 17-21 June 2023 (Appendix A); a total of 1,048 PV images were analyzed for the survey (Appendix B).

Vessel operations adhered to the specific vessel strike avoidance measures provided by the Bureau of Ocean Energy Management (BOEM) as part of the Atlantic Outer Continental Shelf Leases Project Design Criteria and Best Management Practices. On 20 June there was one sighting of common dolphin, which was recorded and reported. Scientific sampling activities did not result in the inadvertent take of any marine mammals or federally endangered species.

3.1 Scallop Imagery in the Empire Wind Lease Area and Reference Area

A total of two scallops were observed throughout the entire surveyed area, both occurring in the Reference Area, one at Station 116 and the other at Station 120 (Figures 3-1, 3-2, and 3-3). Average water depths, corrected for tide height at the time of sampling, at Stations 116 and 120 were 118.4 and 134.8 ft (36.1 and 41.1 m), respectively, and shell heights were 2.23 in (56.6 mm) and 3.0 in (76.3 mm), respectively. There were no scallops observed in any of the replicate images collected within the Empire Wind Lease Area (Figure 3-1).

3.2 Non-Scallop Biological Resources Observed in PV Imagery

Although scallop resources were scarce within the Empire Wind Lease Area and Reference Area, PV imagery captured other benthic fauna throughout each area. Sand dollars (*Echinarachnius parma*) were common in both areas and were present as dense aggregations (Figure 3-4) and also as dead tests (Figure 3-5). Other organisms included Diopatra tubes (polychaete worm), moon snail eggs, moon snails, skate eggs, sea stars, Cerianthid tube-dwelling anemones, and sea scallop shells (Figure 3-6). Other more mobile organisms, including squid, crabs, skate, and fish were also present in both areas (Figure 3-7). Squid eggs were observed in the Empire Wind Lease Area at Stations 08 and 19, and in the Reference Area at Station 120 (Figure 3-8).

3.3 Depth and Surficial Bottom Features

The original inclusion of water depth as a categorical variable in the study design was intended to aid in explaining physical factors that may be associated with sea scallop distributions. However, the observations of only two scallops prevented the use of this categorical variable as an explanatory factor. There were several stations, typically in deeper habitat, where PV images revealed sand contours (ripples) indicative of strong bottom currents (Figure 3-9).

4.0 DISCUSSION

This annual report presents results of the first year of baseline monitoring for the Empire Wind scallop survey, which was conducted on 17-21 June 2023. All planned stations were successfully sampled, and seven to eighteen high-quality replicate images from each station were collected and analyzed. The observation of only two living Atlantic sea scallops across all stations is consistent with other studies that have found relatively low scallop abundances in the Empire Wind Lease Area and the Reference Area.

Scallops aggregate across a range of spatial scales, ranging from 'clumps' (cm^2) and 'patches' (m^2) to 'beds' (km^2) and 'grounds' (>10 km^2) (Brand 2006). Sea scallop distributions are influenced by physical parameters, such as the presence of sand-gravel substrate, low levels of predation, and filamentous flora and fauna that provide an initial settlement habitat (Stokesbury and Himmelman 1995; Stokesbury 2002; Henry and Kenchington 2004). Additionally, scallop grounds are associated with oceanographic conditions that facilitate larval retention (Tremblay et al. 1994; Carey et al. 2013). The lower abundances of scallops in the Mid-Atlantic Bight compared to Georges Bank can be attributed in part to differences in bottom habitat type. The part of the Mid-Atlantic Bight that includes the Empire Wind Lease Area is dominated by sand and is not characterized by heterogeneous bottom habitat, which is more common on Georges Bank where scallops are more abundant (Grothues et al. 2021).

Because scallop occurrences were rare in this baseline survey, calculations of densities per m^2, were not conducted. Likewise, biological information could not be inferred from the spacing of scallops, for instance the number per quadrat, which could reflect reproductive capacity. Studies that assess scallop abundances in areas that overlap with the Empire Wind Lease Area and the Reference Area are discussed below.

4.1 Scallop Fishery-Dependent Studies

Available data collected on commercial scallop vessel activity indicates that the Empire Wind Lease Area does not substantially overlap with high-value, commercial scallop grounds. A heat map of Vessel Monitoring System (VMS) data collected in 2015 to 2016 depicts relatively low commercial scallop vessel activity in the western portion of the Empire Wind Lease Area and higher activity in the eastern portion of the Lease Area where habitat is deeper (Figure 1-2). The highest commercial scallop vessel activity that is depicted is in areas approximately 18 mi (30 km) to the east of the eastern boundary of the Empire Wind Lease Area.

4.2 Scallop Fishery-Independent Studies

Site assessment surveys at Empire Wind Lease Area included PV imagery at 157 stations located within the Lease Area and along potential export cable routes. Sea scallops were observed at low abundances at five stations along potential cable routes. Sea scallops were not

observed along the cable route within the Empire Wind Lease Area (Empire COP, Appendix T-3, Benthic Resources Characterization Report; INSPIRE 2019b).

The NOAA Fisheries Integrated Sea Scallop and HabCam Research Survey (NOAA Fisheries 2022c) is conducted every summer by NOAA Fisheries in partnership with the Coonamessett Farm Foundation (CFF), the Virginia Institute of Marine Science (VIMS), and SMAST. The areas sampled in a portion of the Empire Wind Scallop Survey were surveyed by the CFF Habcam and the VIMS dredge survey (Figure 4-1). The absence of sea scallops within the Empire Wind Lease Area in this baseline survey is supported by the historically low dredge survey collections in this area. Data from 1978 to 2017, collected across the main sea scallop habitats in the Northeast U.S. continental shelf indicate low sea scallop densities in the Empire Wind Lease Area and Reference Area (Figure 4-2). Sea scallop dredge surveys conducted by VIMS in 2015 and 2019 collected sea scallops within the Empire Wind Lease Area at either the lowest density category depicted on maps or scallops were completely absent (Rudders and Roman 2018; Rudders et al. 2019). Results of the SMAST Habcam survey from 2003 through 2012 indicated that sea scallops were absent at depths less than 98 ft (30 m) and low in abundance between 98 and 164 ft (30 and 50 m (Grothues et al. 2021).

Guida et al. 2017 reviewed Northeast Fisheries Science Center (NEFSC) seasonal trawl survey data from 2003 to 2016 and qualitative records from beam trawls, bottom grabs, and bottom imagery to document the distributions of species of concern relative to the locations of wind energy areas. Sea scallops were widely distributed within the Empire Wind Lease Area, with the greatest concentrations at depths exceeding 115 ft (35 m). Images of the seafloor at <131 ft (40 m) depth off Long Island in 2011 using an autonomous underwater vehicle (AUV) recorded sea scallop densities that ranged from 0.118 to 2.20 ft^2 (0.011 to 0.204 m^2) (Walker et al. 2016). Station locations in the AUV survey were in the vicinity of the Empire Wind Lease Area and Reference Area but may not have overlapped.

Although not in close proximity to the Empire Wind Lease Area, another benthic monitoring survey using similar survey methods was conducted at the Vineyard Wind Lease Areas, located southeast of Martha's Vineyard. Results of the Vineyard Wind surveys indicated that sea scallops were not observed in the drop camera study area of Lease Area OCS-A 0522S in July 2019 (Bethoney et al. 2020a) or the survey of the Lease Area OCS-A 0501S study area (Bethoney et al. 2020b). At the Lease Area OCS-A 0501N study area, scallops were observed at a few stations in the July and October 2019 surveys (Bethoney et al. 2020c).

4.3 Non-Scallop Biological Resources

Although sea scallops were not present in the surveyed portion of the Empire Wind Lease Area and only two were encountered in the Reference Area, other biological organisms were prominent in the PV images. Most notably, sand dollars, which approximate the size of sea

scallops, were present in dense aggregations in both areas. Sea scallop shells also were visible, indicating the sampling design and methodology would have detected sea scallops if they had been present in the surveyed areas.

Sea stars were present in both survey areas and are a major scallop predator (Barbeau et al. 1994; Nadeau and Cliché 1998; Hart 2006). Sea stars do not generally overlap in space with scallop aggregations (Carey et al. 2013). Interactions between scallops and sea stars in the Mid-Atlantic Bight may increase rates of scallop mortality and dispersal (Carey et al. 2013).

Squid and squid eggs were observed in both survey areas, which was expected given the presence of the commercial squid fishery in the mid- to western portion of the Empire Wind region (INSPIRE Environmental 2023a).

5.0 SUMMARY

The seafloor was surveyed using PV imagery to assess Atlantic sea scallop distributions and abundances in the Empire Wind Lease Area and a Reference Area in June 2023. Results of this Year 1 Empire Wind scallop survey are summarized below.

- Survey sampling was successfully conducted at 60 stations in the Empire Wind Lease Area stations and 60 stations in the Reference Area. Seven to eighteen replicate images were analyzed for each station.
- Two scallops were observed across all survey stations, and these scallops occurred at two stations in the Reference Area. The scallops measured 2.23 in (56.6 mm) shell height and 3.0 in (76.3 mm) shell height and were located at 118.4 and 134.8 ft (36.1 and 41.1 m) depths, respectively.
- Other organisms observed in the PV imagery included dense aggregations of sand dollars in both the Wind Farm Lease Area and the Reference Area. Diopatra tube worms, moon snail eggs, skate eggs, sea stars, Cerianthid anemones, and sea scallop shells were also observed in the images.
- Squid eggs were observed at two stations in the Empire Wind Lease Area and one station in the Reference Area.
- More mobile organisms, such as squid, crabs, and fish were present in both areas.
- Survey results are consistent with fishery-dependent and fishery-independent data, which indicate the Empire Wind Lease Area and the Reference Area are located in areas with low-value scallop habitat.

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Empire Wind Scallop Monitoring Survey
2023 Annual Report

FIGURES

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LIST OF FIGURES

Figure Page

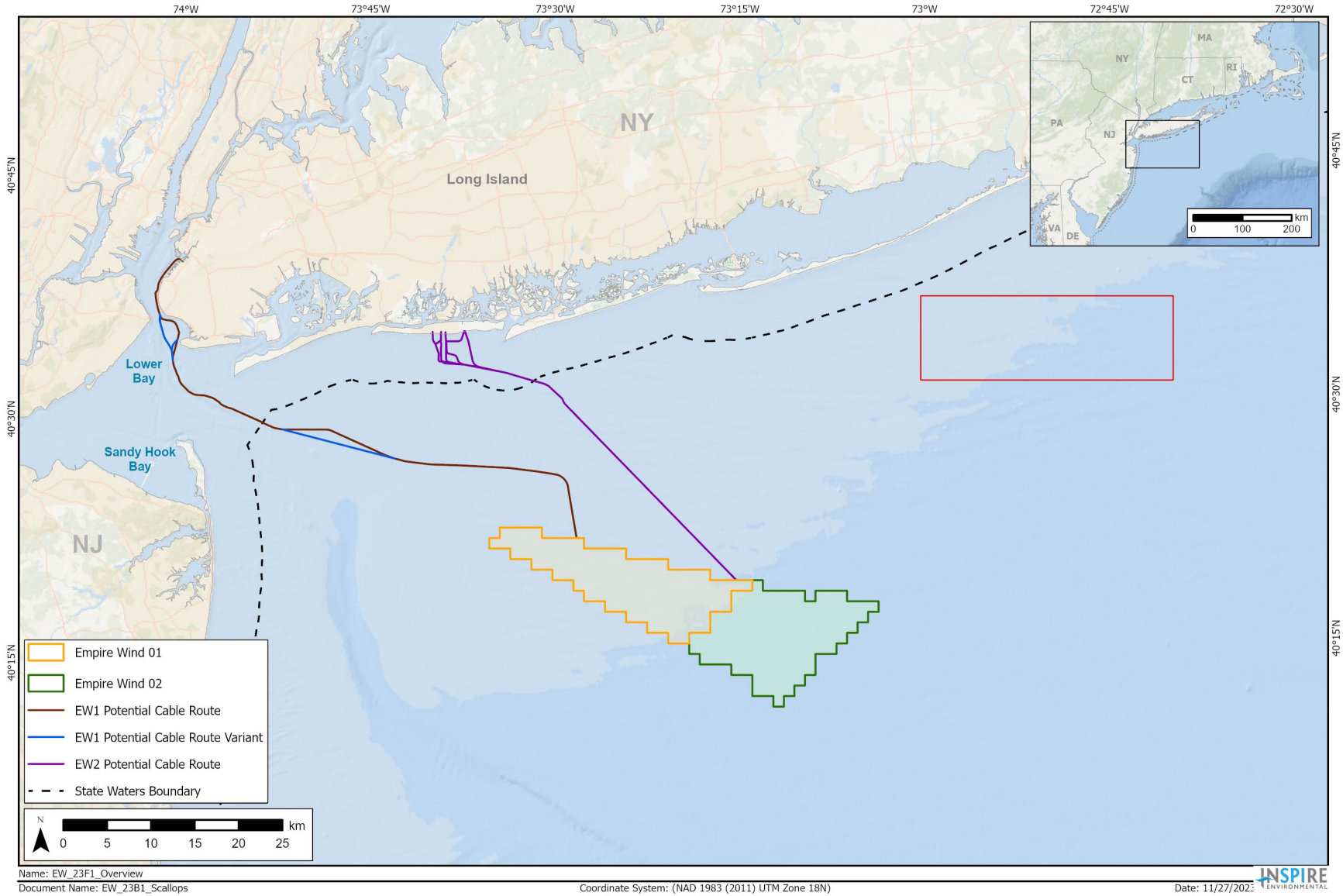


Figure 1-1. Map of the Empire Wind Lease Area including export cable routes

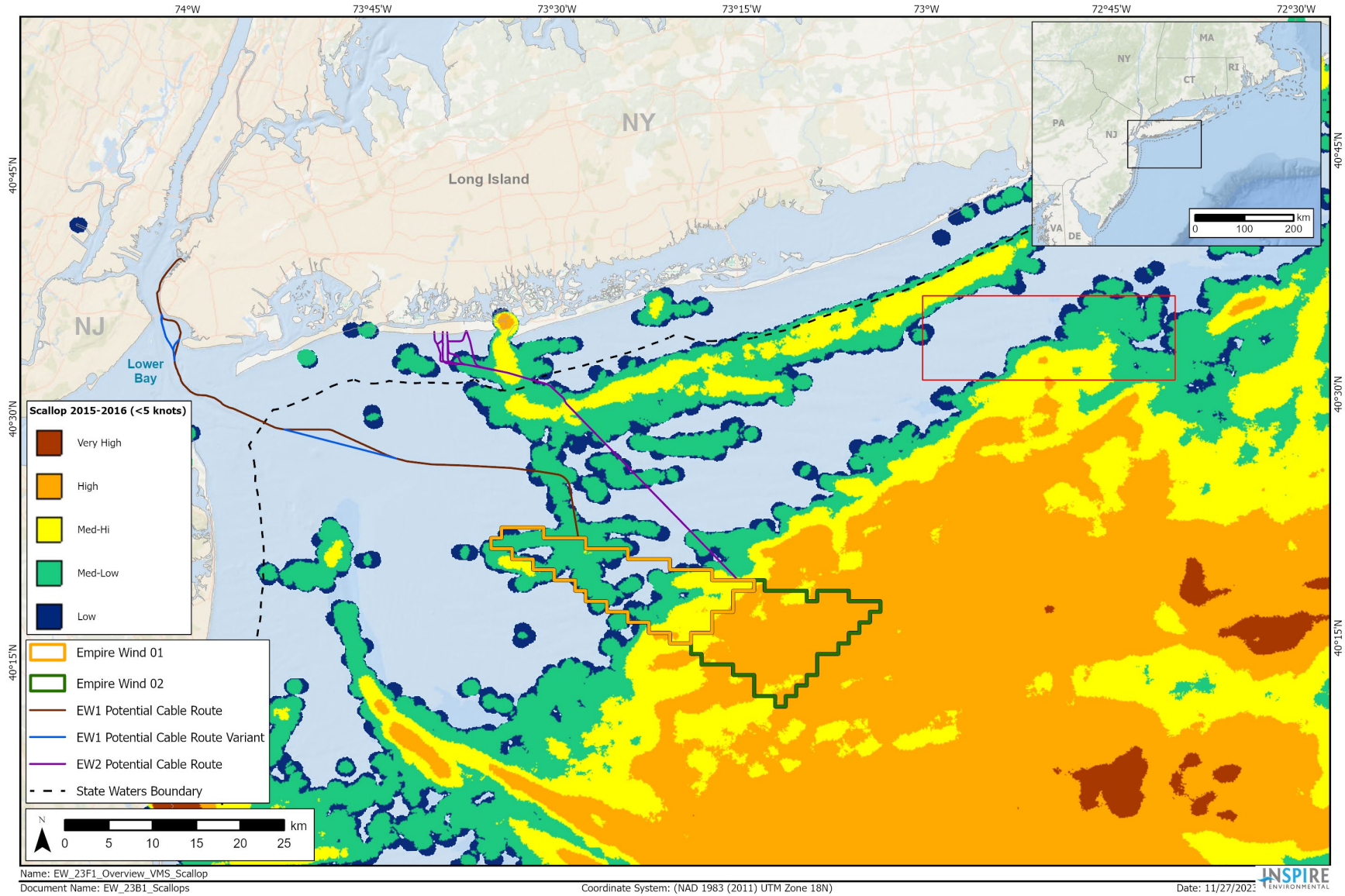


Figure 1-2. Vessel Monitoring System (VMS) data for the scallop dredge fleet from 2015 to 2016 in the Empire Wind region

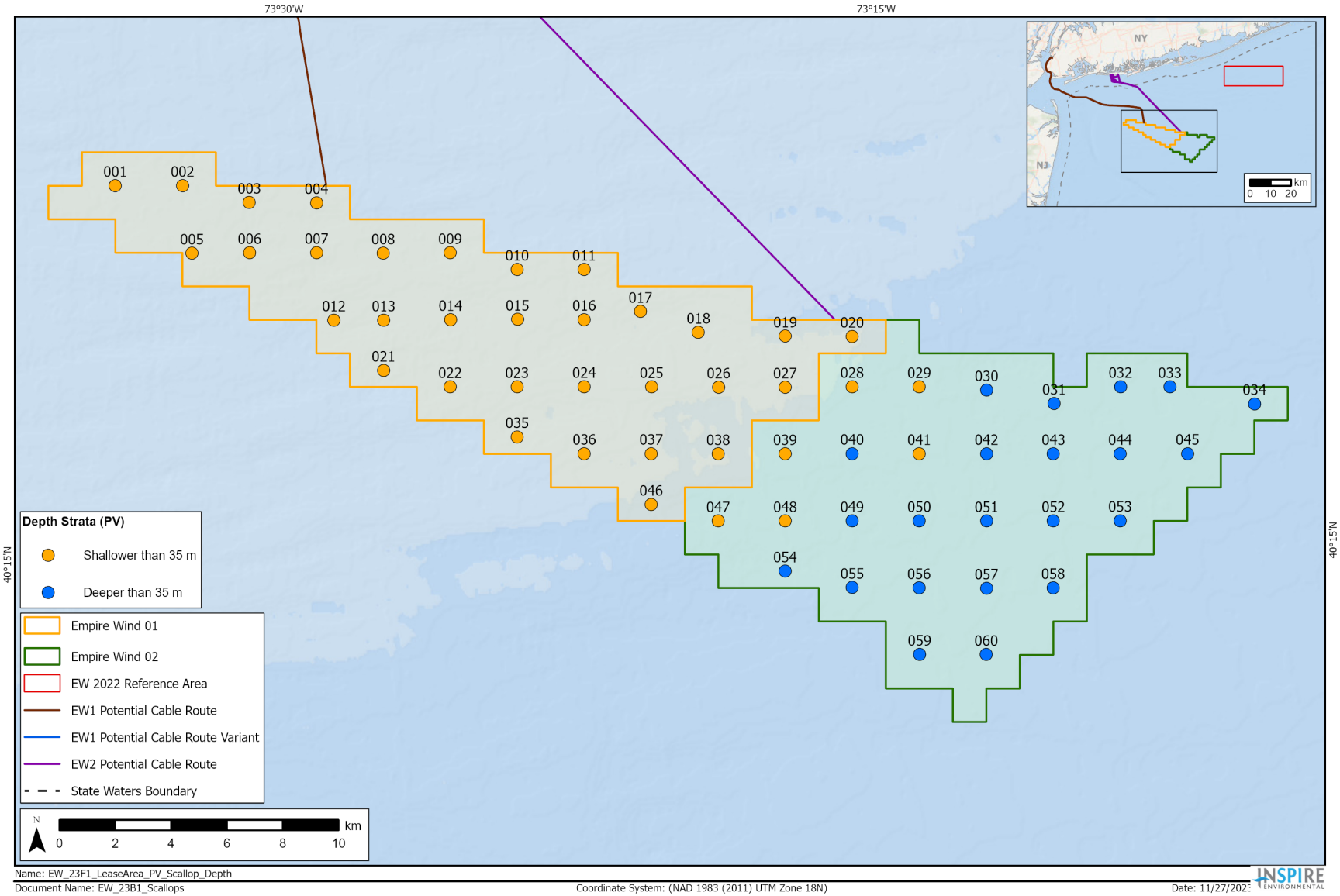


Figure 2-1. Locations of plan view imaging (PV) stations in the Empire Wind Lease Area for 2023 sampling. Shallow (<35 m) and deeper (>35 m) stations are color coded.

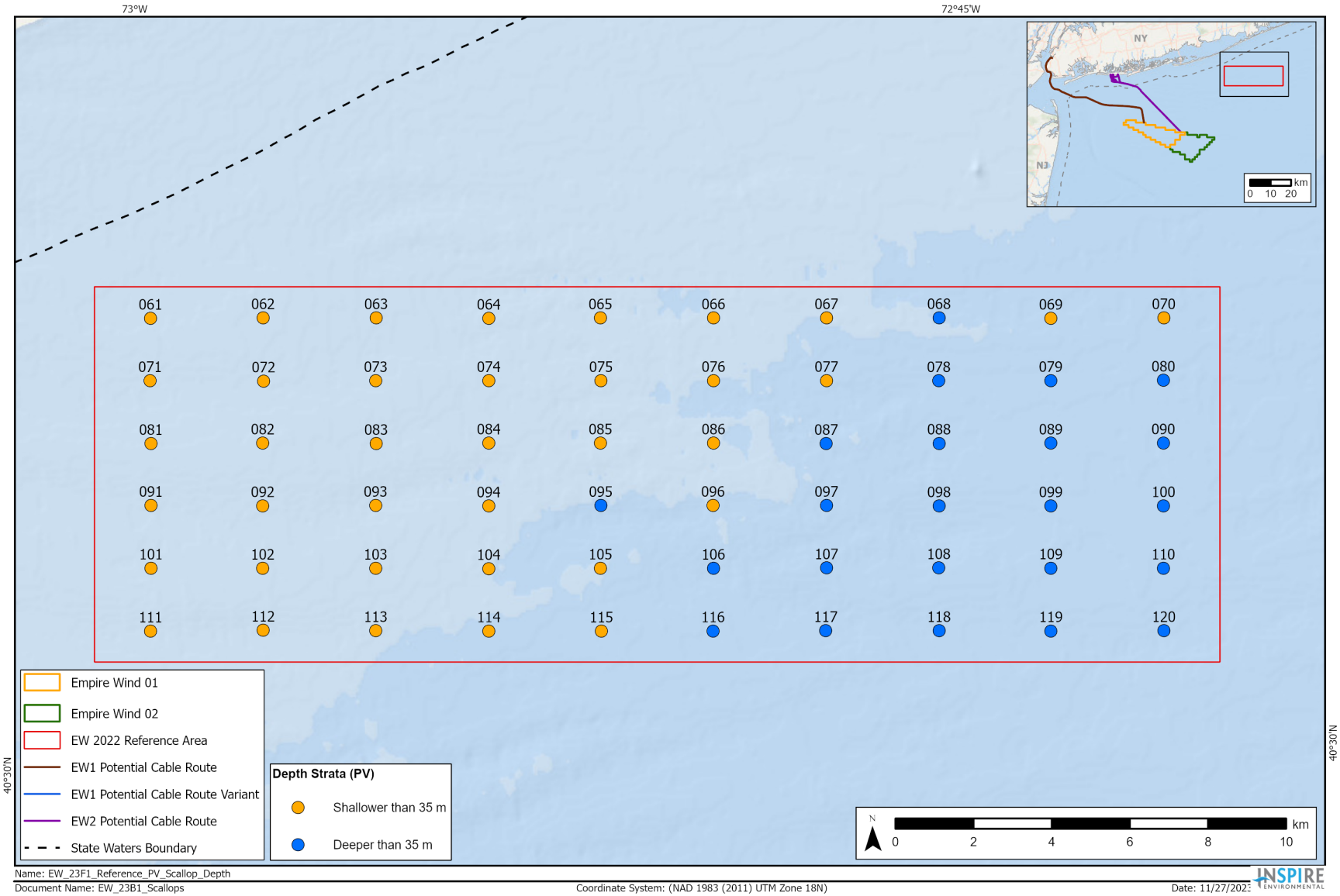


Figure 2-2. Locations of PV stations in the Reference Area for 2023 sampling. Shallow (<35 m) and deeper (>35 m) stations are color coded.

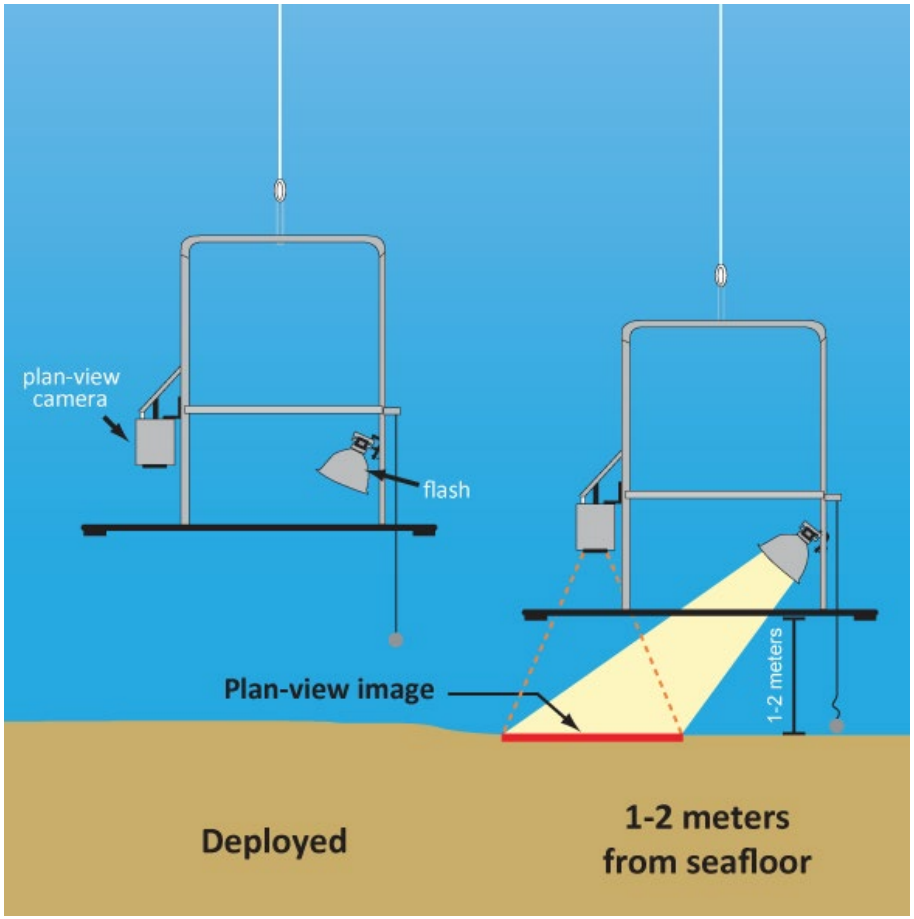


Figure 2-3. Operation of the plan view imaging system

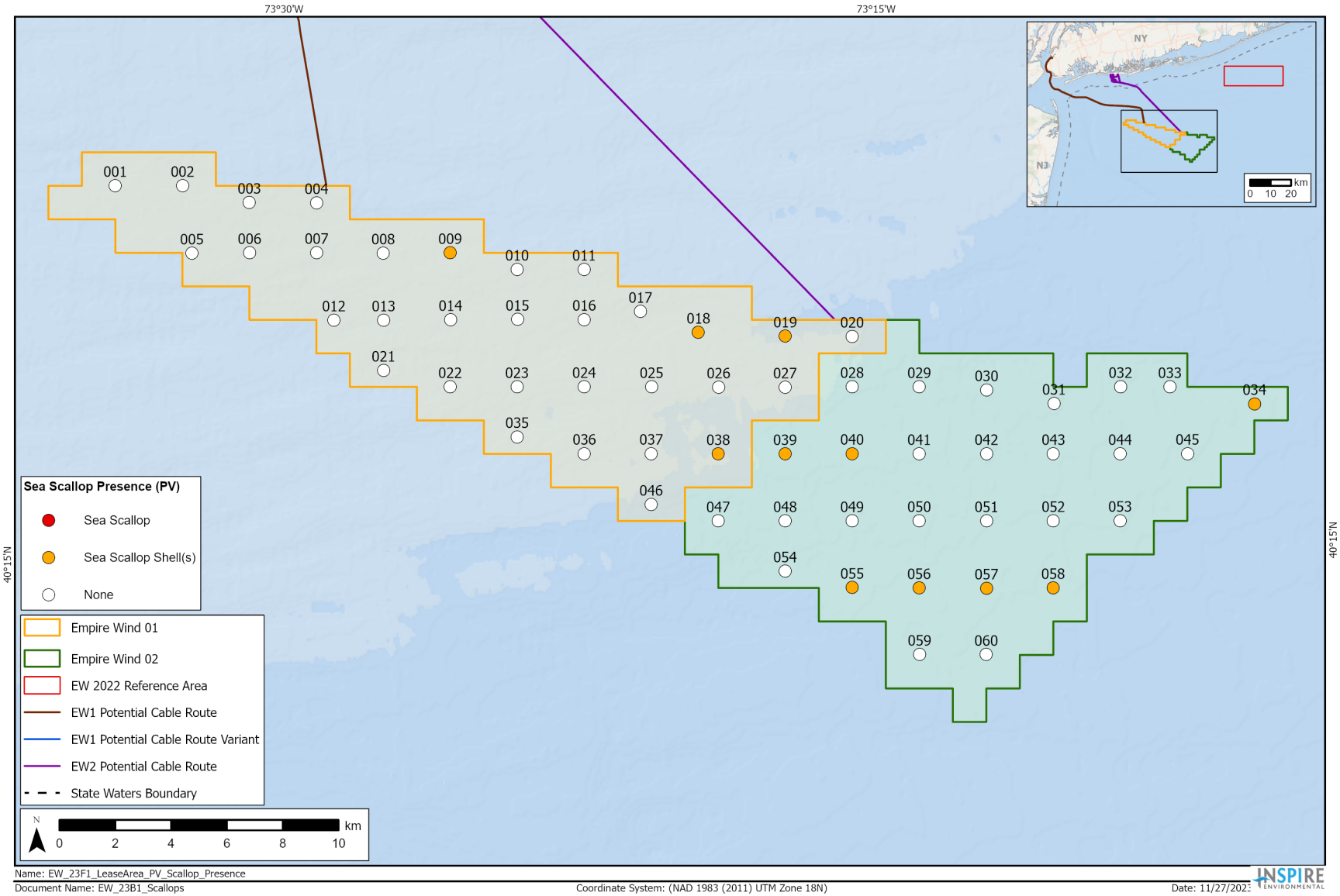


Figure 3-1. Locations of all stations with sea scallops and sea scallop shells visible in PV imagery in the Empire Wind Lease Area and Reference Area

Figure 3-2. Scallop amongst sand dollars at Station 116 in the Reference Area

Figure 3-3. Scallop amongst sand dollars and sea stars at Station 120 in the Reference Area

(A)

(B)

Figure 3-4. Dense aggregations of small sand dollars in the (A) Empire Wind Lease Area and (B) Reference Area

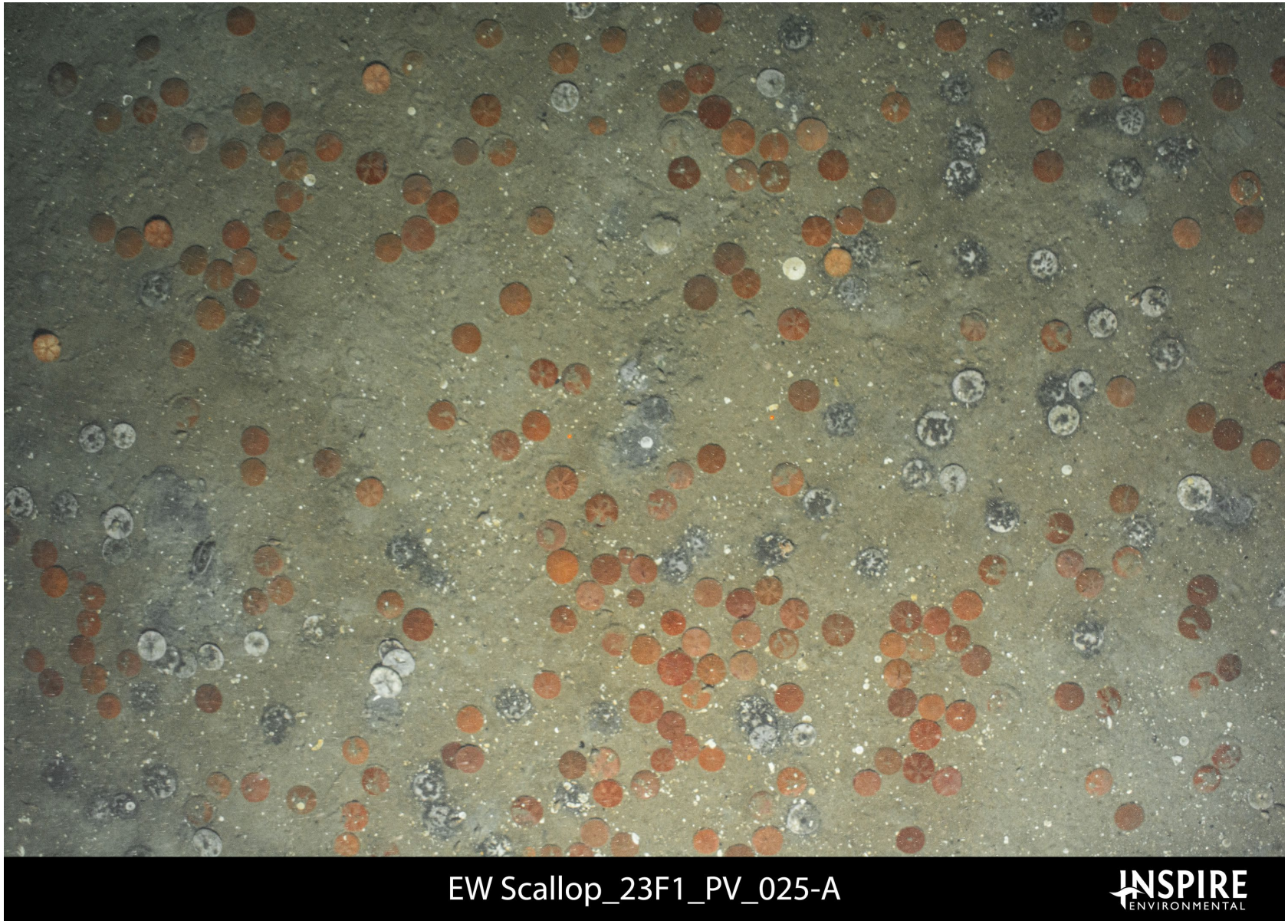


Figure 3-5. Combination of living and dead sand dollars at Station 25 in the Empire Wind Lease Area

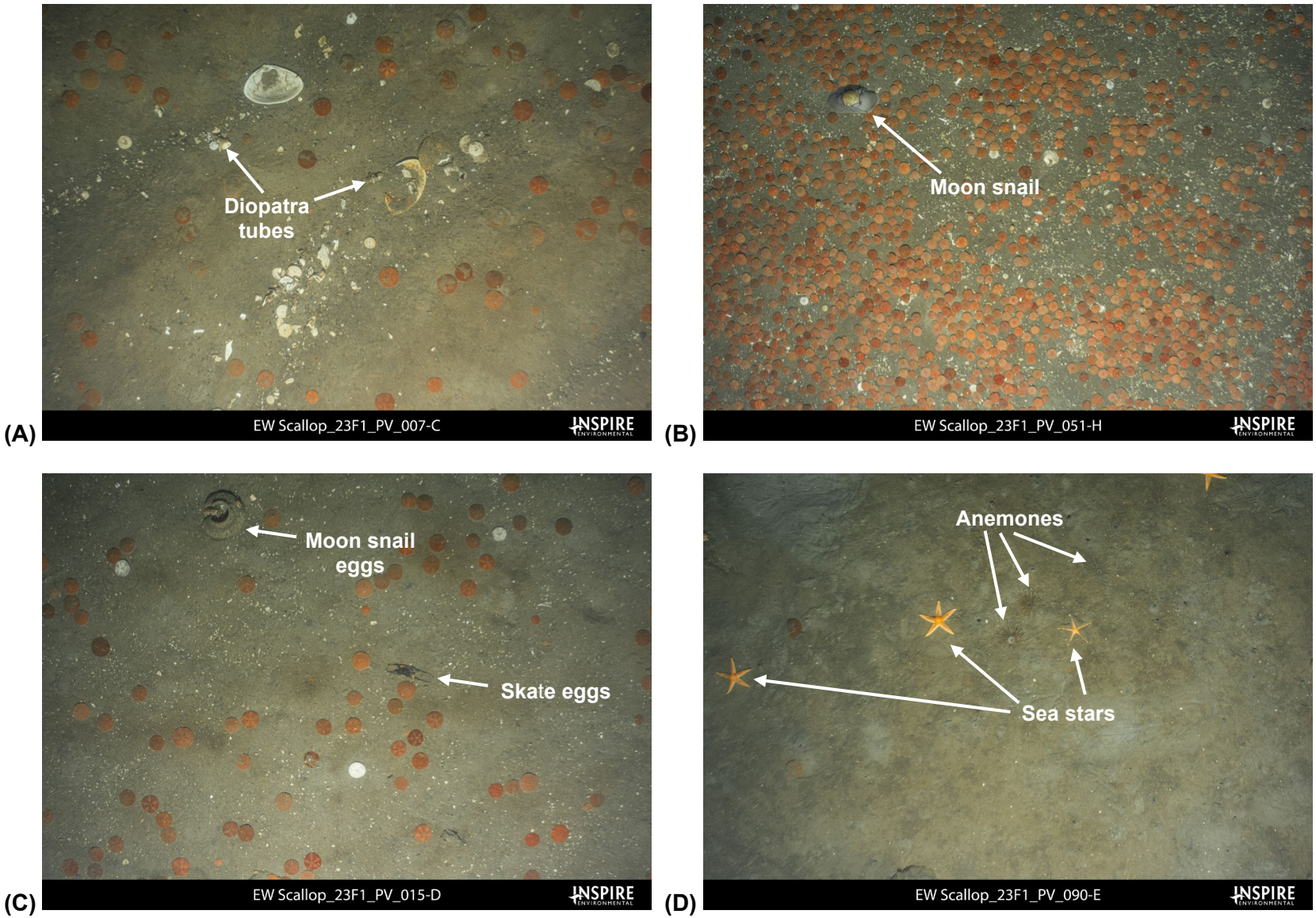


Figure 3-6. Examples of benthic organisms observed at the Empire Wind Lease Area and/or Reference Area in PV images (A) Diopatra worms; (B) moon snail, (C) moon snail eggs and skate eggs; and (D) Cerianthid tube-dwelling anemones and sea stars

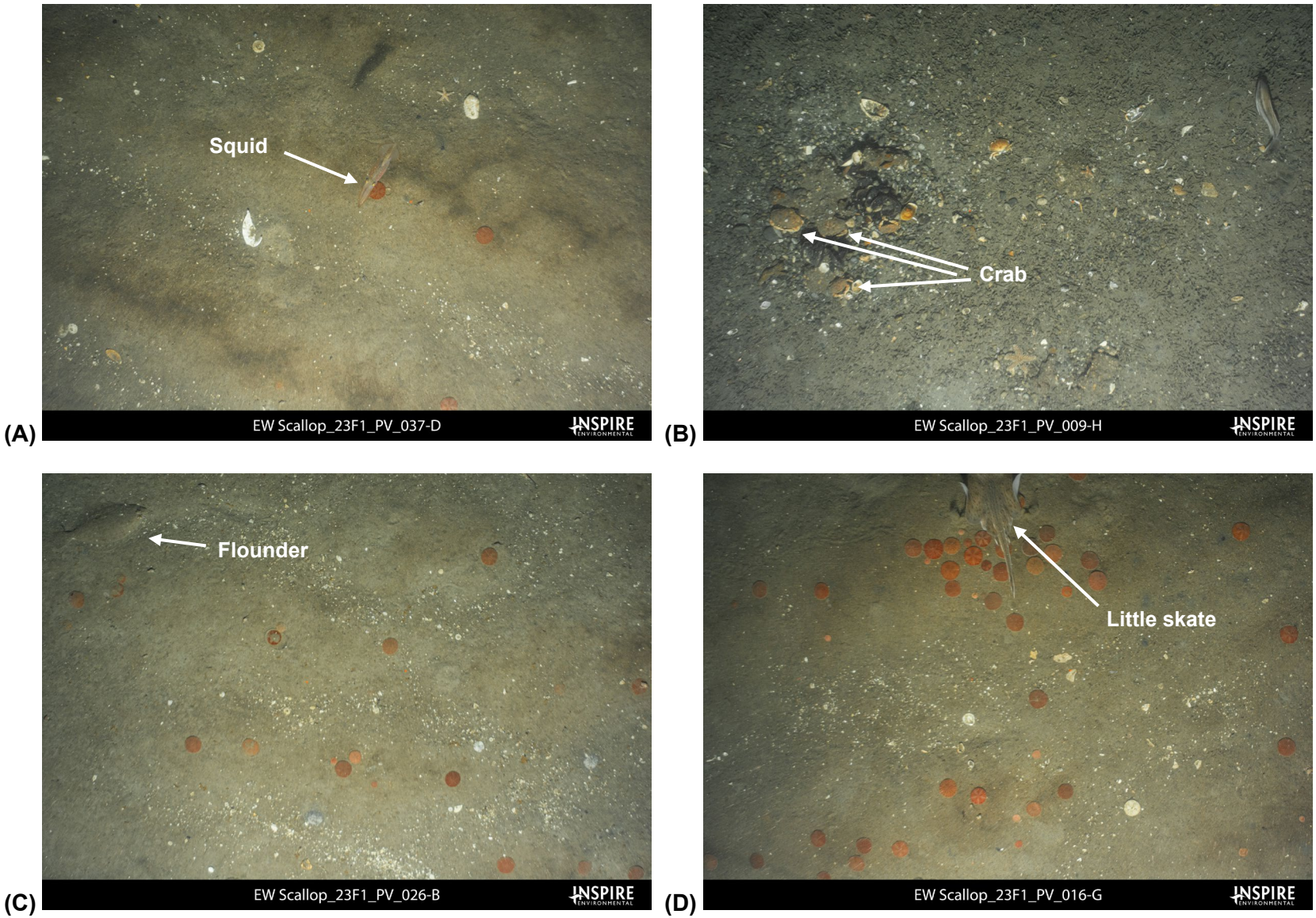
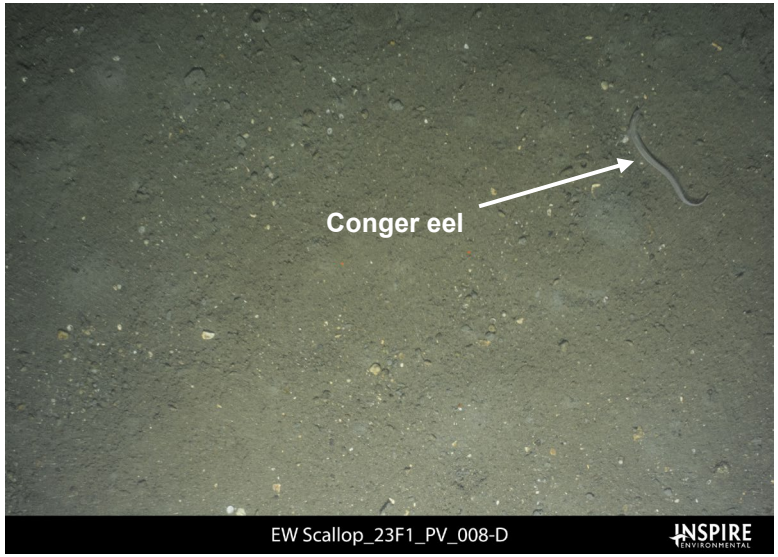


Figure 3-7. Examples of more highly mobile benthic fauna at the Empire Wind Lease Area and/or Reference Area (A) squid; (B) crab; (C) flounder; (D) little skate; (E) conger eel; and (F) fish

(E)



(F)

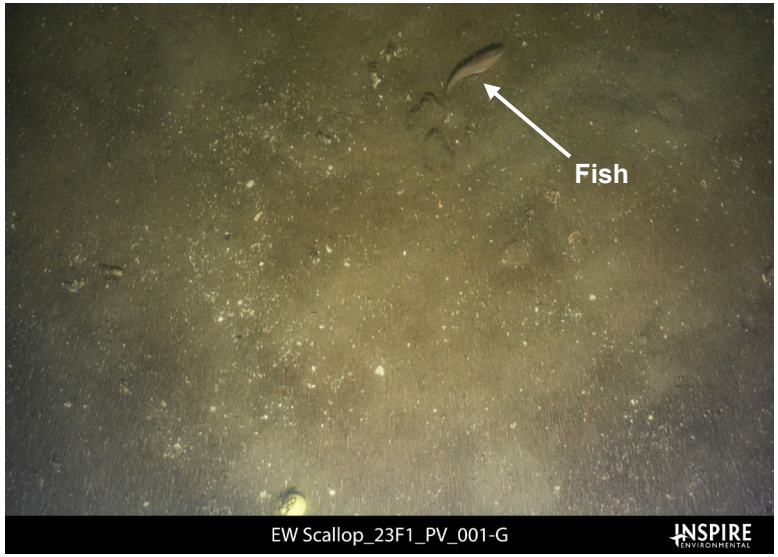


Figure 3-7. continued ***Examples of more highly mobile benthic fauna at the Empire Wind Lease Area and/or Reference Area (A) squid; (B) crab; (C) flounder; (D) little skate; (E) conger eel; and (F) fish***

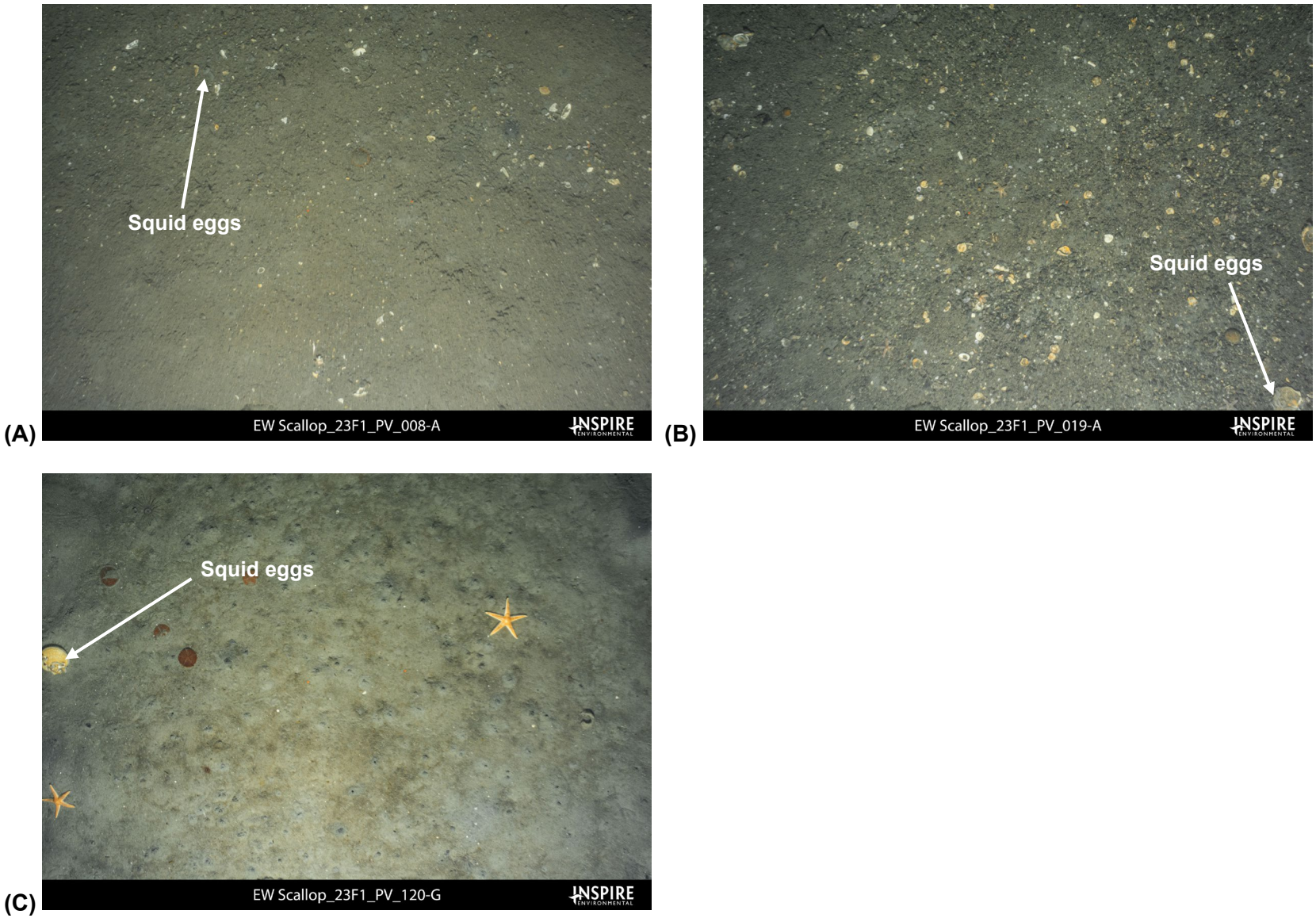


Figure 3-8. Squid eggs present in the Empire Wind Lease Area at (A) Station 8; (B) Station 19; (C) and in the Reference Area at Station 120

(A)

(B)

Figure 3-9. Example PV images of sediment ripples indicative of strong currents in the (A) Empire Wind Lease Area and (B) Reference Area

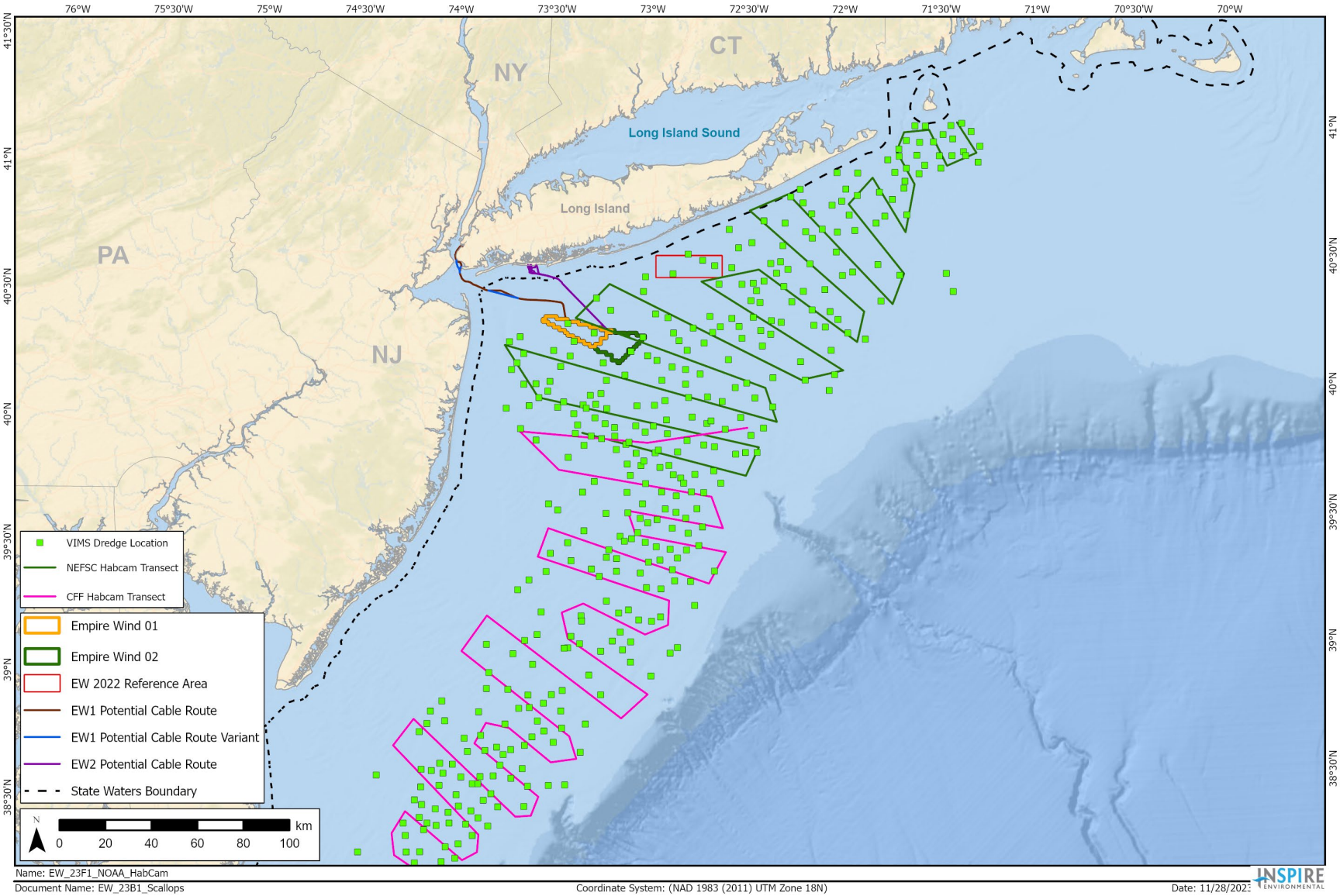


Figure 4-1. Mid-Atlantic HabCam and dredge survey transects as depicted in the 2022 NOAA Northeast Sea Scallop Survey Results (NOAA Fisheries 2022c). NEFSC=Northeast Fisheries Science Center, CFF=Coonamessett Farm Foundation, VIMS=Virginia Institute of Marine Science.

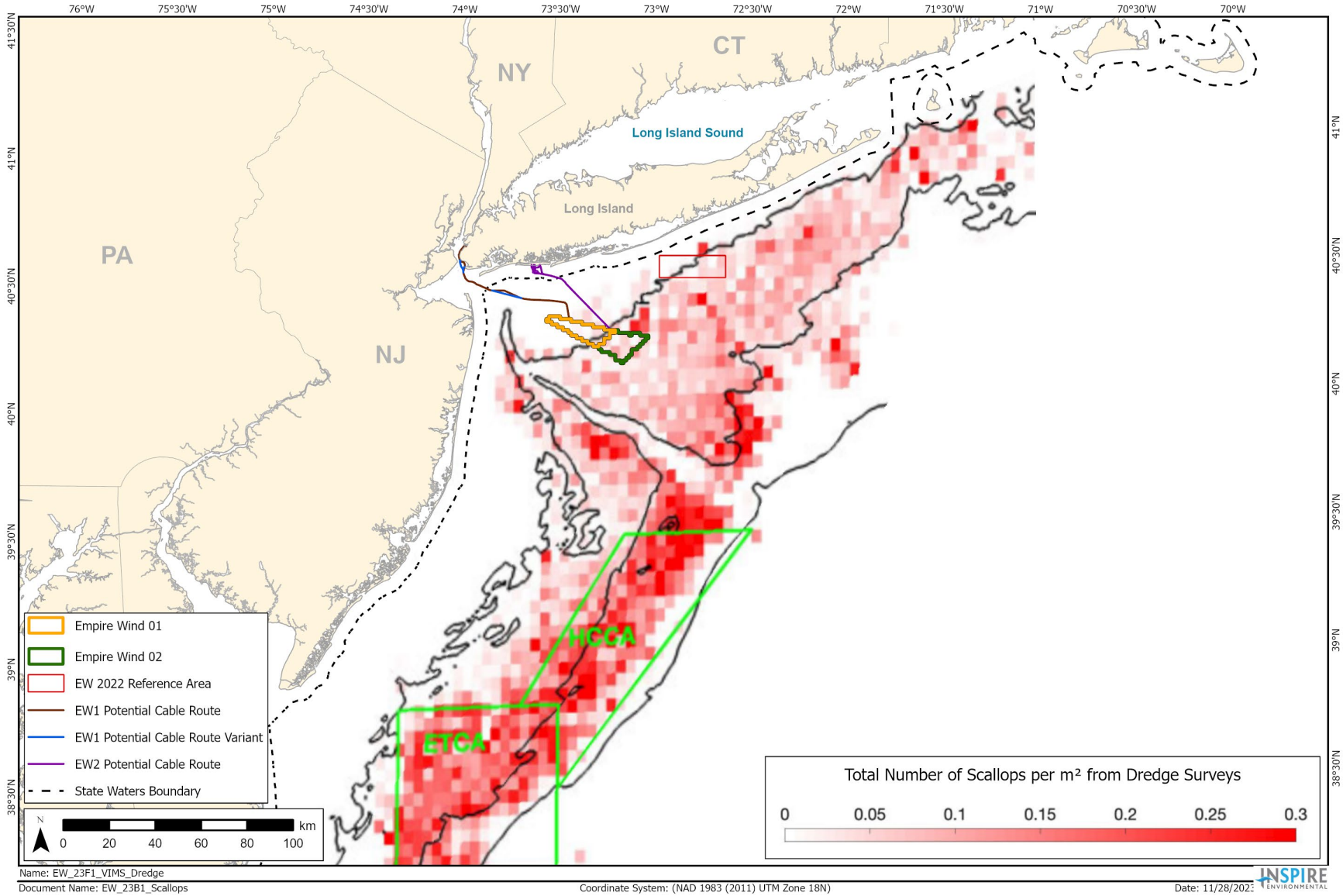


Figure 4-2. Relative densities of Atlantic sea scallops collected in dredge surveys conducted by Virginia Institute of Marine Science (VIMS) as part of the NOAA Northeast Sea Scallop Survey. Source: Figure 1 in Zang et al. 2023.

Empire Wind Scallop Monitoring Survey
2023 Annual Report

APPENDICES

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LIST OF APPENDICES

Appendix A - Plan View Station Location Details

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	001	A	6/17/2023	17:06:48	17:07:00	621195.32	4470010.12	40.3718658	-73.5724309	24.4	0.9	23.5	Tide heights are to closest minute.
Lease Area	PV	001	B	6/17/2023	17:07:32	17:08:00	621204.71	4469999.11	40.3717653	-73.5723225	24.4	0.9	23.5	
Lease Area	PV	001	C	6/17/2023	17:08:06	17:08:00	621196.29	4469997.59	40.3717529	-73.5724219	24.4	0.9	23.5	
Lease Area	PV	001	D	6/17/2023	17:08:48	17:09:00	621203.08	4470006.78	40.3718346	-73.5723402	24.4	0.9	23.5	
Lease Area	PV	001	E	6/17/2023	17:09:25	17:09:00	621195.11	4470004.93	40.3718191	-73.5724344	24.4	0.9	23.5	
Lease Area	PV	001	F	6/17/2023	17:10:02	17:10:00	621191.62	4469994.29	40.3717238	-73.5724775	24.4	0.9	23.5	
Lease Area	PV	001	G	6/17/2023	17:10:39	17:11:00	621202.27	4469995.28	40.3717312	-73.5723519	24.4	0.9	23.5	
Lease Area	PV	001	H	6/17/2023	17:11:09	17:11:00	621201.04	4469991.99	40.3717017	-73.572367	24.4	0.9	23.5	
Lease Area	PV	002	A	6/17/2023	17:49:17	17:49:00	623603	4470009.77	40.3715092	-73.5440794	24.1	1.1	23.0	
Lease Area	PV	002	B	6/17/2023	17:49:53	17:50:00	623596.84	4470009.19	40.3715049	-73.544152	24.1	1.1	23.0	
Lease Area	PV	002	C	6/17/2023	17:50:21	17:50:00	623592.05	4470003.56	40.3714549	-73.5442095	24.1	1.1	23.0	
Lease Area	PV	002	D	6/17/2023	17:50:49	17:51:00	623605.27	4470000.94	40.3714293	-73.5440543	24.1	1.1	23.0	
Lease Area	PV	002	E	6/17/2023	17:51:14	17:51:00	623600.19	4469998.34	40.3714067	-73.5441147	24.1	1.1	23.0	
Lease Area	PV	002	F	6/17/2023	17:51:38	17:52:00	623589.38	4469996.09	40.371388	-73.5442424	24.1	1.1	23.0	
Lease Area	PV	002	G	6/17/2023	17:52:04	17:52:00	623598.65	4469990.62	40.3713374	-73.5441343	24.1	1.1	23.0	
Lease Area	PV	002	H	6/17/2023	17:52:30	17:53:00	623610.81	4469992.69	40.3713542	-73.5439907	24.1	1.1	23.0	
Lease Area	PV	003	A	6/17/2023	18:33:28	18:33:00	625999.56	4469406.55	40.3657177	-73.5159783	26.2	1.3	24.9	
Lease Area	PV	003	B	6/17/2023	18:34:02	18:34:00	625991.82	4469411.53	40.3657637	-73.5160685	26.2	1.3	24.9	
Lease Area	PV	003	C	6/17/2023	18:34:32	18:35:00	625992.52	4469406.13	40.365715	-73.5160613	26.2	1.3	24.9	
Lease Area	PV	003	D	6/17/2023	18:35:10	18:35:00	625993.72	4469397.45	40.3656366	-73.5160489	26.2	1.3	24.9	
Lease Area	PV	003	E	6/17/2023	18:35:43	18:36:00	625988.9	4469402.22	40.3656803	-73.5161047	26.2	1.3	24.9	
Lease Area	PV	003	F	6/17/2023	18:36:21	18:36:00	626003.97	4469391.34	40.36558	-73.5159294	26.2	1.3	24.9	
Lease Area	PV	003	G	6/17/2023	18:36:54	18:37:00	626010.02	4469402.24	40.3656773	-73.515856	26.2	1.3	24.9	
Lease Area	PV	003	H	6/17/2023	18:37:25	18:37:00	626010.58	4469408.06	40.3657296	-73.5158483	26.2	1.3	24.9	
Lease Area	PV	003	I	6/17/2023	18:38:33	18:39:00	625993.98	4469409.13	40.3657418	-73.5160435	26.2	1.3	24.9	
Lease Area	PV	005	A	6/17/2023	19:08:04	19:08:00	623937.09	4467587.3	40.3496421	-73.5406159	24.1	1.4	22.7	
Lease Area	PV	005	B	6/17/2023	19:08:40	19:09:00	623934.91	4467590.97	40.3496754	-73.5406409	24.1	1.4	22.6	
Lease Area	PV	005	C	6/17/2023	19:09:12	19:09:00	623932.39	4467599.66	40.3497541	-73.5406689	24.1	1.4	22.6	
Lease Area	PV	005	D	6/17/2023	19:09:44	19:10:00	623933.92	4467604.32	40.3497958	-73.54065	24.1	1.4	22.6	
Lease Area	PV	005	E	6/17/2023	19:10:24	19:10:00	623941.87	4467609.17	40.3498383	-73.5405554	24.1	1.4	22.6	
Lease Area	PV	005	F	6/17/2023	19:11:00	19:11:00	623947.33	4467597.31	40.3497307	-73.5404935	24.1	1.4	22.6	
Lease Area	PV	005	G	6/17/2023	19:11:40	19:12:00	623948.7	4467603.16	40.3497832	-73.5404762	24.1	1.4	22.6	
Lease Area	PV	005	H	6/17/2023	19:12:26	19:12:00	623951.36	4467594.9	40.3497084	-73.5404465	24.1	1.4	22.6	
Lease Area	PV	005	I	6/17/2023	19:13:17	19:13:00	623947.51	4467591.41	40.3496775	-73.5404925	24.1	1.4	22.6	
Lease Area	PV	006	A	6/17/2023	19:43:57	19:44:00	626010.21	4467602.72	40.3494704	-73.5162092	25.9	1.5	24.4	
Lease Area	PV	006	B	6/17/2023	19:44:27	19:44:00	626009.41	4467607.59	40.3495144	-73.5162176	25.9	1.5	24.4	
Lease Area	PV	006	C	6/17/2023	19:45:11	19:45:00	626000.76	4467610.3	40.3495401	-73.5163189	25.9	1.5	24.4	
Lease Area	PV	006	D	6/17/2023	19:45:39	19:46:00	625991.88	4467609.81	40.349537	-73.5164236	25.9	1.5	24.4	
Lease Area	PV	006	E	6/17/2023	19:46:22	19:46:00	625991.87	4467601.94	40.3494661	-73.5164252	25.9	1.5	24.4	
Lease Area	PV	006	F	6/17/2023	19:47:00	19:47:00	625993.05	4467593.57	40.3493906	-73.516413	25.9	1.5	24.4	
Lease Area	PV	006	G	6/17/2023	19:47:31	19:48:00	626002.72	4467583.77	40.3493008	-73.5163011	25.9	1.5	24.4	Outside of watch circle.
Lease Area	PV	006	H	6/17/2023	19:48:10	19:48:00	625998.26	4467592.13	40.3493768	-73.516352	25.9	1.5	24.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	006	I	6/17/2023	19:49:31	19:50:00	626005.93	4467602.25	40.3494668	-73.5162597	25.9	1.5	24.4	
Lease Area	PV	004	A	6/17/2023	20:09:25	20:09:00	628400.93	4469391.24	40.3652135	-73.4877074	27.4	1.5	25.9	
Lease Area	PV	004	B	6/17/2023	20:09:54	20:10:00	628397.37	4469393.78	40.3652369	-73.4877488	27.4	1.5	25.9	
Lease Area	PV	004	C	6/17/2023	20:10:31	20:11:00	628394.67	4469402.71	40.3653177	-73.4877788	27.4	1.5	25.9	
Lease Area	PV	004	D	6/17/2023	20:11:12	20:11:00	628399.94	4469409.6	40.365379	-73.4877153	27.4	1.5	25.9	
Lease Area	PV	004	E	6/17/2023	20:11:48	20:12:00	628405.38	4469397.68	40.3652708	-73.4876537	27.4	1.5	25.9	
Lease Area	PV	004	F	6/17/2023	20:12:14	20:12:00	628406.5	4469391.67	40.3652165	-73.4876417	27.4	1.5	25.9	
Lease Area	PV	004	G	6/17/2023	20:12:57	20:13:00	628404.44	4469403.52	40.3653235	-73.4876636	27.4	1.5	25.9	
Lease Area	PV	004	H	6/17/2023	20:13:38	20:14:00	628392.39	4469394.65	40.3652455	-73.4878072	27.4	1.5	25.9	
Lease Area	PV	007	A	6/17/2023	20:36:48	20:37:00	628405.06	4467607.78	40.3491508	-73.4880176	27.7	1.5	26.2	
Lease Area	PV	007	B	6/17/2023	20:37:16	20:37:00	628409.08	4467611.2	40.349181	-73.4879696	27.7	1.5	26.2	
Lease Area	PV	007	C	6/17/2023	20:38:13	20:38:00	628409.57	4467599.22	40.349073	-73.4879663	27.7	1.5	26.2	
Lease Area	PV	007	D	6/17/2023	20:38:49	20:39:00	628399.59	4467603.46	40.3491127	-73.4880829	27.7	1.5	26.3	
Lease Area	PV	007	E	6/17/2023	20:39:18	20:39:00	628391.36	4467610.84	40.3491805	-73.4881783	27.7	1.5	26.3	
Lease Area	PV	007	F	6/17/2023	20:40:04	20:40:00	628395.32	4467595.13	40.3490384	-73.4881348	27.7	1.5	26.3	
Lease Area	PV	007	G	6/17/2023	20:40:36	20:41:00	628385.16	4467600.62	40.3490894	-73.4882533	27.7	1.5	26.3	
Lease Area	PV	007	H	6/17/2023	20:42:40	20:43:00	628401.19	4467587.61	40.3489697	-73.4880673	27.7	1.5	26.3	
Lease Area	PV	012	A	6/17/2023	21:03:04	21:03:00	629029.01	4465191.39	40.3272923	-73.4811612	29.6	1.4	28.1	
Lease Area	PV	012	B	6/17/2023	21:04:07	21:04:00	629035.88	4465192.98	40.3273055	-73.48108	29.6	1.4	28.1	
Lease Area	PV	012	C	6/17/2023	21:04:40	21:05:00	629032.51	4465201.79	40.3273854	-73.4811179	29.6	1.4	28.1	
Lease Area	PV	012	D	6/17/2023	21:05:09	21:05:00	629032.38	4465208.25	40.3274436	-73.4811181	29.6	1.4	28.1	
Lease Area	PV	012	E	6/17/2023	21:05:42	21:06:00	629027.37	4465210.35	40.3274633	-73.4811767	29.6	1.4	28.1	
Lease Area	PV	012	F	6/17/2023	21:06:24	21:06:00	629025.83	4465203.34	40.3274004	-73.4811962	29.6	1.4	28.1	
Lease Area	PV	012	G	6/17/2023	21:06:53	21:07:00	629029.23	4465195.67	40.3273308	-73.4811577	29.6	1.4	28.2	
Lease Area	PV	012	H	6/17/2023	21:07:47	21:08:00	629044.89	4465201.8	40.3273836	-73.4809722	29.6	1.4	28.2	
Lease Area	PV	021	A	6/17/2023	21:28:11	21:28:00	630803.18	4463394.07	40.3108295	-73.4606518	30.5	1.3	29.1	
Lease Area	PV	021	B	6/17/2023	21:28:54	21:29:00	630798.62	4463396.92	40.3108559	-73.4607048	30.5	1.3	29.1	
Lease Area	PV	021	C	6/17/2023	21:29:27	21:29:00	630791.99	4463403.43	40.3109155	-73.4607815	30.5	1.3	29.1	
Lease Area	PV	021	D	6/17/2023	21:30:23	21:30:00	630799.18	4463410.31	40.3109764	-73.4606955	30.5	1.3	29.2	
Lease Area	PV	021	E	6/17/2023	21:31:13	21:31:00	630797.81	4463412.09	40.3109926	-73.4607112	30.5	1.3	29.2	
Lease Area	PV	021	F	6/17/2023	21:31:56	21:32:00	630806.63	4463402.29	40.310903	-73.4606095	30.5	1.3	29.2	
Lease Area	PV	021	G	6/17/2023	21:32:30	21:33:00	630804.65	4463408.58	40.3109599	-73.4606315	30.5	1.3	29.2	
Lease Area	PV	021	H	6/17/2023	21:40:13	21:40:00	630796.36	4463387.87	40.3107747	-73.4607333	30.5	1.3	29.2	
Lease Area	PV	013	A	6/17/2023	22:23:05	22:23:00	630808.96	4465191.34	40.3270149	-73.460216	29.9	1.1	28.8	
Lease Area	PV	013	B	6/17/2023	22:23:38	22:24:00	630810.77	4465197.95	40.3270741	-73.4601933	29.9	1.1	28.8	
Lease Area	PV	013	C	6/17/2023	22:24:16	22:24:00	630803.92	4465195.62	40.3270542	-73.4602744	29.9	1.1	28.8	
Lease Area	PV	013	D	6/17/2023	22:24:45	22:25:00	630797.26	4465190.52	40.3270093	-73.4603538	29.9	1.1	28.8	
Lease Area	PV	013	E	6/17/2023	22:25:37	22:26:00	630795.49	4465200.48	40.3270993	-73.4603726	29.9	1.1	28.8	
Lease Area	PV	013	F	6/17/2023	22:26:05	22:26:00	630787.75	4465208.21	40.3271701	-73.4604621	29.9	1.1	28.8	
Lease Area	PV	013	G	6/17/2023	22:26:35	22:27:00	630803.24	4465199	40.3270847	-73.4602817	29.9	1.1	28.8	
Lease Area	PV	013	H	6/17/2023	22:27:05	22:27:00	630811.84	4465205.37	40.3271408	-73.4601792	29.9	1.1	28.8	
Lease Area	PV	008	A	6/17/2023	22:53:45	22:54:00	630795.86	4467592.89	40.3486453	-73.4598783	28.7	0.9	27.7	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	008	B	6/17/2023	22:54:22	22:54:00	630791.15	4467600.25	40.3487123	-73.4599323	28.7	0.9	27.7	
Lease Area	PV	008	C	6/17/2023	22:55:08	22:55:00	630792.19	4467608.18	40.3487836	-73.4599184	28.7	0.9	27.7	
Lease Area	PV	008	D	6/17/2023	22:55:44	22:56:00	630799.67	4467603.42	40.3487395	-73.4598313	28.7	0.9	27.7	
Lease Area	PV	008	E	6/17/2023	22:56:16	22:56:00	630801.81	4467613.21	40.3488274	-73.4598041	28.7	0.9	27.7	
Lease Area	PV	008	F	6/17/2023	22:56:53	22:57:00	630806.88	4467606.82	40.348769	-73.4597458	28.7	0.9	27.7	
Lease Area	PV	008	G	6/17/2023	22:59:00	22:59:00	630788.67	4467600.58	40.3487157	-73.4599614	28.7	0.9	27.7	
Lease Area	PV	008	H	6/17/2023	23:00:00	23:00:00	630795	4467590.01	40.3486195	-73.459889	28.7	0.9	27.8	
Lease Area	PV	009	A	6/17/2023	23:19:50	23:20:00	633189.24	4467601.5	40.3483442	-73.4317044	30.5	0.8	29.7	
Lease Area	PV	009	B	6/17/2023	23:20:36	23:21:00	633196.76	4467611.86	40.3484363	-73.4316137	30.5	0.8	29.7	
Lease Area	PV	009	C	6/17/2023	23:21:15	23:21:00	633206.14	4467610.57	40.3484232	-73.4315036	30.5	0.8	29.7	
Lease Area	PV	009	D	6/17/2023	23:21:51	23:22:00	633215.7	4467605.14	40.3483728	-73.4313922	30.5	0.8	29.7	Outside of watch circle.
Lease Area	PV	009	E	6/17/2023	23:24:09	23:24:00	633211.85	4467598.13	40.3483102	-73.431439	30.5	0.8	29.7	
Lease Area	PV	009	F	6/17/2023	23:24:55	23:25:00	633200.82	4467590.62	40.3482444	-73.4315704	30.5	0.8	29.7	
Lease Area	PV	009	G	6/17/2023	23:25:33	23:26:00	633196.63	4467592.17	40.348259	-73.4316194	30.5	0.8	29.7	
Lease Area	PV	009	H	6/17/2023	23:26:05	23:26:00	633196.19	4467598.43	40.3483154	-73.4316232	30.5	0.8	29.7	
Lease Area	PV	009	I	6/17/2023	23:27:12	23:27:00	633208.81	4467604	40.3483636	-73.4314735	30.5	0.8	29.7	
Lease Area	PV	014	A	6/17/2023	23:44:51	23:45:00	633203.49	4465209.09	40.3267961	-73.4320356	29.3	0.7	28.6	
Lease Area	PV	014	B	6/17/2023	23:45:31	23:46:00	633195.35	4465205.9	40.3267687	-73.4321321	29.3	0.7	28.6	
Lease Area	PV	014	C	6/17/2023	23:46:01	23:46:00	633189.84	4465205.81	40.3267688	-73.4321969	29.3	0.7	28.6	
Lease Area	PV	014	D	6/17/2023	23:46:45	23:47:00	633201.19	4465208.29	40.3267893	-73.4320628	29.3	0.7	28.6	
Lease Area	PV	014	E	6/17/2023	23:47:55	23:48:00	633212.26	4465204.4	40.3267525	-73.4319334	29.3	0.7	28.6	
Lease Area	PV	014	F	6/17/2023	23:49:09	23:49:00	633210.5	4465205.74	40.3267649	-73.4319538	29.3	0.6	28.6	
Lease Area	PV	014	G	6/17/2023	23:50:24	23:50:00	633196.49	4465194.31	40.3266642	-73.4321211	29.3	0.6	28.6	
Lease Area	PV	014	H	6/17/2023	23:50:58	23:51:00	633198.83	4465189.1	40.3266169	-73.4320946	29.3	0.6	28.6	
Lease Area	PV	022	A	6/18/2023	0:14:30	0:15:00	633191.03	4462804.71	40.3051445	-73.4326831	29.3	0.5	28.8	
Lease Area	PV	022	B	6/18/2023	0:15:18	0:15:00	633200.1	4462809.78	40.3051887	-73.4325753	29.3	0.5	28.8	
Lease Area	PV	022	C	6/18/2023	0:16:11	0:16:00	633211.13	4462804.43	40.3051387	-73.4324467	29.3	0.5	28.8	
Lease Area	PV	022	D	6/18/2023	0:16:51	0:17:00	633209.35	4462792.5	40.3050316	-73.4324701	29.3	0.5	28.8	
Lease Area	PV	022	E	6/18/2023	0:17:36	0:18:00	633194.96	4462789.82	40.3050097	-73.43264	29.3	0.5	28.8	
Lease Area	PV	022	F	6/18/2023	0:18:30	0:19:00	633191.88	4462796.61	40.3050714	-73.4326748	29.3	0.5	28.8	
Lease Area	PV	022	G	6/18/2023	0:19:12	0:19:00	633195.73	4462799.42	40.3050961	-73.4326289	29.3	0.5	28.8	
Lease Area	PV	022	H	6/18/2023	0:19:48	0:20:00	633206.75	4462796.98	40.3050723	-73.4324998	29.3	0.5	28.8	
Lease Area	PV	035	A	6/18/2023	1:16:49	1:17:00	635596.6	4461011.52	40.2886084	-73.4047659	30.8	0.2	30.6	
Lease Area	PV	035	B	6/18/2023	1:17:31	1:18:00	635589.79	4461004.58	40.288547	-73.4048475	30.8	0.2	30.6	
Lease Area	PV	035	C	6/18/2023	1:18:14	1:18:00	635596.01	4460999.09	40.2884965	-73.4047755	30.8	0.2	30.6	
Lease Area	PV	035	E	6/18/2023	1:20:13	1:20:00	635607.63	4460994.9	40.2884569	-73.4046397	30.8	0.2	30.6	
Lease Area	PV	035	F	6/18/2023	1:21:09	1:21:00	635605.96	4460989.15	40.2884054	-73.4046606	30.8	0.2	30.6	
Lease Area	PV	035	G	6/18/2023	1:21:54	1:22:00	635597.56	4460990.12	40.2884155	-73.4047592	30.8	0.2	30.6	
Lease Area	PV	035	H	6/18/2023	1:22:37	1:23:00	635590.36	4460992.46	40.2884377	-73.4048434	30.8	0.2	30.6	
Lease Area	PV	023	A	6/18/2023	1:45:23	1:45:00	635587.63	4462801.57	40.3047307	-73.4044922	29.6	0.1	29.4	
Lease Area	PV	023	B	6/18/2023	1:46:11	1:46:00	635590.27	4462806.34	40.3047733	-73.4044601	29.6	0.1	29.4	
Lease Area	PV	023	C	6/18/2023	1:47:00	1:47:00	635596.1	4462811.98	40.3048231	-73.4043904	29.6	0.1	29.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	023	D	6/18/2023	1:47:53	1:48:00	635608.57	4462807.08	40.304777	-73.4042447	29.6	0.1	29.4	
Lease Area	PV	023	E	6/18/2023	1:48:39	1:49:00	635600.19	4462797.93	40.3046959	-73.4043452	29.6	0.1	29.4	
Lease Area	PV	023	F	6/18/2023	1:49:19	1:49:00	635593.52	4462789.21	40.3046185	-73.4044255	29.6	0.1	29.4	
Lease Area	PV	023	G	6/18/2023	1:49:56	1:50:00	635602.14	4462788.81	40.3046135	-73.4043242	29.6	0.1	29.4	
Lease Area	PV	023	H	6/18/2023	1:51:06	1:51:00	635609.13	4462792.63	40.3046467	-73.4042412	29.6	0.1	29.4	
Lease Area	PV	014	I	6/18/2023	2:18:42	2:19:00	633191.98	4465194.05	40.3266625	-73.4321742	29.3	0.1	29.2	
Lease Area	PV	014	J	6/18/2023	2:19:26	2:19:00	633189.53	4465197.77	40.3266964	-73.4322022	29.3	0.1	29.2	
Lease Area	PV	014	K	6/18/2023	2:20:25	2:20:00	633205.61	4465193.75	40.3266577	-73.4320139	29.3	0.1	29.2	
Lease Area	PV	014	L	6/18/2023	2:21:10	2:21:00	633207.64	4465198.53	40.3267004	-73.431989	29.3	0.1	29.2	
Lease Area	PV	015	A	6/18/2023	2:39:41	2:40:00	635601.34	4465212.65	40.3264422	-73.4038196	29.6	0.1	29.5	
Lease Area	PV	015	B	6/18/2023	2:40:27	2:40:00	635590.41	4465205.88	40.326383	-73.4039496	29.6	0.1	29.5	
Lease Area	PV	015	C	6/18/2023	2:41:06	2:41:00	635589.8	4465193.16	40.3262686	-73.4039595	29.6	0.1	29.5	
Lease Area	PV	015	D	6/18/2023	2:41:49	2:42:00	635594	4465199.91	40.3263287	-73.4039087	29.6	0.1	29.5	
Lease Area	PV	015	E	6/18/2023	2:42:33	2:43:00	635602.58	4465203.12	40.3263562	-73.403807	29.6	0.1	29.5	
Lease Area	PV	015	F	6/18/2023	2:43:05	2:43:00	635605.95	4465207.34	40.3263937	-73.4037665	29.6	0.1	29.5	
Lease Area	PV	015	G	6/18/2023	2:43:45	2:44:00	635607.01	4465195.53	40.3262871	-73.4037565	29.6	0.1	29.5	
Lease Area	PV	015	H	6/18/2023	2:44:20	2:44:00	635601.76	4465188.23	40.3262222	-73.4038198	29.6	0.1	29.5	
Lease Area	PV	010	A	6/18/2023	3:04:18	3:04:00	635594.82	4467010.15	40.3426312	-73.4035148	27.7	0.1	27.6	
Lease Area	PV	010	B	6/18/2023	3:04:59	3:05:00	635588.48	4466999.41	40.3425355	-73.4035917	27.7	0.1	27.6	
Lease Area	PV	010	C	6/18/2023	3:05:39	3:06:00	635591.74	4466990.83	40.3424577	-73.4035551	27.7	0.1	27.6	
Lease Area	PV	010	D	6/18/2023	3:06:33	3:07:00	635595.86	4466996.07	40.3425042	-73.4035055	27.7	0.1	27.6	
Lease Area	PV	010	E	6/18/2023	3:07:08	3:07:00	635597.25	4467003.61	40.3425719	-73.4034875	27.7	0.1	27.6	
Lease Area	PV	010	F	6/18/2023	3:07:49	3:08:00	635607.73	4467005.61	40.3425882	-73.4033638	27.7	0.1	27.6	
Lease Area	PV	010	G	6/18/2023	3:08:21	3:08:00	635609.66	4466999	40.3425283	-73.4033425	27.7	0.1	27.6	
Lease Area	PV	011	A	6/18/2023	3:27:43	3:28:00	637991.71	4467009.94	40.3422364	-73.3753046	29.6	0.2	29.4	
Lease Area	PV	011	B	6/18/2023	3:28:33	3:29:00	638001.87	4467010.33	40.3422382	-73.375185	29.6	0.2	29.4	
Lease Area	PV	011	C	6/18/2023	3:29:18	3:29:00	637989.03	4466999.71	40.3421447	-73.3753384	29.6	0.2	29.4	
Lease Area	PV	011	D	6/18/2023	3:30:00	3:30:00	637990.95	4466989.88	40.3420558	-73.3753179	29.6	0.2	29.4	
Lease Area	PV	011	E	6/18/2023	3:31:02	3:31:00	637995.34	4466999.22	40.3421392	-73.3752642	29.6	0.2	29.4	
Lease Area	PV	011	F	6/18/2023	3:32:06	3:32:00	638005.48	4467003.19	40.3421733	-73.375144	29.6	0.2	29.4	
Lease Area	PV	011	G	6/18/2023	3:32:45	3:33:00	638008.79	4466997.74	40.3421237	-73.3751062	29.6	0.2	29.4	
Lease Area	PV	011	H	6/18/2023	3:33:20	3:33:00	638005.42	4466990.56	40.3420596	-73.3751474	29.6	0.2	29.4	
Lease Area	PV	016	A	6/18/2023	4:03:56	4:04:00	637997.08	4465211.66	40.3260408	-73.3756299	30.8	0.3	30.5	
Lease Area	PV	016	B	6/18/2023	4:04:37	4:05:00	637990.34	4465204.81	40.3259802	-73.3757107	30.8	0.3	30.5	
Lease Area	PV	016	C	6/18/2023	4:05:30	4:06:00	637996.09	4465197.58	40.3259142	-73.3756446	30.8	0.3	30.5	
Lease Area	PV	016	D	6/18/2023	4:06:21	4:06:00	638000.4	4465204.19	40.325973	-73.3755924	30.8	0.3	30.5	
Lease Area	PV	016	E	6/18/2023	4:07:05	4:07:00	638007.01	4465200.95	40.3259427	-73.3755154	30.8	0.3	30.5	
Lease Area	PV	016	F	6/18/2023	4:07:44	4:08:00	638008.28	4465194.5	40.3258844	-73.3755018	30.8	0.3	30.5	
Lease Area	PV	016	G	6/18/2023	4:08:20	4:08:00	637996.69	4465189.01	40.3258369	-73.3756394	30.8	0.3	30.5	
Lease Area	PV	016	H	6/18/2023	4:09:04	4:09:00	637987.79	4465192.65	40.3258711	-73.3757433	30.8	0.3	30.5	
Lease Area	PV	024	A	6/18/2023	4:25:48	4:26:00	637993.08	4462808.29	40.3043975	-73.3761956	30.5	0.3	30.2	
Lease Area	PV	024	B	6/18/2023	4:26:50	4:27:00	637997.63	4462812.67	40.3044362	-73.3761412	30.5	0.3	30.2	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	024	C	6/18/2023	4:27:35	4:28:00	638005.88	4462807.65	40.3043896	-73.3760452	30.5	0.3	30.2	
Lease Area	PV	024	D	6/18/2023	4:28:21	4:28:00	638007.4	4462799.35	40.3043146	-73.3760291	30.5	0.3	30.2	
Lease Area	PV	024	E	6/18/2023	4:29:42	4:30:00	637992.27	4462801.76	40.3043388	-73.3762066	30.5	0.3	30.1	
Lease Area	PV	024	F	6/18/2023	4:30:29	4:30:00	637988.85	4462794.3	40.3042722	-73.3762484	30.5	0.3	30.1	
Lease Area	PV	024	G	6/18/2023	4:31:10	4:31:00	637995.15	4462787.66	40.3042113	-73.3761757	30.5	0.3	30.1	
Lease Area	PV	024	H	6/18/2023	4:31:58	4:32:00	638001.2	4462791.78	40.3042474	-73.3761037	30.5	0.4	30.1	
Lease Area	PV	036	A	6/18/2023	4:49:21	4:49:00	638000.83	4460411.49	40.2828113	-73.3766212	31.4	0.4	31.0	
Lease Area	PV	036	B	6/18/2023	4:50:04	4:50:00	638006.02	4460405.72	40.2827585	-73.3765614	31.4	0.4	31.0	
Lease Area	PV	036	C	6/18/2023	4:50:40	4:51:00	637997.6	4460400.3	40.282711	-73.3766616	31.4	0.4	31.0	
Lease Area	PV	036	D	6/18/2023	4:51:17	4:51:00	637987.53	4460401.97	40.2827277	-73.3767796	31.4	0.4	31.0	
Lease Area	PV	036	E	6/18/2023	4:52:05	4:52:00	637991.12	4460394.31	40.2826582	-73.3767391	31.4	0.4	31.0	
Lease Area	PV	036	F	6/18/2023	4:53:02	4:53:00	638001.13	4460390.29	40.2826203	-73.3766222	31.4	0.4	31.0	
Lease Area	PV	036	G	6/18/2023	4:53:55	4:54:00	638006.61	4460396.1	40.2826717	-73.3765565	31.4	0.4	31.0	
Lease Area	PV	036	H	6/18/2023	4:55:15	4:55:00	637990.77	4460406.7	40.2827698	-73.3767405	31.4	0.4	31.0	
Lease Area	PV	037	A	6/18/2023	5:14:50	5:15:00	640398.18	4460411.67	40.2824139	-73.3484308	33.2	0.5	32.7	
Lease Area	PV	037	B	6/18/2023	5:15:30	5:16:00	640388.05	4460404.9	40.2823546	-73.3485514	33.2	0.5	32.7	
Lease Area	PV	037	C	6/18/2023	5:16:10	5:16:00	640394.06	4460399.42	40.2823042	-73.348482	33.2	0.5	32.7	
Lease Area	PV	037	D	6/18/2023	5:17:03	5:17:00	640396.78	4460406.05	40.2823635	-73.3484485	33.2	0.5	32.7	
Lease Area	PV	037	E	6/18/2023	5:17:52	5:18:00	640408.88	4460399.52	40.2823026	-73.3483077	33.2	0.5	32.7	
Lease Area	PV	037	F	6/18/2023	5:18:23	5:18:00	640407.98	4460406.77	40.2823681	-73.3483167	33.2	0.5	32.7	
Lease Area	PV	037	H	6/18/2023	5:19:43	5:20:00	640405.83	4460388.57	40.2822045	-73.3483459	33.2	0.5	32.7	
Lease Area	PV	025	A	6/18/2023	5:46:40	5:47:00	640408.86	4462805.7	40.3039717	-73.3477801	30.8	0.7	30.1	
Lease Area	PV	025	B	6/18/2023	5:47:15	5:47:00	640396.48	4462811.43	40.3040254	-73.3479245	30.8	0.7	30.1	
Lease Area	PV	025	C	6/18/2023	5:48:00	5:48:00	640400.87	4462806.48	40.3039801	-73.3478739	30.8	0.7	30.1	
Lease Area	PV	025	D	6/18/2023	5:48:37	5:49:00	640389.63	4462806.34	40.3039807	-73.3480062	30.8	0.7	30.1	
Lease Area	PV	025	E	6/18/2023	5:49:19	5:49:00	640399.96	4462797.93	40.3039032	-73.3478865	30.8	0.7	30.1	
Lease Area	PV	025	F	6/18/2023	5:52:29	5:52:00	640391.85	4462799.7	40.3039205	-73.3479815	30.8	0.7	30.1	
Lease Area	PV	025	G	6/18/2023	5:53:07	5:53:00	640392.57	4462793.61	40.3038656	-73.3479744	30.8	0.7	30.1	
Lease Area	PV	025	H	6/18/2023	5:53:47	5:54:00	640402.71	4462791.29	40.303843	-73.3478556	30.8	0.7	30.1	
Lease Area	PV	017	A	6/18/2023	6:41:36	6:42:00	640010.29	4465498.43	40.3282882	-73.3518787	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	B	6/18/2023	6:42:13	6:42:00	640005.51	4465504.93	40.3283475	-73.3519335	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	C	6/18/2023	6:42:45	6:43:00	639999.46	4465508.22	40.3283782	-73.352004	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	D	6/18/2023	6:43:27	6:43:00	640000.85	4465496.65	40.3282737	-73.3519902	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	E	6/18/2023	6:44:07	6:44:00	639995.27	4465496.78	40.3282758	-73.3520558	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	F	6/18/2023	6:44:53	6:45:00	639994.46	4465505.91	40.3283582	-73.3520633	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	G	6/18/2023	6:45:25	6:45:00	640005.4	4465491.04	40.3282224	-73.3519378	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	017	H	6/18/2023	6:45:57	6:46:00	639997.19	4465492.19	40.3282342	-73.3520342	31.7	0.9	30.8	Alternate location for original station.
Lease Area	PV	018	A	6/18/2023	8:37:15	8:37:00	642085	4464753.95	40.3212333	-73.3276317	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	018	B	6/18/2023	8:38:02	8:38:00	642082.21	4464750.01	40.3211983	-73.3276654	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	018	D	6/18/2023	8:39:48	8:40:00	642082.22	4464759.34	40.3212823	-73.3276632	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	018	E	6/18/2023	8:40:30	8:41:00	642071.11	4464760.91	40.3212984	-73.3277936	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	018	F	6/18/2023	8:41:24	8:41:00	642076.56	4464768.05	40.3213617	-73.3277278	32.0	1.1	30.9	Alternate location for original station.

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	018	G	6/18/2023	8:42:47	8:43:00	642078.14	4464754.78	40.321242	-73.3277122	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	018	H	6/18/2023	8:43:15	8:43:00	642068.69	4464753.3	40.3212302	-73.3278237	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	018	I	6/18/2023	8:43:55	8:44:00	642076.38	4464745.56	40.3211592	-73.327735	32.0	1.1	30.9	Alternate location for original station.
Lease Area	PV	026	A	6/18/2023	9:09:45	9:10:00	642811.14	4462793.27	40.3034527	-73.3195262	32.6	1.1	31.5	
Lease Area	PV	026	B	6/18/2023	9:10:20	9:10:00	642809.39	4462800.3	40.3035163	-73.3195452	32.6	1.1	31.5	
Lease Area	PV	026	C	6/18/2023	9:10:56	9:11:00	642803.01	4462805.98	40.3035685	-73.319619	32.6	1.1	31.5	
Lease Area	PV	026	D	6/18/2023	9:11:28	9:11:00	642797.15	4462810.81	40.303613	-73.3196868	32.6	1.1	31.5	
Lease Area	PV	026	E	6/18/2023	9:12:14	9:12:00	642792.22	4462799.37	40.3035109	-73.3197474	32.6	1.1	31.5	
Lease Area	PV	026	F	6/18/2023	9:12:36	9:13:00	642796.4	4462792.11	40.3034448	-73.3196998	32.6	1.1	31.5	
Lease Area	PV	026	G	6/18/2023	9:13:45	9:14:00	642801.63	4462792.8	40.3034501	-73.3196382	32.6	1.1	31.5	
Lease Area	PV	026	H	6/18/2023	9:14:48	9:15:00	642793.22	4462796.69	40.3034865	-73.3197362	32.6	1.1	31.5	
Lease Area	PV	038	A	6/18/2023	9:36:30	9:37:00	642801.03	4460399.03	40.2818932	-73.3201792	34.1	1.0	33.1	
Lease Area	PV	038	B	6/18/2023	9:37:10	9:37:00	642793.33	4460402.8	40.2819284	-73.3202689	34.1	1.0	33.1	
Lease Area	PV	038	C	6/18/2023	9:37:51	9:38:00	642794.14	4460408.81	40.2819824	-73.320258	34.1	1.0	33.1	
Lease Area	PV	038	D	6/18/2023	9:38:33	9:39:00	642808.6	4460394.73	40.2818532	-73.3200912	34.1	1.0	33.1	
Lease Area	PV	038	E	6/18/2023	9:39:22	9:39:00	642807.34	4460409.6	40.2819873	-73.3201027	34.1	1.0	33.1	
Lease Area	PV	038	F	6/18/2023	9:40:00	9:40:00	642804.15	4460399.45	40.2818964	-73.3201424	34.1	1.0	33.1	
Lease Area	PV	038	G	6/18/2023	9:40:52	9:41:00	642795.52	4460396.71	40.2818732	-73.3202445	34.1	1.0	33.1	
Lease Area	PV	038	H	6/18/2023	9:41:26	9:41:00	642802.56	4460390.77	40.2818185	-73.3201631	34.1	1.0	33.1	
Lease Area	PV	046	A	6/18/2023	10:15:03	10:15:00	640397.09	4458589.5	40.2660043	-73.3488429	35.1	0.9	34.1	
Lease Area	PV	046	B	6/18/2023	10:15:34	10:16:00	640407.6	4458595.96	40.2660607	-73.3487179	35.1	0.9	34.1	
Lease Area	PV	046	C	6/18/2023	10:16:27	10:16:00	640403.23	4458589.39	40.2660022	-73.3487708	35.1	0.9	34.1	
Lease Area	PV	046	D	6/18/2023	10:17:40	10:18:00	640390.79	4458596.65	40.2660697	-73.3489154	35.1	0.9	34.2	
Lease Area	PV	046	E	6/18/2023	10:18:46	10:19:00	640388.19	4458603.67	40.2661334	-73.3489444	35.1	0.9	34.2	
Lease Area	PV	046	F	6/18/2023	10:19:59	10:20:00	640393.75	4458600.27	40.2661018	-73.3488798	35.1	0.9	34.2	
Lease Area	PV	046	G	6/18/2023	10:21:07	10:21:00	640403.59	4458609.33	40.2661818	-73.3487622	35.1	0.9	34.2	
Lease Area	PV	046	H	6/18/2023	10:21:51	10:22:00	640409.93	4458603.22	40.2661257	-73.348689	35.1	0.9	34.2	
Lease Area	PV	047	A	6/18/2023	10:42:39	10:43:00	642789.69	4457995.29	40.2602482	-73.3208481	34.7	0.8	33.9	
Lease Area	PV	047	B	6/18/2023	10:43:34	10:44:00	642795.65	4457985.76	40.2601614	-73.3207802	34.7	0.8	33.9	
Lease Area	PV	047	C	6/18/2023	10:44:19	10:44:00	642799.09	4457992.16	40.2602184	-73.3207383	34.7	0.8	33.9	
Lease Area	PV	047	D	6/18/2023	10:45:02	10:45:00	642788.51	4458004.83	40.2603343	-73.3208599	34.7	0.8	33.9	
Lease Area	PV	047	E	6/18/2023	10:45:29	10:45:00	642794.46	4457997.19	40.2602645	-73.3207917	34.7	0.8	33.9	
Lease Area	PV	047	F	6/18/2023	10:46:08	10:46:00	642799.07	4458004.77	40.260332	-73.3207358	34.7	0.8	33.9	
Lease Area	PV	047	G	6/18/2023	10:46:40	10:47:00	642798.38	4458012.73	40.2604038	-73.3207421	34.7	0.8	34.0	
Lease Area	PV	047	H	6/18/2023	10:47:28	10:47:00	642807.57	4457999.71	40.260285	-73.320637	34.7	0.8	34.0	
Lease Area	PV	047	I	6/18/2023	10:48:07	10:48:00	642803.58	4458010.08	40.260379	-73.3206816	34.7	0.8	34.0	
Lease Area	PV	054	A	6/18/2023	11:10:39	11:11:00	645189.34	4456204.81	40.2437114	-73.2930462	38.1	0.7	37.4	
Lease Area	PV	054	B	6/18/2023	11:11:37	11:12:00	645199.43	4456205.06	40.2437119	-73.2929276	38.1	0.7	37.4	
Lease Area	PV	054	C	6/18/2023	11:12:06	11:12:00	645201.56	4456212.57	40.2437792	-73.2929008	38.1	0.7	37.4	
Lease Area	PV	054	D	6/18/2023	11:12:37	11:13:00	645199.9	4456208.61	40.2437438	-73.2929213	38.1	0.7	37.4	
Lease Area	PV	054	E	6/18/2023	11:13:14	11:13:00	645206.37	4456193.62	40.2436077	-73.2928486	38.1	0.7	37.4	
Lease Area	PV	054	F	6/18/2023	11:13:43	11:14:00	645195.56	4456191.58	40.2435912	-73.2929761	38.1	0.7	37.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	054	G	6/18/2023	11:14:28	11:14:00	645198.71	4456199.4	40.243661	-73.2929373	38.1	0.7	37.4	
Lease Area	PV	054	H	6/18/2023	11:15:01	11:15:00	645192.52	4456196.96	40.2436401	-73.2930106	38.1	0.7	37.4	
Lease Area	PV	048	A	6/18/2023	11:37:42	11:38:00	645190.73	4458004	40.2599136	-73.2926226	35.4	0.6	34.8	
Lease Area	PV	048	B	6/18/2023	11:38:27	11:38:00	645196.14	4458012.42	40.2599885	-73.2925571	35.4	0.6	34.8	
Lease Area	PV	048	C	6/18/2023	11:38:54	11:39:00	645203.41	4458003.22	40.2599044	-73.2924738	35.4	0.6	34.8	
Lease Area	PV	048	D	6/18/2023	11:39:23	11:39:00	645203.53	4458008.99	40.2599563	-73.292471	35.4	0.6	34.8	
Lease Area	PV	048	E	6/18/2023	11:39:59	11:40:00	645204.93	4457993.22	40.259814	-73.2924582	35.4	0.6	34.8	
Lease Area	PV	048	F	6/18/2023	11:40:28	11:40:00	645194.4	4457994.38	40.2598263	-73.2925817	35.4	0.6	34.8	
Lease Area	PV	048	G	6/18/2023	11:41:03	11:41:00	645193.64	4457999.88	40.259876	-73.2925894	35.4	0.6	34.8	
Lease Area	PV	048	H	6/18/2023	11:41:50	11:42:00	645208.11	4457999.2	40.2598673	-73.2924194	35.4	0.6	34.8	
Lease Area	PV	039	A	6/18/2023	12:10:01	12:10:00	645188.43	4460400.44	40.2814948	-73.2921067	34.1	0.5	33.7	
Lease Area	PV	039	B	6/18/2023	12:10:42	12:11:00	645191.11	4460407	40.2815534	-73.2920737	34.1	0.5	33.7	
Lease Area	PV	039	C	6/18/2023	12:11:19	12:11:00	645196.73	4460412.49	40.2816019	-73.2920064	34.1	0.5	33.7	
Lease Area	PV	039	D	6/18/2023	12:11:50	12:12:00	645204.45	4460408.25	40.2815624	-73.2919166	34.1	0.5	33.7	
Lease Area	PV	039	E	6/18/2023	12:12:15	12:12:00	645211.27	4460400.04	40.2814872	-73.2918383	34.1	0.5	33.7	
Lease Area	PV	039	F	6/18/2023	12:12:47	12:13:00	645202.62	4460397.91	40.2814696	-73.2919405	34.1	0.5	33.7	
Lease Area	PV	039	G	6/18/2023	12:13:15	12:13:00	645194.37	4460392.21	40.2814197	-73.2920388	34.1	0.5	33.7	
Lease Area	PV	039	H	6/18/2023	12:13:47	12:14:00	645197.53	4460387.74	40.2813789	-73.2920026	34.1	0.5	33.7	
Lease Area	PV	027	A	6/18/2023	12:35:41	12:36:00	645188.79	4462793	40.3030405	-73.2915599	32.3	0.4	31.9	
Lease Area	PV	027	B	6/18/2023	12:37:02	12:37:00	645189.41	4462801.65	40.3031183	-73.2915506	32.3	0.4	31.9	
Lease Area	PV	027	C	6/18/2023	12:37:36	12:38:00	645193.34	4462807.62	40.3031714	-73.291503	32.3	0.4	31.9	
Lease Area	PV	027	D	6/18/2023	12:38:05	12:38:00	645201.81	4462813.77	40.3032253	-73.291402	32.3	0.4	31.9	
Lease Area	PV	027	E	6/18/2023	12:38:30	12:39:00	645208.04	4462807.28	40.3031658	-73.2913302	32.3	0.4	31.9	
Lease Area	PV	027	F	6/18/2023	12:38:59	12:39:00	645212.02	4462801.26	40.3031109	-73.2912848	32.3	0.4	31.9	
Lease Area	PV	027	G	6/18/2023	12:39:32	12:40:00	645203.16	4462796.35	40.3030682	-73.2913901	32.3	0.4	32.0	
Lease Area	PV	027	H	6/18/2023	12:40:01	12:40:00	645201.57	4462788.22	40.3029953	-73.2914106	32.3	0.4	32.0	
Lease Area	PV	019	A	6/18/2023	12:57:34	12:58:00	645200.36	4464612.6	40.3194246	-73.2910107	32.9	0.3	32.6	
Lease Area	PV	019	B	6/18/2023	12:58:06	12:58:00	645208.85	4464607.79	40.3193798	-73.2909119	32.9	0.3	32.6	
Lease Area	PV	019	C	6/18/2023	12:58:40	12:59:00	645195.01	4464608.83	40.3193916	-73.2910745	32.9	0.3	32.6	
Lease Area	PV	019	D	6/18/2023	12:59:07	12:59:00	645189.28	4464600.66	40.319319	-73.2911437	32.9	0.3	32.6	
Lease Area	PV	019	E	6/18/2023	12:59:41	13:00:00	645204.42	4464596.99	40.3192833	-73.2909665	32.9	0.3	32.6	
Lease Area	PV	019	F	6/18/2023	13:00:16	13:00:00	645208.39	4464601.96	40.3193274	-73.2909186	32.9	0.3	32.6	
Lease Area	PV	019	G	6/18/2023	13:00:57	13:01:00	645192.95	4464590.32	40.3192252	-73.2911029	32.9	0.3	32.6	
Lease Area	PV	019	H	6/18/2023	13:01:27	13:01:00	645205.33	4464590.75	40.319227	-73.2909572	32.9	0.3	32.6	
Lease Area	PV	020	A	6/18/2023	13:18:42	13:19:00	647591.36	4464607.81	40.3189623	-73.2628822	33.2	0.2	33.0	
Lease Area	PV	020	B	6/18/2023	13:19:28	13:19:00	647598.25	4464612.22	40.3190008	-73.2628001	33.2	0.2	33.0	
Lease Area	PV	020	C	6/18/2023	13:19:58	13:20:00	647607.4	4464607.7	40.3189585	-73.2626935	33.2	0.2	33.0	
Lease Area	PV	020	D	6/18/2023	13:20:22	13:20:00	647610.75	4464600.31	40.3188914	-73.2626558	33.2	0.2	33.0	
Lease Area	PV	020	E	6/18/2023	13:20:59	13:21:00	647601.29	4464601.34	40.3189023	-73.2627668	33.2	0.2	33.0	
Lease Area	PV	020	F	6/18/2023	13:21:18	13:21:00	647592.4	4464598.28	40.3188763	-73.2628721	33.2	0.2	33.0	
Lease Area	PV	020	G	6/18/2023	13:21:50	13:22:00	647597.28	4464587.72	40.3187804	-73.2628172	33.2	0.2	33.0	
Lease Area	PV	020	H	6/18/2023	13:22:29	13:22:00	647600.18	4464594.4	40.31884	-73.2627815	33.2	0.2	33.0	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	019	I	6/18/2023	14:03:14	14:03:00	645191.23	4464593.79	40.3192568	-73.2911224	33.2	0.2	33.1	
Lease Area	PV	019	J	6/18/2023	14:03:50	14:04:00	645197.97	4464597.29	40.3192871	-73.2910423	33.2	0.2	33.1	
Lease Area	PV	019	K	6/18/2023	14:04:20	14:04:00	645208.45	4464597	40.3192827	-73.290919	33.2	0.2	33.1	
Lease Area	PV	019	L	6/18/2023	14:04:48	14:05:00	645202.3	4464590.15	40.3192221	-73.2909929	33.2	0.2	33.1	
Lease Area	PV	028	A	6/18/2023	14:46:23	14:46:00	647591.53	4462808.81	40.302762	-73.2632953	33.8	0.2	33.7	
Lease Area	PV	028	B	6/18/2023	14:47:01	14:47:00	647599.35	4462811.57	40.3027855	-73.2632027	33.8	0.2	33.7	
Lease Area	PV	028	C	6/18/2023	14:47:39	14:48:00	647605.65	4462807.36	40.3027465	-73.2631296	33.8	0.2	33.7	
Lease Area	PV	028	D	6/18/2023	14:48:08	14:48:00	647601.65	4462799.47	40.3026761	-73.2631784	33.8	0.2	33.7	
Lease Area	PV	028	E	6/18/2023	14:48:41	14:49:00	647588.73	4462801.5	40.3026967	-73.2633299	33.8	0.2	33.7	
Lease Area	PV	028	F	6/18/2023	14:49:27	14:49:00	647592.09	4462793.63	40.3026252	-73.2632922	33.8	0.2	33.7	
Lease Area	PV	028	G	6/18/2023	14:49:52	14:50:00	647601.23	4462793.41	40.3026216	-73.2631848	33.8	0.2	33.7	
Lease Area	PV	028	H	6/18/2023	14:50:28	14:50:00	647604.17	4462788.91	40.3025806	-73.2631512	33.8	0.2	33.7	
Lease Area	PV	040	A	6/18/2023	15:21:45	15:22:00	647593.01	4460410.49	40.2811644	-73.2638309	38.4	0.2	38.2	
Lease Area	PV	040	B	6/18/2023	15:22:14	15:22:00	647604.12	4460410.68	40.2811642	-73.2637002	38.4	0.2	38.2	
Lease Area	PV	040	C	6/18/2023	15:22:49	15:23:00	647612.53	4460401.34	40.2810786	-73.2636034	38.4	0.2	38.2	
Lease Area	PV	040	D	6/18/2023	15:23:18	15:23:00	647603.98	4460399.2	40.2810608	-73.2637045	38.4	0.2	38.2	
Lease Area	PV	040	E	6/18/2023	15:23:46	15:24:00	647591.26	4460398.94	40.2810607	-73.2638541	38.4	0.2	38.2	
Lease Area	PV	040	F	6/18/2023	15:24:07	15:24:00	647595.97	4460405.03	40.2811147	-73.2637973	38.4	0.2	38.2	
Lease Area	PV	040	G	6/18/2023	15:24:51	15:25:00	647595.25	4460392.14	40.2809988	-73.2638087	38.4	0.2	38.2	
Lease Area	PV	040	H	6/18/2023	15:25:16	15:25:00	647606.5	4460390.69	40.2809837	-73.2636768	38.4	0.2	38.2	
Lease Area	PV	049	A	6/18/2023	15:46:21	15:46:00	647589.45	4458003.29	40.2594876	-73.2644271	36.6	0.3	36.3	
Lease Area	PV	049	B	6/18/2023	15:46:42	15:47:00	647596.94	4458012.26	40.2595671	-73.264337	36.6	0.3	36.3	
Lease Area	PV	049	C	6/18/2023	15:47:18	15:47:00	647603.17	4458004.62	40.2594972	-73.2642655	36.6	0.3	36.3	
Lease Area	PV	049	D	6/18/2023	15:47:42	15:48:00	647612.7	4458001.8	40.2594701	-73.2641541	36.6	0.3	36.3	
Lease Area	PV	049	E	6/18/2023	15:48:07	15:48:00	647609.59	4457992.72	40.2593889	-73.2641928	36.6	0.3	36.3	
Lease Area	PV	049	F	6/18/2023	15:48:29	15:48:00	647599.87	4457999.33	40.2594501	-73.2643055	36.6	0.3	36.3	
Lease Area	PV	049	G	6/18/2023	15:49:01	15:49:00	647590.91	4457992.13	40.2593869	-73.2644125	36.6	0.3	36.3	
Lease Area	PV	049	H	6/18/2023	15:49:36	15:50:00	647600.68	4457988.92	40.2593562	-73.2642984	36.6	0.3	36.3	
Lease Area	PV	055	A	6/18/2023	16:14:16	16:14:00	647598.96	4455613.22	40.2379627	-73.2648652	37.5	0.4	37.1	
Lease Area	PV	055	B	6/18/2023	16:14:54	16:15:00	647604.16	4455606.84	40.2379043	-73.2648055	37.5	0.4	37.1	
Lease Area	PV	055	C	6/18/2023	16:15:22	16:15:00	647589.67	4455607.82	40.2379157	-73.2649756	37.5	0.4	37.1	
Lease Area	PV	055	D	6/18/2023	16:15:54	16:16:00	647589.25	4455604.19	40.2378831	-73.2649813	37.5	0.4	37.1	
Lease Area	PV	055	E	6/18/2023	16:16:37	16:17:00	647607.06	4455599.26	40.2378356	-73.2647732	37.5	0.4	37.1	
Lease Area	PV	055	F	6/18/2023	16:16:58	16:17:00	647605.3	4455591.89	40.2377695	-73.2647956	37.5	0.4	37.1	
Lease Area	PV	059	A	6/18/2023	16:43:56	16:44:00	650006.59	4453215.08	40.2159393	-73.2371344	38.4	0.6	37.8	Outside of watch circle.
Lease Area	PV	059	B	6/18/2023	16:45:02	16:45:00	649997.9	4453209.23	40.2158882	-73.2372378	38.4	0.6	37.8	
Lease Area	PV	059	C	6/18/2023	16:45:23	16:45:00	650004.93	4453207.64	40.2158726	-73.2371556	38.4	0.6	37.8	
Lease Area	PV	059	D	6/18/2023	16:45:48	16:46:00	650007.72	4453200.66	40.2158093	-73.2371245	38.4	0.6	37.8	
Lease Area	PV	059	E	6/18/2023	16:46:19	16:46:00	650005.46	4453192.68	40.2157378	-73.2371529	38.4	0.6	37.8	
Lease Area	PV	059	F	6/18/2023	16:46:39	16:47:00	649998	4453188.35	40.2157002	-73.2372415	38.4	0.6	37.8	
Lease Area	PV	059	G	6/18/2023	16:46:59	16:47:00	649992.73	4453192.71	40.2157404	-73.2373024	38.4	0.6	37.8	
Lease Area	PV	059	H	6/18/2023	16:47:25	16:47:00	649987.51	4453202.46	40.2158291	-73.2373615	38.4	0.6	37.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	059	I	6/18/2023	16:48:25	16:48:00	649996.95	4453203.74	40.2158389	-73.2372503	38.4	0.6	37.8	
Lease Area	PV	056	A	6/18/2023	17:15:30	17:16:00	649989.75	4455597.49	40.2373964	-73.2367758	38.4	0.7	37.7	
Lease Area	PV	056	B	6/18/2023	17:16:06	17:16:00	649992.84	4455591.83	40.2373448	-73.2367409	38.4	0.7	37.7	
Lease Area	PV	056	C	6/18/2023	17:16:37	17:17:00	650002.95	4455588.12	40.2373096	-73.2366229	38.4	0.7	37.7	
Lease Area	PV	056	D	6/18/2023	17:17:08	17:17:00	650011.94	4455597.53	40.2373927	-73.2365151	38.4	0.7	37.7	
Lease Area	PV	056	E	6/18/2023	17:17:29	17:17:00	650003.11	4455604.92	40.2374609	-73.2366171	38.4	0.7	37.7	
Lease Area	PV	056	F	6/18/2023	17:17:58	17:18:00	649990.72	4455605.99	40.2374727	-73.2367625	38.4	0.7	37.7	
Lease Area	PV	056	G	6/18/2023	17:18:39	17:19:00	649994.35	4455610.31	40.237511	-73.2367188	38.4	0.7	37.7	
Lease Area	PV	056	H	6/18/2023	17:19:08	17:19:00	650003.44	4455598.36	40.2374017	-73.2366148	38.4	0.7	37.7	
Lease Area	PV	055	I	6/18/2023	17:34:36	17:35:00	647610.71	4455601.64	40.2378564	-73.2647298	37.5	0.8	36.7	
Lease Area	PV	055	J	6/18/2023	17:35:09	17:35:00	647604.69	4455594.16	40.2377901	-73.2648022	37.5	0.8	36.7	
Lease Area	PV	055	K	6/18/2023	17:35:35	17:36:00	647597.67	4455586.43	40.2377217	-73.2648865	37.5	0.8	36.7	
Lease Area	PV	055	L	6/18/2023	17:35:56	17:36:00	647591	4455598.23	40.2378291	-73.2649622	37.5	0.8	36.7	
Lease Area	PV	050	A	6/18/2023	18:10:55	18:11:00	650001.35	4458008.39	40.2591048	-73.2360759	37.2	1.0	36.2	
Lease Area	PV	050	B	6/18/2023	18:11:48	18:12:00	649993.93	4458003.53	40.2590623	-73.2361642	37.2	1.0	36.2	
Lease Area	PV	050	C	6/18/2023	18:12:41	18:13:00	649989	4457998.29	40.259016	-73.2362234	37.2	1.0	36.2	
Lease Area	PV	050	D	6/18/2023	18:14:10	18:14:00	649994.34	4457992.43	40.2589623	-73.236162	37.2	1.0	36.2	
Lease Area	PV	050	E	6/18/2023	18:14:52	18:15:00	649997.87	4457987.31	40.2589156	-73.2361217	37.2	1.0	36.2	
Lease Area	PV	050	F	6/18/2023	18:15:44	18:16:00	650006.12	4457992.76	40.2589632	-73.2360235	37.2	1.0	36.2	
Lease Area	PV	050	G	6/18/2023	18:16:26	18:16:00	650006.27	4458000.9	40.2590364	-73.2360198	37.2	1.0	36.2	
Lease Area	PV	050	H	6/18/2023	18:17:12	18:17:00	649994.35	4458009.66	40.2591175	-73.2361578	37.2	1.0	36.2	
Lease Area	PV	041	A	6/18/2023	18:35:41	18:36:00	650000.74	4460408.75	40.2807204	-73.2355212	36.0	1.1	34.9	
Lease Area	PV	041	B	6/18/2023	18:36:19	18:36:00	649999.61	4460402.54	40.2806646	-73.235536	36.0	1.1	34.9	
Lease Area	PV	041	C	6/18/2023	18:36:54	18:37:00	649998.65	4460397.68	40.2806211	-73.2355484	36.0	1.1	34.8	
Lease Area	PV	041	D	6/18/2023	18:38:47	18:39:00	649997.48	4460409.9	40.2807313	-73.2355593	36.0	1.1	34.8	
Lease Area	PV	041	E	6/18/2023	18:39:19	18:39:00	649992.75	4460401.41	40.2806557	-73.2356169	36.0	1.1	34.8	
Lease Area	PV	041	G	6/18/2023	18:46:52	18:47:00	649992.13	4460393.73	40.2805867	-73.235626	36.0	1.2	34.8	
Lease Area	PV	041	H	6/18/2023	18:47:41	18:48:00	650014.25	4460396.4	40.2806067	-73.2353653	36.0	1.2	34.8	
Lease Area	PV	029	A	6/18/2023	19:07:02	19:07:00	650000.28	4462805.16	40.3023003	-73.2349651	36.0	1.3	34.7	
Lease Area	PV	029	B	6/18/2023	19:07:43	19:08:00	649998.48	4462809.38	40.3023386	-73.2349853	36.0	1.3	34.7	
Lease Area	PV	029	C	6/18/2023	19:09:12	19:09:00	649997.9	4462798.02	40.3022364	-73.2349948	36.0	1.3	34.7	
Lease Area	PV	029	D	6/18/2023	19:10:05	19:10:00	649992.86	4462804.46	40.3022953	-73.2350526	36.0	1.3	34.7	
Lease Area	PV	029	E	6/18/2023	19:10:44	19:11:00	649986.48	4462803.38	40.3022867	-73.2351279	36.0	1.3	34.7	
Lease Area	PV	029	F	6/18/2023	19:12:22	19:12:00	650003.28	4462790.35	40.3021664	-73.2349333	36.0	1.3	34.7	
Lease Area	PV	029	G	6/18/2023	19:13:18	19:13:00	650009.74	4462802.38	40.3022735	-73.2348545	36.0	1.3	34.7	
Lease Area	PV	029	H	6/18/2023	19:14:16	19:14:00	650013.42	4462796.42	40.3022192	-73.2348126	36.0	1.3	34.7	
Lease Area	PV	030	A	6/18/2023	19:36:56	19:37:00	652407.43	4462692.06	40.3008463	-73.2066805	37.2	1.4	35.8	
Lease Area	PV	030	B	6/18/2023	19:37:31	19:38:00	652398.13	4462687.13	40.3008036	-73.206791	37.2	1.4	35.8	
Lease Area	PV	030	C	6/18/2023	19:38:07	19:38:00	652397.78	4462696.72	40.30089	-73.2067929	37.2	1.4	35.8	
Lease Area	PV	030	D	6/18/2023	19:38:40	19:39:00	652391.95	4462693.93	40.300866	-73.2068621	37.2	1.4	35.8	
Lease Area	PV	030	E	6/18/2023	19:39:28	19:39:00	652397.87	4462690.48	40.3008338	-73.2067933	37.2	1.4	35.8	
Lease Area	PV	030	F	6/18/2023	19:39:54	19:40:00	652397.25	4462681.93	40.3007569	-73.2068026	37.2	1.4	35.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	030	G	6/18/2023	19:40:55	19:41:00	652393.42	4462702.59	40.3009437	-73.2068427	37.2	1.4	35.8	
Lease Area	PV	030	H	6/18/2023	19:41:39	19:42:00	652406.35	4462699.11	40.30091	-73.2066915	37.2	1.4	35.8	
Lease Area	PV	042	A	6/18/2023	20:13:44	20:14:00	652405.99	4460408.91	40.280287	-73.2072409	37.2	1.5	35.7	
Lease Area	PV	042	B	6/18/2023	20:14:20	20:14:00	652400.9	4460406.92	40.28027	-73.2073012	37.2	1.5	35.7	
Lease Area	PV	042	C	6/18/2023	20:14:51	20:15:00	652393.14	4460409.07	40.2802907	-73.207392	37.2	1.5	35.7	
Lease Area	PV	042	D	6/18/2023	20:16:04	20:16:00	652401.11	4460405.86	40.2802604	-73.207299	37.2	1.5	35.7	
Lease Area	PV	042	E	6/18/2023	20:16:40	20:17:00	652410.73	4460399.7	40.2802032	-73.2071874	37.2	1.5	35.7	
Lease Area	PV	042	F	6/18/2023	20:18:43	20:19:00	652390.87	4460395.65	40.2801703	-73.2074218	37.2	1.5	35.7	
Lease Area	PV	042	G	6/18/2023	20:19:12	20:19:00	652396.68	4460405.32	40.2802563	-73.2073512	37.2	1.5	35.7	
Lease Area	PV	042	H	6/18/2023	20:20:09	20:20:00	652408.75	4460397.81	40.2801865	-73.2072111	37.2	1.5	35.7	
Lease Area	PV	051	A	6/18/2023	20:40:01	20:40:00	652404.65	4457998.61	40.2585825	-73.2078298	38.1	1.5	36.6	
Lease Area	PV	051	B	6/18/2023	20:40:33	20:41:00	652398.36	4458005.92	40.2586495	-73.207902	38.1	1.5	36.6	
Lease Area	PV	051	C	6/18/2023	20:41:11	20:41:00	652409.44	4458011.04	40.2586936	-73.2077706	38.1	1.5	36.6	
Lease Area	PV	051	D	6/18/2023	20:41:46	20:42:00	652399.18	4458008.77	40.258675	-73.2078917	38.1	1.5	36.6	
Lease Area	PV	051	E	6/18/2023	20:42:27	20:42:00	652392.35	4458005.95	40.2586509	-73.2079727	38.1	1.5	36.6	
Lease Area	PV	051	F	6/18/2023	20:43:10	20:43:00	652394.58	4457999.62	40.2585935	-73.207948	38.1	1.5	36.6	
Lease Area	PV	051	G	6/18/2023	20:43:57	20:44:00	652399.57	4457993.52	40.2585376	-73.2078908	38.1	1.5	36.6	
Lease Area	PV	051	H	6/18/2023	20:44:34	20:45:00	652403.83	4457989.78	40.2585032	-73.2078416	38.1	1.5	36.6	
Lease Area	PV	057	A	6/18/2023	21:04:18	21:04:00	652404.34	4455592.55	40.236916	-73.208405	39.6	1.5	38.1	
Lease Area	PV	057	B	6/18/2023	21:04:58	21:05:00	652409.4	4455608.44	40.2370582	-73.2083418	39.6	1.5	38.1	
Lease Area	PV	057	C	6/18/2023	21:05:44	21:06:00	652410.21	4455602.16	40.2370015	-73.2083338	39.6	1.5	38.1	
Lease Area	PV	057	D	6/18/2023	21:07:00	21:07:00	652401.21	4455596.76	40.2369545	-73.2084408	39.6	1.5	38.1	
Lease Area	PV	057	E	6/18/2023	21:07:32	21:08:00	652401.8	4455606.99	40.2370465	-73.2084314	39.6	1.5	38.1	
Lease Area	PV	057	F	6/18/2023	21:09:32	21:10:00	652390.49	4455608.53	40.2370624	-73.208564	39.6	1.5	38.1	
Lease Area	PV	057	G	6/18/2023	21:10:52	21:11:00	652401.04	4455601.14	40.236994	-73.2084417	39.6	1.5	38.1	
Lease Area	PV	057	H	6/18/2023	21:11:48	21:12:00	652386.64	4455597.71	40.2369657	-73.2086118	39.6	1.5	38.1	
Lease Area	PV	060	A	6/18/2023	21:32:40	21:33:00	652400.61	4453211.47	40.215475	-73.2090138	39.9	1.4	38.5	
Lease Area	PV	060	B	6/18/2023	21:33:23	21:33:00	652398.15	4453203.73	40.2154057	-73.2090445	39.9	1.4	38.5	
Lease Area	PV	060	C	6/18/2023	21:34:09	21:34:00	652410.51	4453205.94	40.2154234	-73.2088988	39.9	1.4	38.5	
Lease Area	PV	060	D	6/18/2023	21:34:53	21:35:00	652406.3	4453201.03	40.2153799	-73.2089495	39.9	1.4	38.5	
Lease Area	PV	060	E	6/18/2023	21:35:33	21:36:00	652390.5	4453200.31	40.2153763	-73.2091352	39.9	1.4	38.5	
Lease Area	PV	060	F	6/18/2023	21:36:22	21:36:00	652407.48	4453196.79	40.2153415	-73.2089366	39.9	1.4	38.5	
Lease Area	PV	060	G	6/18/2023	21:38:13	21:38:00	652399.61	4453209.27	40.2154554	-73.2090261	39.9	1.4	38.5	
Lease Area	PV	060	H	6/18/2023	21:39:07	21:39:00	652403.54	4453186.74	40.2152518	-73.2089853	39.9	1.4	38.5	
Lease Area	PV	058	A	6/18/2023	22:01:13	22:01:00	654794.12	4455608.63	40.2366226	-73.1803213	40.2	1.4	38.9	
Lease Area	PV	058	B	6/18/2023	22:01:46	22:02:00	654807.5	4455611.45	40.2366455	-73.1801634	40.2	1.4	38.9	
Lease Area	PV	058	C	6/18/2023	22:02:26	22:02:00	654800.89	4455605.66	40.2365946	-73.1802425	40.2	1.4	38.9	
Lease Area	PV	058	D	6/18/2023	22:03:13	22:03:00	654792.12	4455594.89	40.2364992	-73.1803481	40.2	1.4	38.9	
Lease Area	PV	058	E	6/18/2023	22:03:47	22:04:00	654795.64	4455602.35	40.2365658	-73.1803049	40.2	1.4	38.9	
Lease Area	PV	058	F	6/18/2023	22:04:28	22:04:00	654808.54	4455596.14	40.2365075	-73.1801549	40.2	1.4	38.9	
Lease Area	PV	058	G	6/18/2023	22:05:21	22:05:00	654809.92	4455603.15	40.2365703	-73.180137	40.2	1.3	38.9	
Lease Area	PV	058	H	6/18/2023	22:06:23	22:06:00	654797.25	4455590.48	40.2364586	-73.1802889	40.2	1.3	38.9	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	052	A	6/18/2023	22:25:07	22:25:00	654803.21	4458007.39	40.2582214	-73.1796357	39.0	1.3	37.8	
Lease Area	PV	052	B	6/18/2023	22:25:40	22:26:00	654795.7	4458004.61	40.2581978	-73.1797247	39.0	1.3	37.8	
Lease Area	PV	052	C	6/18/2023	22:26:08	22:26:00	654798.25	4458011.73	40.2582614	-73.179693	39.0	1.3	37.8	
Lease Area	PV	052	D	6/18/2023	22:27:01	22:27:00	654791.29	4457993.95	40.2581026	-73.1797791	39.0	1.3	37.8	
Lease Area	PV	052	E	6/18/2023	22:27:36	22:28:00	654793.96	4458002.97	40.2581833	-73.1797455	39.0	1.3	37.8	
Lease Area	PV	052	F	6/18/2023	22:28:08	22:28:00	654797.23	4457997.37	40.2581323	-73.1797084	39.0	1.3	37.8	
Lease Area	PV	052	G	6/18/2023	22:28:45	22:29:00	654805.5	4457989.91	40.2580636	-73.179613	39.0	1.2	37.8	
Lease Area	PV	052	H	6/18/2023	22:30:01	22:30:00	654808.27	4457999.27	40.2581474	-73.1795782	39.0	1.2	37.8	
Lease Area	PV	043	A	6/18/2023	23:09:16	23:09:00	654803.29	4460406.5	40.279825	-73.1790553	38.1	1.1	37.1	
Lease Area	PV	043	B	6/18/2023	23:10:03	23:10:00	654795.78	4460401.2	40.2797786	-73.1791449	38.1	1.1	37.1	
Lease Area	PV	043	C	6/18/2023	23:10:43	23:11:00	654788.74	4460402.5	40.2797916	-73.1792274	38.1	1.0	37.1	
Lease Area	PV	043	D	6/18/2023	23:11:14	23:11:00	654799.73	4460407.63	40.2798358	-73.1790969	38.1	1.0	37.1	
Lease Area	PV	043	E	6/18/2023	23:12:00	23:12:00	654788.09	4460392.81	40.2797045	-73.1792373	38.1	1.0	37.1	
Lease Area	PV	043	F	6/18/2023	23:12:54	23:13:00	654796.53	4460398.97	40.2797584	-73.1791366	38.1	1.0	37.1	
Lease Area	PV	043	G	6/18/2023	23:13:23	23:13:00	654798.83	4460393.38	40.2797077	-73.1791109	38.1	1.0	37.1	
Lease Area	PV	043	H	6/18/2023	23:14:02	23:14:00	654807.19	4460397.35	40.2797419	-73.1790117	38.1	1.0	37.1	
Lease Area	PV	031	A	6/18/2023	23:29:23	23:29:00	654826.29	4462208.27	40.2960453	-73.1783492	36.6	1.0	35.6	
Lease Area	PV	031	B	6/18/2023	23:29:56	23:30:00	654816.56	4462199.2	40.2959654	-73.1784659	36.6	1.0	35.6	
Lease Area	PV	031	C	6/18/2023	23:30:29	23:30:00	654811.98	4462203	40.2960005	-73.1785188	36.6	1.0	35.6	
Lease Area	PV	031	D	6/18/2023	23:31:00	23:31:00	654821.05	4462208.39	40.2960473	-73.1784108	36.6	0.9	35.6	
Lease Area	PV	031	E	6/18/2023	23:31:39	23:32:00	654833.11	4462202.13	40.2959887	-73.1782705	36.6	0.9	35.6	
Lease Area	PV	031	F	6/18/2023	23:32:14	23:32:00	654825.43	4462195.02	40.2959261	-73.1783626	36.6	0.9	35.6	
Lease Area	PV	031	G	6/18/2023	23:32:41	23:33:00	654817.73	4462188.84	40.2958719	-73.1784546	36.6	0.9	35.6	
Lease Area	PV	031	H	6/18/2023	23:33:10	23:33:00	654817.93	4462197.09	40.2959462	-73.1784503	36.6	0.9	35.6	
Lease Area	PV	032	A	6/18/2023	23:52:21	23:52:00	657204.88	4462809.05	40.3010111	-73.1502294	37.8	0.8	37.0	
Lease Area	PV	032	B	6/18/2023	23:52:52	23:53:00	657197.5	4462805.52	40.3009807	-73.1503171	37.8	0.8	37.0	
Lease Area	PV	032	C	6/18/2023	23:53:25	23:53:00	657194.19	4462800.86	40.3009394	-73.1503572	37.8	0.8	37.0	
Lease Area	PV	032	D	6/18/2023	23:54:03	23:54:00	657199.07	4462809.32	40.3010147	-73.1502977	37.8	0.8	37.0	
Lease Area	PV	032	E	6/18/2023	23:54:57	23:55:00	657194.1	4462786.11	40.3008066	-73.1503618	37.8	0.8	37.0	Outside of watch circle.
Lease Area	PV	032	F	6/18/2023	23:55:30	23:56:00	657192.4	4462795.05	40.3008874	-73.1503796	37.8	0.8	37.0	
Lease Area	PV	032	G	6/18/2023	23:56:22	23:56:00	657208.11	4462791.65	40.3008539	-73.1501957	37.8	0.8	37.0	
Lease Area	PV	032	H	6/18/2023	23:56:48	23:57:00	657209.82	4462797.46	40.3009058	-73.1501742	37.8	0.8	37.0	
Lease Area	PV	032	I	6/18/2023	23:57:21	23:57:00	657205.62	4462801.95	40.3009471	-73.1502225	37.8	0.8	37.0	
Lease Area	PV	033	A	6/19/2023	0:14:44	0:15:00	658975.58	4462804.31	40.3006335	-73.1294059	38.4	0.7	37.7	
Lease Area	PV	033	B	6/19/2023	0:15:27	0:15:00	658966.77	4462808.18	40.30067	-73.1295085	38.4	0.7	37.7	
Lease Area	PV	033	C	6/19/2023	0:16:04	0:16:00	658958.16	4462813.1	40.300716	-73.1296086	38.4	0.7	37.7	
Lease Area	PV	033	D	6/19/2023	0:16:31	0:17:00	658957.29	4462804.21	40.3006361	-73.129621	38.4	0.7	37.7	
Lease Area	PV	033	E	6/19/2023	0:17:05	0:17:00	658966.46	4462796.94	40.3005689	-73.129515	38.4	0.7	37.7	
Lease Area	PV	033	F	6/19/2023	0:17:36	0:18:00	658974.52	4462795.17	40.3005514	-73.1294206	38.4	0.7	37.7	
Lease Area	PV	033	G	6/19/2023	0:18:09	0:18:00	658969.63	4462789.06	40.3004973	-73.1294797	38.4	0.7	37.7	
Lease Area	PV	033	H	6/19/2023	0:18:44	0:19:00	658961.62	4462790.19	40.300509	-73.1295736	38.4	0.7	37.7	
Lease Area	PV	044	A	6/19/2023	0:42:01	0:42:00	657193.08	4460409.42	40.2794055	-73.1509574	37.8	0.6	37.2	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	044	B	6/19/2023	0:42:45	0:43:00	657204.83	4460411.33	40.2794205	-73.1508187	37.8	0.6	37.2	
Lease Area	PV	044	C	6/19/2023	0:43:17	0:43:00	657209.5	4460403.61	40.2793501	-73.1507657	37.8	0.6	37.2	
Lease Area	PV	044	D	6/19/2023	0:43:45	0:44:00	657197.76	4460404.52	40.2793605	-73.1509035	37.8	0.6	37.2	
Lease Area	PV	044	E	6/19/2023	0:44:15	0:44:00	657188.66	4460397.23	40.2792966	-73.1510123	37.8	0.6	37.2	
Lease Area	PV	044	F	6/19/2023	0:45:02	0:45:00	657203.53	4460397.83	40.2792992	-73.1508373	37.8	0.6	37.2	
Lease Area	PV	044	G	6/19/2023	0:45:35	0:46:00	657205.38	4460391.38	40.2792408	-73.1508172	37.8	0.6	37.2	
Lease Area	PV	044	H	6/19/2023	0:46:07	0:46:00	657199.72	4460389.4	40.279224	-73.1508842	37.8	0.6	37.2	
Lease Area	PV	053	A	6/19/2023	1:09:43	1:10:00	657193.55	4458010.7	40.2578057	-73.1515401	38.1	0.4	37.7	
Lease Area	PV	053	B	6/19/2023	1:10:14	1:10:00	657203.59	4458012.28	40.2578181	-73.1514217	38.1	0.4	37.7	
Lease Area	PV	053	C	6/19/2023	1:10:45	1:11:00	657209.8	4458000.74	40.257713	-73.1513516	38.1	0.4	37.7	
Lease Area	PV	053	E	6/19/2023	1:11:54	1:12:00	657188.69	4458003.75	40.2577441	-73.151599	38.1	0.4	37.7	
Lease Area	PV	053	F	6/19/2023	1:12:28	1:12:00	657190.12	4457993.41	40.2576507	-73.1515847	38.1	0.4	37.7	
Lease Area	PV	053	G	6/19/2023	1:13:00	1:13:00	657202.9	4457988.09	40.2576004	-73.1514358	38.1	0.4	37.7	
Lease Area	PV	053	H	6/19/2023	1:13:27	1:13:00	657211.05	4457993.75	40.2576498	-73.1513386	38.1	0.4	37.7	
Lease Area	PV	045	A	6/19/2023	1:45:06	1:45:00	659604.07	4460410.75	40.2789609	-73.1226112	38.4	0.3	38.1	
Lease Area	PV	045	B	6/19/2023	1:45:33	1:46:00	659593.66	4460410.97	40.2789649	-73.1227335	38.4	0.3	38.1	
Lease Area	PV	045	C	6/19/2023	1:46:06	1:46:00	659590.16	4460405.11	40.2789128	-73.1227761	38.4	0.3	38.1	
Lease Area	PV	045	D	6/19/2023	1:46:35	1:47:00	659601.29	4460401.97	40.2788824	-73.122646	38.4	0.3	38.1	
Lease Area	PV	045	E	6/19/2023	1:47:02	1:47:00	659609.88	4460402.79	40.2788881	-73.1225448	38.4	0.3	38.1	
Lease Area	PV	045	F	6/19/2023	1:47:35	1:48:00	659608.29	4460393.24	40.2788024	-73.1225659	38.4	0.3	38.1	
Lease Area	PV	045	G	6/19/2023	1:48:01	1:48:00	659601.25	4460389.93	40.278774	-73.1226495	38.4	0.3	38.1	
Lease Area	PV	045	H	6/19/2023	1:48:39	1:49:00	659592.31	4460393.54	40.2788082	-73.1227537	38.4	0.3	38.1	
Lease Area	PV	034	A	6/19/2023	2:12:11	2:12:00	662005.28	4462194.6	40.2945617	-73.0939296	38.7	0.2	38.5	
Lease Area	PV	034	B	6/19/2023	2:12:48	2:13:00	661998.94	4462188.59	40.2945088	-73.0940057	38.7	0.2	38.5	
Lease Area	PV	034	C	6/19/2023	2:13:32	2:14:00	661991.64	4462193.95	40.2945585	-73.0940902	38.7	0.2	38.5	
Lease Area	PV	034	D	6/19/2023	2:14:12	2:14:00	661988.83	4462200.31	40.2946163	-73.0941216	38.7	0.2	38.5	
Lease Area	PV	034	E	6/19/2023	2:14:52	2:15:00	662001.32	4462199.1	40.294603	-73.093975	38.7	0.2	38.5	
Lease Area	PV	034	F	6/19/2023	2:15:29	2:15:00	662011.1	4462203.73	40.2946428	-73.0938589	38.7	0.2	38.5	
Lease Area	PV	034	G	6/19/2023	2:16:08	2:16:00	662005.8	4462211.61	40.2947148	-73.0939192	38.7	0.2	38.5	
Lease Area	PV	034	H	6/19/2023	2:16:43	2:17:00	661993.62	4462208.3	40.2946873	-73.0940633	38.7	0.2	38.5	
Reference	PV	120	A	6/19/2023	6:20:30	6:21:00	695366.04	4488804.73	40.5269732	-72.6935309	41.8	0.6	41.1	
Reference	PV	120	B	6/19/2023	6:21:10	6:21:00	695362.71	4488809.77	40.5270194	-72.6935686	41.8	0.6	41.1	
Reference	PV	120	C	6/19/2023	6:21:37	6:22:00	695351.09	4488809.51	40.5270198	-72.6937058	41.8	0.6	41.1	
Reference	PV	120	D	6/19/2023	6:29:40	6:30:00	695358.9	4488788.53	40.5268291	-72.6936201	41.8	0.7	41.1	
Reference	PV	120	E	6/19/2023	6:30:08	6:30:00	695346.08	4488795.84	40.5268979	-72.6937691	41.8	0.7	41.1	
Reference	PV	120	F	6/19/2023	6:30:54	6:31:00	695348.17	4488803.15	40.5269632	-72.6937422	41.8	0.7	41.1	
Reference	PV	120	G	6/19/2023	6:31:34	6:32:00	695359.95	4488800.01	40.5269322	-72.6936042	41.8	0.7	41.1	
Reference	PV	120	H	6/19/2023	6:32:08	6:32:00	695356.88	4488792.72	40.5268673	-72.6936426	41.8	0.7	41.1	
Reference	PV	110	A	6/19/2023	6:57:10	6:57:00	695351.37	4490401.71	40.5413522	-72.6932107	39.3	0.8	38.6	
Reference	PV	110	B	6/19/2023	6:57:59	6:58:00	695364.35	4490403.44	40.5413647	-72.693057	39.3	0.8	38.5	
Reference	PV	110	C	6/19/2023	6:58:30	6:59:00	695358.81	4490411.98	40.5414429	-72.6931198	39.3	0.8	38.5	
Reference	PV	110	D	6/19/2023	6:59:12	6:59:00	695351.4	4490406.78	40.5413978	-72.6932088	39.3	0.8	38.5	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	110	E	6/19/2023	7:01:17	7:01:00	695348.81	4490393.56	40.5412794	-72.6932434	39.3	0.8	38.5	
Reference	PV	110	F	6/19/2023	7:02:03	7:02:00	695350.51	4490402.16	40.5413564	-72.6932207	39.3	0.8	38.5	
Reference	PV	110	G	6/19/2023	7:03:29	7:03:00	695365.35	4490392.66	40.5412674	-72.6930486	39.3	0.8	38.5	
Reference	PV	110	H	6/19/2023	7:05:59	7:06:00	695362.13	4490393.54	40.5412761	-72.6930863	39.3	0.8	38.5	
Reference	PV	100	A	6/19/2023	7:23:07	7:23:00	695359.01	4491996.08	40.5557023	-72.6926278	38.1	0.9	37.2	
Reference	PV	100	B	6/19/2023	7:23:43	7:24:00	695358.66	4492004.86	40.5557814	-72.6926292	38.1	0.9	37.2	
Reference	PV	100	C	6/19/2023	7:24:20	7:24:00	695368.21	4491999.95	40.555735	-72.692518	38.1	0.9	37.2	
Reference	PV	100	D	6/19/2023	7:25:21	7:25:00	695350.51	4491996.45	40.5557076	-72.692728	38.1	0.9	37.2	
Reference	PV	100	E	6/19/2023	7:26:06	7:26:00	695352.31	4491990.65	40.555655	-72.6927085	38.1	0.9	37.2	
Reference	PV	100	F	6/19/2023	7:32:03	7:32:00	695351	4492004.78	40.5557825	-72.6927196	38.1	0.9	37.2	
Reference	PV	100	G	6/19/2023	7:32:48	7:33:00	695353.05	4491999.29	40.5557326	-72.6926971	38.1	0.9	37.2	
Reference	PV	100	H	6/19/2023	7:33:42	7:34:00	695355.3	4492013.51	40.5558601	-72.6926662	38.1	0.9	37.2	
Reference	PV	090	A	6/19/2023	7:55:19	7:55:00	695349.26	4493603.73	40.570176	-72.6922456	37.8	1.0	36.8	
Reference	PV	090	B	6/19/2023	7:55:48	7:56:00	695353.77	4493598.98	40.5701322	-72.6921939	37.8	1.0	36.8	
Reference	PV	090	C	6/19/2023	7:56:31	7:57:00	695360.61	4493609.64	40.5702265	-72.6921098	37.8	1.0	36.8	
Reference	PV	090	D	6/19/2023	7:57:25	7:57:00	695360.69	4493601.18	40.5701504	-72.6921115	37.8	1.0	36.8	
Reference	PV	090	E	6/19/2023	7:57:53	7:58:00	695368.5	4493592.64	40.5700716	-72.692022	37.8	1.0	36.8	
Reference	PV	090	F	6/19/2023	7:58:19	7:58:00	695364.89	4493598.62	40.5701263	-72.6920627	37.8	1.0	36.8	
Reference	PV	090	G	6/19/2023	7:58:50	7:59:00	695352.77	4493591.67	40.5700666	-72.6922079	37.8	1.0	36.8	
Reference	PV	090	H	6/19/2023	7:59:22	7:59:00	695359.65	4493588.49	40.5700364	-72.6921277	37.8	1.0	36.8	
Reference	PV	080	A	6/19/2023	8:18:11	8:18:00	695352.42	4495206.03	40.5845985	-72.6917124	37.2	1.1	36.1	
Reference	PV	080	B	6/19/2023	8:18:48	8:19:00	695362.65	4495208.88	40.5846217	-72.6915907	37.2	1.1	36.1	
Reference	PV	080	C	6/19/2023	8:19:13	8:19:00	695356.35	4495212.02	40.5846515	-72.6916642	37.2	1.1	36.1	
Reference	PV	080	D	6/19/2023	8:21:35	8:22:00	695350.03	4495201.97	40.5845625	-72.6917419	37.2	1.1	36.1	
Reference	PV	080	E	6/19/2023	8:23:27	8:23:00	695353.39	4495192.97	40.5844807	-72.691705	37.2	1.1	36.1	
Reference	PV	080	F	6/19/2023	8:23:50	8:24:00	695365.94	4495195.66	40.584502	-72.691556	37.2	1.1	36.1	
Reference	PV	080	G	6/19/2023	8:24:16	8:24:00	695365.98	4495201.96	40.5845587	-72.6915536	37.2	1.1	36.1	
Reference	PV	080	H	6/19/2023	8:24:52	8:25:00	695354.61	4495201.98	40.5845615	-72.6916878	37.2	1.1	36.1	
Reference	PV	070	A	6/19/2023	8:41:40	8:42:00	695361.42	4496804.71	40.598987	-72.691111	36.0	1.1	34.9	
Reference	PV	070	B	6/19/2023	8:42:28	8:42:00	695366.67	4496797.17	40.5989179	-72.6910513	36.0	1.1	34.9	
Reference	PV	070	C	6/19/2023	8:43:07	8:43:00	695361.89	4496810.52	40.5990392	-72.6911036	36.0	1.1	34.9	
Reference	PV	070	D	6/19/2023	8:43:52	8:44:00	695349.31	4496805.76	40.5989993	-72.6912536	36.0	1.1	34.9	
Reference	PV	070	E	6/19/2023	8:44:40	8:45:00	695348.87	4496796.52	40.5989162	-72.6912617	36.0	1.1	34.9	
Reference	PV	070	F	6/19/2023	8:45:26	8:45:00	695354.98	4496798.52	40.5989328	-72.6911889	36.0	1.1	34.9	
Reference	PV	070	G	6/19/2023	8:45:51	8:46:00	695363.74	4496791.02	40.5988632	-72.6910878	36.0	1.1	34.9	
Reference	PV	070	H	6/19/2023	8:46:53	8:47:00	695355.63	4496788.96	40.5988466	-72.6911842	36.0	1.1	34.9	
Reference	PV	070	I	6/19/2023	9:35:43	9:36:00	695354.61	4496800.65	40.598952	-72.6911926	36.0	1.1	34.8	
Reference	PV	070	J	6/19/2023	9:36:26	9:36:00	695353.81	4496810.75	40.5990431	-72.691199	36.0	1.1	34.8	
Reference	PV	070	K	6/19/2023	9:37:08	9:37:00	695350.41	4496801.27	40.5989586	-72.691242	36.0	1.1	34.8	
Reference	PV	069	A	6/19/2023	9:58:53	9:59:00	692475.33	4496789.11	40.5995232	-72.7251994	36.0	1.1	34.9	
Reference	PV	069	B	6/19/2023	9:59:35	10:00:00	692472.3	4496797.25	40.5995971	-72.7252327	36.0	1.1	34.9	
Reference	PV	069	C	6/19/2023	10:00:22	10:00:00	692483.05	4496800.1	40.5996203	-72.7251049	36.0	1.1	34.9	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	069	D	6/19/2023	10:00:46	10:01:00	692476.34	4496805.99	40.5996749	-72.7251823	36.0	1.1	34.9	
Reference	PV	069	F	6/19/2023	10:04:34	10:05:00	692472.1	4496806.77	40.5996829	-72.7252321	36.0	1.1	34.9	
Reference	PV	069	G	6/19/2023	10:05:35	10:06:00	692481.48	4496811.46	40.5997229	-72.7251199	36.0	1.1	34.9	
Reference	PV	069	H	6/19/2023	10:06:27	10:06:00	692475.99	4496803.59	40.5996534	-72.7251872	36.0	1.1	34.9	
Reference	PV	069	I	6/19/2023	10:07:23	10:07:00	692482.05	4496795.79	40.5995817	-72.725118	36.0	1.1	34.9	
Reference	PV	079	A	6/19/2023	10:24:33	10:25:00	692468.79	4495199.1	40.5852118	-72.7257618	36.3	1.0	35.3	
Reference	PV	079	B	6/19/2023	10:25:11	10:25:00	692477.7	4495205.39	40.5852663	-72.7256547	36.3	1.0	35.3	
Reference	PV	079	C	6/19/2023	10:25:41	10:26:00	692485.62	4495210.71	40.5853124	-72.7255596	36.3	1.0	35.3	
Reference	PV	079	D	6/19/2023	10:26:19	10:26:00	692468.87	4495210.43	40.5853138	-72.7257574	36.3	1.0	35.3	Outside of watch circle.
Reference	PV	079	E	6/19/2023	10:28:03	10:28:00	692475.06	4495205.92	40.5852717	-72.7256857	36.3	1.0	35.3	
Reference	PV	079	F	6/19/2023	10:28:58	10:29:00	692478.18	4495199.54	40.5852136	-72.7256508	36.3	1.0	35.3	
Reference	PV	079	G	6/19/2023	10:29:31	10:30:00	692490.72	4495200.15	40.5852161	-72.7255026	36.3	1.0	35.3	
Reference	PV	079	H	6/19/2023	10:30:05	10:30:00	692486.62	4495190.72	40.5851322	-72.7255539	36.3	1.0	35.3	
Reference	PV	079	I	6/19/2023	10:30:40	10:31:00	692477.01	4495188.71	40.5851164	-72.725668	36.3	1.0	35.3	
Reference	PV	089	A	6/19/2023	10:45:59	10:46:00	692471.15	4493596.3	40.5707832	-72.7262228	37.5	1.0	36.5	
Reference	PV	089	B	6/19/2023	10:46:54	10:47:00	692471.16	4493603.83	40.570851	-72.7262204	37.5	1.0	36.5	
Reference	PV	089	C	6/19/2023	10:47:33	10:48:00	692475.91	4493608.84	40.570895	-72.7261628	37.5	1.0	36.5	
Reference	PV	089	D	6/19/2023	10:48:14	10:48:00	692478.16	4493605.81	40.5708672	-72.7261371	37.5	1.0	36.5	
Reference	PV	089	E	6/19/2023	10:48:56	10:49:00	692488.04	4493605.62	40.5708631	-72.7260205	37.5	0.9	36.6	
Reference	PV	089	F	6/19/2023	10:49:33	10:50:00	692483	4493598.19	40.5707974	-72.7260823	37.5	0.9	36.6	
Reference	PV	089	G	6/19/2023	10:50:24	10:50:00	692475.49	4493601.53	40.5708292	-72.7261699	37.5	0.9	36.6	
Reference	PV	089	H	6/19/2023	10:51:14	10:51:00	692478.72	4493589.94	40.5707242	-72.7261353	37.5	0.9	36.6	
Reference	PV	099	A	6/19/2023	11:07:18	11:07:00	692471.5	4491993.5	40.556355	-72.7267071	38.1	0.9	37.2	
Reference	PV	099	B	6/19/2023	11:08:01	11:08:00	692484.58	4491990.98	40.5563293	-72.7265535	38.1	0.9	37.2	
Reference	PV	099	C	6/19/2023	11:08:31	11:09:00	692482.22	4491998.86	40.5564007	-72.7265789	38.1	0.9	37.2	
Reference	PV	099	D	6/19/2023	11:09:15	11:09:00	692486.58	4492004.4	40.5564496	-72.7265258	38.1	0.9	37.2	
Reference	PV	099	E	6/19/2023	11:09:44	11:10:00	692479.21	4492009.8	40.5564999	-72.7266111	38.1	0.9	37.2	
Reference	PV	099	F	6/19/2023	11:10:16	11:10:00	692470.33	4492004.45	40.5564538	-72.7267175	38.1	0.9	37.2	
Reference	PV	099	G	6/19/2023	11:10:46	11:11:00	692474.61	4492009.53	40.5564986	-72.7266655	38.1	0.9	37.2	
Reference	PV	109	A	6/19/2023	11:25:51	11:26:00	692473.95	4490404.18	40.5420476	-72.7271621	39.0	0.8	38.2	
Reference	PV	109	B	6/19/2023	11:26:36	11:27:00	692482.3	4490405.29	40.5420557	-72.7270633	39.0	0.8	38.2	
Reference	PV	109	C	6/19/2023	11:27:21	11:27:00	692478.44	4490414.36	40.5421382	-72.7271061	39.0	0.8	38.2	
Reference	PV	109	D	6/19/2023	11:28:08	11:28:00	692464.66	4490409.7	40.5420995	-72.7272701	39.0	0.8	38.2	Outside of watch circle.
Reference	PV	109	E	6/19/2023	11:29:11	11:29:00	692467.43	4490402.86	40.5420372	-72.7272395	39.0	0.8	38.2	
Reference	PV	109	F	6/19/2023	11:30:08	11:30:00	692476.21	4490407.88	40.5420804	-72.7271344	39.0	0.8	38.2	
Reference	PV	109	G	6/19/2023	11:31:03	11:31:00	692472.2	4490393.81	40.5419547	-72.727186	39.0	0.8	38.2	
Reference	PV	109	H	6/19/2023	11:31:50	11:32:00	692476.21	4490397.96	40.5419911	-72.7271374	39.0	0.8	38.2	
Reference	PV	109	I	6/19/2023	11:32:25	11:32:00	692489.58	4490390.8	40.5419235	-72.7269818	39.0	0.8	38.2	
Reference	PV	119	A	6/19/2023	11:51:16	11:51:00	692476.77	4488796.43	40.5275742	-72.7276181	40.8	0.7	40.1	
Reference	PV	119	B	6/19/2023	11:52:01	11:52:00	692482.46	4488788.89	40.527505	-72.7275533	40.8	0.7	40.1	
Reference	PV	119	C	6/19/2023	11:53:08	11:53:00	692478.41	4488805.79	40.5276581	-72.7275959	40.8	0.7	40.1	
Reference	PV	119	D	6/19/2023	11:53:42	11:54:00	692477.72	4488813.38	40.5277266	-72.7276018	40.8	0.7	40.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	119	E	6/19/2023	11:54:31	11:55:00	692467.26	4488798.13	40.5275917	-72.7277298	40.8	0.7	40.1	
Reference	PV	119	F	6/19/2023	11:55:07	11:55:00	692475.45	4488789.13	40.5275088	-72.7276359	40.8	0.7	40.1	
Reference	PV	119	G	6/19/2023	11:55:55	11:56:00	692470.52	4488794.38	40.5275572	-72.7276925	40.8	0.7	40.2	
Reference	PV	119	H	6/19/2023	11:56:45	11:57:00	692474.29	4488806.05	40.5276614	-72.7276445	40.8	0.7	40.2	
Reference	PV	119	I	6/19/2023	12:02:36	12:03:00	692482.17	4488798.53	40.5275919	-72.7275538	40.8	0.7	40.2	
Reference	PV	119	J	6/19/2023	12:03:03	12:03:00	692486.8	4488806.21	40.5276599	-72.7274968	40.8	0.7	40.2	
Reference	PV	119	K	6/19/2023	12:03:36	12:04:00	692475.62	4488801.19	40.5276173	-72.7276302	40.8	0.7	40.2	
Reference	PV	119	L	6/19/2023	12:04:21	12:04:00	692473.83	4488809.17	40.5276896	-72.7276489	40.8	0.7	40.2	
Reference	PV	118	A	6/19/2023	13:27:18	13:27:00	689611.87	4488804.88	40.5283103	-72.7614139	39.0	0.4	38.7	
Reference	PV	118	B	6/19/2023	13:27:48	13:28:00	689605.24	4488812.55	40.5283809	-72.7614898	39.0	0.4	38.7	
Reference	PV	118	C	6/19/2023	13:28:27	13:28:00	689591.41	4488810.11	40.5283621	-72.7616537	39.0	0.4	38.7	
Reference	PV	118	D	6/19/2023	13:28:59	13:29:00	689592.29	4488798.03	40.5282531	-72.761647	39.0	0.4	38.7	
Reference	PV	118	E	6/19/2023	13:29:27	13:29:00	689603.8	4488801.09	40.5282781	-72.7615103	39.0	0.4	38.7	
Reference	PV	118	F	6/19/2023	13:29:49	13:30:00	689599.05	4488803.33	40.5282993	-72.7615656	39.0	0.4	38.7	
Reference	PV	118	G	6/19/2023	13:30:53	13:31:00	689597.27	4488790.43	40.5281836	-72.7615905	39.0	0.4	38.7	
Reference	PV	118	H	6/19/2023	13:31:18	13:31:00	689609.72	4488795.32	40.5282248	-72.7614421	39.0	0.4	38.7	
Reference	PV	108	A	6/19/2023	13:48:51	13:49:00	689609.04	4490406.51	40.542729	-72.7609672	37.8	0.3	37.5	
Reference	PV	108	B	6/19/2023	13:49:14	13:49:00	689602.45	4490412.57	40.542785	-72.7610431	37.8	0.3	37.5	
Reference	PV	108	C	6/19/2023	13:49:43	13:50:00	689593.02	4490405.84	40.5427266	-72.7611564	37.8	0.3	37.5	
Reference	PV	108	D	6/19/2023	13:50:15	13:50:00	689602.15	4490401	40.5426809	-72.7610501	37.8	0.3	37.5	
Reference	PV	108	E	6/19/2023	13:50:37	13:51:00	689612.08	4490398.05	40.5426521	-72.7609338	37.8	0.3	37.5	
Reference	PV	108	F	6/19/2023	13:51:04	13:51:00	689608.96	4490393.44	40.5426113	-72.760972	37.8	0.3	37.5	
Reference	PV	108	G	6/19/2023	13:51:21	13:51:00	689602.45	4490388.37	40.5425672	-72.7610504	37.8	0.3	37.5	
Reference	PV	108	H	6/19/2023	13:51:42	13:52:00	689592.82	4490392.5	40.5426066	-72.7611628	37.8	0.3	37.5	
Reference	PV	098	A	6/19/2023	14:06:06	14:06:00	689610.84	4491993.97	40.557019	-72.7604697	37.8	0.3	37.5	
Reference	PV	098	B	6/19/2023	14:06:36	14:07:00	689611.49	4492002.68	40.5570972	-72.7604594	37.8	0.3	37.5	
Reference	PV	098	C	6/19/2023	14:06:57	14:07:00	689606	4492010.54	40.5571692	-72.7605218	37.8	0.3	37.5	
Reference	PV	098	E	6/19/2023	14:07:50	14:08:00	689596.4	4492004.34	40.5571156	-72.760637	37.8	0.2	37.6	
Reference	PV	098	F	6/19/2023	14:08:14	14:08:00	689601.34	4491995.37	40.5570337	-72.7605814	37.8	0.2	37.6	
Reference	PV	098	G	6/19/2023	14:08:32	14:09:00	689595.54	4491987.82	40.5569671	-72.7606521	37.8	0.2	37.6	
Reference	PV	098	H	6/19/2023	14:09:01	14:09:00	689589.03	4491997.71	40.5570576	-72.760726	37.8	0.2	37.6	
Reference	PV	088	A	6/19/2023	14:27:51	14:28:00	689611.22	4493594.26	40.5714247	-72.7599847	37.8	0.2	37.6	
Reference	PV	088	B	6/19/2023	14:28:21	14:28:00	689609.61	4493601.76	40.5714926	-72.7600015	37.8	0.2	37.6	
Reference	PV	088	C	6/19/2023	14:28:42	14:29:00	689605.42	4493611.54	40.5715816	-72.760048	37.8	0.2	37.6	
Reference	PV	088	D	6/19/2023	14:29:03	14:29:00	689592.78	4493611.27	40.5715821	-72.7601973	37.8	0.2	37.6	
Reference	PV	088	E	6/19/2023	14:29:29	14:29:00	689588.53	4493604.32	40.5715205	-72.7602496	37.8	0.2	37.6	
Reference	PV	088	F	6/19/2023	14:29:54	14:30:00	689599.99	4493603.33	40.5715089	-72.7601146	37.8	0.2	37.6	
Reference	PV	088	G	6/19/2023	14:30:13	14:30:00	689589.86	4493595.39	40.5714398	-72.7602366	37.8	0.2	37.6	
Reference	PV	088	H	6/19/2023	14:30:40	14:31:00	689597.92	4493587.74	40.5713691	-72.7601437	37.8	0.2	37.6	
Reference	PV	078	A	6/19/2023	14:47:11	14:47:00	689609.27	4495192.25	40.5858103	-72.7595277	36.0	0.2	35.8	
Reference	PV	078	B	6/19/2023	14:47:41	14:48:00	689610.55	4495198.36	40.585865	-72.7595107	36.0	0.2	35.8	
Reference	PV	078	C	6/19/2023	14:48:03	14:48:00	689609.3	4495207.84	40.5859506	-72.7595226	36.0	0.2	35.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	078	D	6/19/2023	14:48:21	14:48:00	689598.08	4495210.81	40.5859799	-72.7596542	36.0	0.2	35.8	
Reference	PV	078	E	6/19/2023	14:48:46	14:49:00	689582.43	4495208.16	40.5859596	-72.7598398	36.0	0.2	35.8	Outside of watch circle.
Reference	PV	078	F	6/19/2023	14:50:23	14:50:00	689590.15	4495206.6	40.5859438	-72.7597491	36.0	0.2	35.8	
Reference	PV	078	G	6/19/2023	14:50:51	14:51:00	689602.21	4495200.43	40.5858855	-72.7596086	36.0	0.2	35.8	
Reference	PV	078	H	6/19/2023	14:51:18	14:51:00	689600.25	4495192.94	40.5858185	-72.759634	36.0	0.2	35.8	
Reference	PV	078	I	6/19/2023	14:51:50	14:52:00	689591.12	4495190.81	40.5858015	-72.7597424	36.0	0.2	35.8	
Reference	PV	068	A	6/19/2023	15:06:14	15:06:00	689610.54	4496806.53	40.6003417	-72.7590273	36.0	0.2	35.8	
Reference	PV	068	B	6/19/2023	15:06:36	15:07:00	689601.33	4496812.82	40.6004004	-72.7591342	36.0	0.2	35.8	
Reference	PV	068	C	6/19/2023	15:07:00	15:07:00	689595.7	4496812.12	40.6003954	-72.7592009	36.0	0.2	35.8	
Reference	PV	068	D	6/19/2023	15:07:25	15:07:00	689585.38	4496800.43	40.6002925	-72.7593263	36.0	0.2	35.8	
Reference	PV	068	E	6/19/2023	15:07:50	15:08:00	689592.18	4496792.54	40.60022	-72.7592484	36.0	0.2	35.8	
Reference	PV	068	F	6/19/2023	15:08:18	15:08:00	689604	4496798.4	40.60027	-72.759107	36.0	0.2	35.8	
Reference	PV	068	G	6/19/2023	15:08:47	15:09:00	689609.6	4496795.39	40.6002416	-72.7590418	36.0	0.2	35.8	
Reference	PV	068	H	6/19/2023	15:09:37	15:10:00	689603.24	4496789.12	40.6001866	-72.7591188	36.0	0.2	35.8	
Reference	PV	068	I	6/19/2023	15:10:58	15:11:00	689597.64	4496804.47	40.6003261	-72.7591803	36.0	0.2	35.8	
Reference	PV	067	A	6/19/2023	15:41:54	15:42:00	686728.84	4496804.42	40.6009783	-72.793062	31.4	0.2	31.2	
Reference	PV	067	B	6/19/2023	15:42:35	15:43:00	686724.14	4496812.2	40.6010494	-72.7931152	31.4	0.2	31.2	
Reference	PV	067	C	6/19/2023	15:43:38	15:44:00	686713.35	4496806.06	40.6009966	-72.7932445	31.4	0.2	31.2	
Reference	PV	067	D	6/19/2023	15:44:08	15:44:00	686722.19	4496800.36	40.6009433	-72.7931418	31.4	0.2	31.2	
Reference	PV	067	E	6/19/2023	15:44:45	15:45:00	686728.07	4496794	40.6008847	-72.7930742	31.4	0.2	31.2	
Reference	PV	067	F	6/19/2023	15:45:27	15:45:00	686721.17	4496789.38	40.6008446	-72.7931571	31.4	0.2	31.2	
Reference	PV	067	G	6/19/2023	15:46:01	15:46:00	686709.96	4496795.92	40.600906	-72.7932875	31.4	0.2	31.2	
Reference	PV	067	H	6/19/2023	15:46:31	15:47:00	686710.18	4496803.29	40.6009723	-72.7932828	31.4	0.2	31.2	
Reference	PV	077	A	6/19/2023	16:01:42	16:02:00	686730.55	4495201.36	40.5865469	-72.7935165	35.1	0.3	34.8	
Reference	PV	077	B	6/19/2023	16:02:18	16:02:00	686728.27	4495210.23	40.5866272	-72.7935408	35.1	0.3	34.8	
Reference	PV	077	C	6/19/2023	16:03:13	16:03:00	686719.22	4495210.72	40.5866337	-72.7936475	35.1	0.3	34.8	
Reference	PV	077	D	6/19/2023	16:03:39	16:04:00	686709.56	4495205.57	40.5865895	-72.7937631	35.1	0.3	34.8	
Reference	PV	077	E	6/19/2023	16:04:12	16:04:00	686720.13	4495196.56	40.586506	-72.793641	35.1	0.3	34.8	
Reference	PV	077	G	6/19/2023	16:05:15	16:05:00	686721.51	4495187.96	40.5864283	-72.7936272	35.1	0.3	34.8	
Reference	PV	077	H	6/19/2023	16:05:49	16:06:00	686712.88	4495194.65	40.5864905	-72.7937271	35.1	0.3	34.8	
Reference	PV	087	A	6/19/2023	16:20:50	16:21:00	686727.4	4493589.87	40.5720406	-72.7940305	35.7	0.3	35.4	
Reference	PV	087	B	6/19/2023	16:21:34	16:22:00	686729.8	4493600.21	40.5721332	-72.7939991	35.7	0.3	35.4	
Reference	PV	087	C	6/19/2023	16:22:02	16:22:00	686725.75	4493608.51	40.5722088	-72.7940445	35.7	0.3	35.4	
Reference	PV	087	D	6/19/2023	16:22:27	16:22:00	686715.09	4493612.41	40.5722463	-72.7941692	35.7	0.3	35.4	
Reference	PV	087	E	6/19/2023	16:23:08	16:23:00	686707.87	4493604.3	40.5721749	-72.7942568	35.7	0.3	35.4	
Reference	PV	087	F	6/19/2023	16:27:48	16:28:00	686719.88	4493601.76	40.5721494	-72.7941158	35.7	0.3	35.3	
Reference	PV	087	G	6/19/2023	16:28:38	16:29:00	686714.21	4493590.2	40.5720466	-72.7941861	35.7	0.3	35.3	
Reference	PV	087	H	6/19/2023	16:29:29	16:29:00	686708.82	4493596.25	40.5721023	-72.794248	35.7	0.3	35.3	
Reference	PV	097	A	6/19/2023	16:48:03	16:48:00	686730.76	4492004.34	40.5577666	-72.7944597	36.0	0.4	35.6	
Reference	PV	097	B	6/19/2023	16:48:40	16:49:00	686724.7	4492011.91	40.5578361	-72.7945289	36.0	0.4	35.6	
Reference	PV	097	C	6/19/2023	16:49:26	16:49:00	686712.2	4492008.05	40.5578041	-72.7946776	36.0	0.4	35.6	
Reference	PV	097	D	6/19/2023	16:50:16	16:50:00	686720.48	4492002.38	40.5577512	-72.7945816	36.0	0.4	35.6	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	097	E	6/19/2023	16:51:19	16:51:00	686729.21	4491994.05	40.5576743	-72.794481	36.0	0.4	35.5	
Reference	PV	097	F	6/19/2023	16:51:52	16:52:00	686720.82	4491989.26	40.5576331	-72.7945814	36.0	0.4	35.5	
Reference	PV	097	G	6/19/2023	16:52:26	16:52:00	686710.94	4491992.99	40.5576689	-72.7946969	36.0	0.4	35.5	
Reference	PV	097	H	6/19/2023	16:52:59	16:53:00	686707.61	4492000.29	40.5577353	-72.7947341	36.0	0.4	35.5	
Reference	PV	098	I	6/19/2023	17:14:02	17:14:00	689588.45	4492003.5	40.5571099	-72.7607311	37.8	0.5	37.3	
Reference	PV	098	J	6/19/2023	17:14:34	17:15:00	689608.58	4491999.06	40.5570653	-72.7604948	37.8	0.5	37.3	
Reference	PV	107	A	6/19/2023	17:33:48	17:34:00	686730.85	4490405.39	40.5433724	-72.794931	35.7	0.6	35.1	
Reference	PV	107	B	6/19/2023	17:34:44	17:35:00	686717.89	4490413.49	40.5434482	-72.7950816	35.7	0.6	35.0	
Reference	PV	107	C	6/19/2023	17:35:50	17:36:00	686712.63	4490402.86	40.5433537	-72.7951468	35.7	0.6	35.0	
Reference	PV	107	D	6/19/2023	17:36:45	17:37:00	686718.16	4490398.38	40.5433121	-72.7950828	35.7	0.6	35.0	
Reference	PV	107	E	6/19/2023	17:37:33	17:38:00	686729.06	4490394.06	40.5432708	-72.7949555	35.7	0.6	35.0	
Reference	PV	107	F	6/19/2023	17:38:06	17:38:00	686722.63	4490390.09	40.5432365	-72.7950325	35.7	0.6	35.0	
Reference	PV	107	G	6/19/2023	17:38:39	17:39:00	686710.32	4490397.46	40.5433056	-72.7951756	35.7	0.6	35.0	
Reference	PV	107	H	6/19/2023	17:39:23	17:39:00	686710.54	4490407.38	40.5433949	-72.7951701	35.7	0.6	35.0	
Reference	PV	118	I	6/19/2023	18:21:38	18:22:00	689598.16	4488805.04	40.5283149	-72.7615756	39.0	0.9	38.2	
Reference	PV	118	J	6/19/2023	18:22:14	18:22:00	689598.06	4488819.29	40.5284432	-72.7615725	39.0	0.9	38.2	Outside of watch circle.
Reference	PV	118	K	6/19/2023	18:22:56	18:23:00	689596.09	4488806.56	40.5283291	-72.7615996	39.0	0.9	38.2	
Reference	PV	118	L	6/19/2023	18:23:30	18:24:00	689592.19	4488805.21	40.5283178	-72.761646	39.0	0.9	38.2	
Reference	PV	118	M	6/19/2023	18:23:56	18:24:00	689600.34	4488798.76	40.5282579	-72.7615518	39.0	0.9	38.2	
Reference	PV	117	A	6/19/2023	18:44:22	18:44:00	686715.93	4488801.45	40.5289366	-72.7955806	39.9	1.0	39.0	
Reference	PV	117	B	6/19/2023	18:45:21	18:45:00	686707.13	4488795.76	40.5288874	-72.7956861	39.9	1.0	39.0	
Reference	PV	117	C	6/19/2023	18:46:07	18:46:00	686715.39	4488805.34	40.5289718	-72.7955858	39.9	1.0	39.0	
Reference	PV	117	E	6/19/2023	18:47:31	18:48:00	686712.63	4488809.47	40.5290096	-72.7956172	39.9	1.0	39.0	
Reference	PV	117	F	6/19/2023	18:48:28	18:48:00	686725.29	4488801.33	40.5289334	-72.7954702	39.9	1.0	39.0	
Reference	PV	117	G	6/19/2023	18:49:20	18:49:00	686718.02	4488793.19	40.5288618	-72.7955584	39.9	1.0	38.9	
Reference	PV	117	H	6/19/2023	18:50:21	18:50:00	686720.93	4488796.93	40.5288948	-72.795523	39.9	1.0	38.9	
Reference	PV	116	A	6/19/2023	19:24:13	19:24:00	683830.71	4488795.87	40.5295311	-72.8296225	37.2	1.1	36.0	
Reference	PV	116	B	6/19/2023	19:24:45	19:25:00	683838.65	4488800.92	40.5295748	-72.8295274	37.2	1.1	36.0	
Reference	PV	116	C	6/19/2023	19:25:34	19:26:00	683844.22	4488806.46	40.5296234	-72.8294601	37.2	1.2	36.0	
Reference	PV	116	F	6/19/2023	19:29:06	19:29:00	683831.49	4488800.44	40.5295721	-72.829612	37.2	1.2	36.0	
Reference	PV	116	G	6/19/2023	19:29:44	19:30:00	683843.86	4488794.22	40.5295133	-72.8294679	37.2	1.2	36.0	
Reference	PV	116	H	6/19/2023	19:30:18	19:30:00	683839.67	4488790.83	40.5294837	-72.8295183	37.2	1.2	36.0	
Reference	PV	106	A	6/19/2023	19:46:55	19:47:00	683836.83	4490395.84	40.5439334	-72.8290852	38.7	1.2	37.5	
Reference	PV	106	B	6/19/2023	19:47:36	19:48:00	683840.43	4490403.12	40.5439982	-72.8290406	38.7	1.2	37.5	
Reference	PV	106	C	6/19/2023	19:48:08	19:48:00	683842.05	4490408.31	40.5440445	-72.82902	38.7	1.2	37.5	
Reference	PV	106	D	6/19/2023	19:48:33	19:49:00	683832.86	4490408.08	40.5440445	-72.8291285	38.7	1.2	37.5	
Reference	PV	106	F	6/19/2023	19:49:37	19:50:00	683830.92	4490395.29	40.5439298	-72.8291551	38.7	1.3	37.5	
Reference	PV	106	G	6/19/2023	19:50:04	19:50:00	683836.94	4490389.98	40.5438807	-72.8290857	38.7	1.3	37.5	
Reference	PV	106	H	6/19/2023	19:50:46	19:51:00	683845.54	4490392.71	40.5439033	-72.8289834	38.7	1.3	37.5	
Reference	PV	096	A	6/19/2023	20:06:40	20:07:00	683829.65	4492004.78	40.5584195	-72.828702	36.0	1.3	34.7	
Reference	PV	096	B	6/19/2023	20:07:21	20:07:00	683835.92	4491999.43	40.5583699	-72.8286295	36.0	1.3	34.7	
Reference	PV	096	C	6/19/2023	20:08:02	20:08:00	683849.04	4491999.28	40.5583656	-72.8284747	36.0	1.3	34.7	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	096	D	6/19/2023	20:08:30	20:09:00	683846.15	4491990.42	40.5582865	-72.8285114	36.0	1.3	34.7	
Reference	PV	096	E	6/19/2023	20:08:58	20:09:00	683838.93	4491992.04	40.5583027	-72.8285961	36.0	1.3	34.7	
Reference	PV	096	F	6/19/2023	20:09:41	20:10:00	683832.86	4491999.17	40.5583682	-72.8286657	36.0	1.3	34.6	
Reference	PV	096	G	6/19/2023	20:10:27	20:10:00	683848.88	4492005.72	40.5584237	-72.8284747	36.0	1.3	34.6	
Reference	PV	096	H	6/19/2023	20:10:53	20:11:00	683842.4	4492010.86	40.5584714	-72.8285497	36.0	1.3	34.6	
Reference	PV	086	A	6/19/2023	20:26:35	20:27:00	683839.72	4493600.08	40.5727788	-72.8281187	35.1	1.4	33.7	
Reference	PV	086	B	6/19/2023	20:27:15	20:27:00	683842.02	4493604.95	40.5728221	-72.8280901	35.1	1.4	33.7	
Reference	PV	086	C	6/19/2023	20:27:47	20:28:00	683843.97	4493607.48	40.5728445	-72.8280664	35.1	1.4	33.7	
Reference	PV	086	D	6/19/2023	20:28:16	20:28:00	683838.91	4493610.05	40.5728687	-72.8281254	35.1	1.4	33.7	
Reference	PV	086	E	6/19/2023	20:28:44	20:29:00	683830.46	4493605.47	40.5728294	-72.8282264	35.1	1.4	33.7	
Reference	PV	086	F	6/19/2023	20:29:08	20:29:00	683831.18	4493596.12	40.5727451	-72.8282207	35.1	1.4	33.7	
Reference	PV	086	G	6/19/2023	20:29:36	20:30:00	683834.48	4493591.96	40.5727069	-72.8281829	35.1	1.4	33.7	
Reference	PV	086	H	6/19/2023	20:30:13	20:30:00	683844.59	4493598.21	40.5727609	-72.8280617	35.1	1.4	33.7	
Reference	PV	076	A	6/19/2023	20:43:56	20:44:00	683838.71	4495199.18	40.5871748	-72.8276648	34.1	1.4	32.7	
Reference	PV	076	B	6/19/2023	20:44:33	20:45:00	683848.27	4495198.9	40.5871701	-72.827552	34.1	1.4	32.7	
Reference	PV	076	C	6/19/2023	20:44:57	20:45:00	683847.09	4495208.78	40.5872593	-72.827563	34.1	1.4	32.7	
Reference	PV	076	D	6/19/2023	20:45:24	20:45:00	683839.3	4495205.65	40.5872329	-72.8276559	34.1	1.4	32.7	
Reference	PV	076	E	6/19/2023	20:45:48	20:46:00	683836.42	4495211.12	40.5872828	-72.8276883	34.1	1.4	32.7	
Reference	PV	076	F	6/19/2023	20:46:15	20:46:00	683829.6	4495205.82	40.5872366	-72.8277704	34.1	1.4	32.7	
Reference	PV	076	G	6/19/2023	20:46:42	20:47:00	683829.55	4495198.01	40.5871663	-72.8277733	34.1	1.4	32.7	
Reference	PV	076	H	6/19/2023	20:47:08	20:47:00	683840.51	4495190.56	40.5870968	-72.827646	34.1	1.4	32.7	
Reference	PV	076	I	6/19/2023	20:47:35	20:48:00	683842.59	4495197.38	40.5871577	-72.8276195	34.1	1.4	32.7	
Reference	PV	066	A	6/19/2023	21:01:49	21:02:00	683839.29	4496799	40.6015769	-72.8271915	33.2	1.5	31.8	
Reference	PV	066	B	6/19/2023	21:02:15	21:02:00	683846.06	4496796.31	40.6015511	-72.8271124	33.2	1.5	31.8	
Reference	PV	066	C	6/19/2023	21:02:45	21:03:00	683846.06	4496804.38	40.6016238	-72.82711	33.2	1.5	31.8	
Reference	PV	066	D	6/19/2023	21:03:05	21:03:00	683844.39	4496810	40.6016747	-72.8271281	33.2	1.5	31.8	
Reference	PV	066	E	6/19/2023	21:03:28	21:03:00	683837.42	4496813.4	40.6017069	-72.8272094	33.2	1.5	31.8	
Reference	PV	066	F	6/19/2023	21:04:55	21:05:00	683839.4	4496806.99	40.6016488	-72.8271879	33.2	1.5	31.8	
Reference	PV	066	G	6/19/2023	21:05:25	21:05:00	683832.41	4496807.29	40.601653	-72.8272704	33.2	1.5	31.8	
Reference	PV	066	H	6/19/2023	21:05:51	21:06:00	683830.22	4496799.49	40.6015833	-72.8272985	33.2	1.5	31.8	
Reference	PV	066	I	6/19/2023	21:06:15	21:06:00	683836.2	4496791.81	40.6015128	-72.8272301	33.2	1.5	31.8	
Reference	PV	065	A	6/19/2023	21:46:26	21:46:00	680948.86	4496799.07	40.6022149	-72.8613309	31.7	1.5	30.2	
Reference	PV	065	B	6/19/2023	21:46:58	21:47:00	680959.31	4496798.77	40.60221	-72.8612075	31.7	1.5	30.2	
Reference	PV	065	C	6/19/2023	21:47:20	21:47:00	680967.58	4496803.83	40.6022537	-72.8611084	31.7	1.5	30.2	
Reference	PV	065	D	6/19/2023	21:47:46	21:48:00	680966.32	4496807.62	40.6022881	-72.8611222	31.7	1.5	30.2	
Reference	PV	065	E	6/19/2023	21:48:09	21:48:00	680961.78	4496812.23	40.6023306	-72.8611745	31.7	1.5	30.2	
Reference	PV	065	G	6/19/2023	21:49:09	21:49:00	680956.06	4496801.35	40.6022339	-72.8612452	31.7	1.5	30.2	
Reference	PV	065	H	6/19/2023	21:49:35	21:50:00	680955.58	4496793.5	40.6021633	-72.8612531	31.7	1.5	30.2	
Reference	PV	065	I	6/19/2023	21:50:02	21:50:00	680962.48	4496788.84	40.6021199	-72.861173	31.7	1.5	30.2	
Reference	PV	075	A	6/19/2023	22:08:29	22:08:00	680963.27	4495195.11	40.587772	-72.861621	29.6	1.4	28.1	
Reference	PV	075	B	6/19/2023	22:08:53	22:09:00	680967.93	4495200.82	40.5878224	-72.8615643	29.6	1.4	28.1	
Reference	PV	075	C	6/19/2023	22:09:19	22:09:00	680966.76	4495206.82	40.5878767	-72.8615764	29.6	1.4	28.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	075	D	6/19/2023	22:09:41	22:10:00	680964.03	4495213.92	40.5879412	-72.8616066	29.6	1.4	28.1	
Reference	PV	075	E	6/19/2023	22:10:05	22:10:00	680954.92	4495208.49	40.5878943	-72.8617158	29.6	1.4	28.1	
Reference	PV	075	F	6/19/2023	22:10:44	22:11:00	680947.68	4495199.53	40.5878152	-72.8618038	29.6	1.4	28.1	
Reference	PV	075	G	6/19/2023	22:11:10	22:11:00	680957.04	4495193.87	40.5877622	-72.8616949	29.6	1.4	28.1	
Reference	PV	075	H	6/19/2023	22:11:44	22:12:00	680964.95	4495189.87	40.5877245	-72.8616027	29.6	1.4	28.1	
Reference	PV	075	I	6/19/2023	22:12:19	22:12:00	680960.25	4495201.6	40.5878311	-72.8616548	29.6	1.4	28.1	
Reference	PV	075	J	6/19/2023	22:12:41	22:13:00	680952.81	4495205.87	40.5878712	-72.8617414	29.6	1.4	28.1	
Reference	PV	075	K	6/19/2023	22:22:11	22:22:00	680965.05	4495186.8	40.5876968	-72.8616024	29.6	1.4	28.2	
Reference	PV	075	L	6/19/2023	22:22:40	22:23:00	680965.53	4495193.13	40.5877537	-72.8615949	29.6	1.4	28.2	
Reference	PV	075	M	6/19/2023	22:23:05	22:23:00	680966.59	4495201.68	40.5878304	-72.8615799	29.6	1.4	28.2	
Reference	PV	075	N	6/19/2023	22:23:27	22:23:00	680969.8	4495209.63	40.5879013	-72.8615397	29.6	1.4	28.2	
Reference	PV	075	O	6/19/2023	22:23:51	22:24:00	680957.49	4495212.08	40.587926	-72.8616844	29.6	1.4	28.2	
Reference	PV	075	P	6/19/2023	22:24:16	22:24:00	680954.07	4495207.86	40.5878888	-72.861726	29.6	1.4	28.2	
Reference	PV	075	Q	6/19/2023	22:24:41	22:25:00	680952.24	4495202.6	40.5878418	-72.8617491	29.6	1.4	28.2	
Reference	PV	075	R	6/19/2023	22:25:07	22:25:00	680951.31	4495195.81	40.5877809	-72.861762	29.6	1.4	28.2	
Reference	PV	085	A	6/19/2023	22:42:38	22:43:00	680950.53	4493600.75	40.5734214	-72.8622286	32.6	1.3	31.3	
Reference	PV	085	B	6/19/2023	22:43:22	22:43:00	680972.65	4493603.65	40.5734427	-72.8619666	32.6	1.3	31.3	
Reference	PV	085	C	6/19/2023	22:43:56	22:44:00	680962.17	4493611.47	40.5735153	-72.8620881	32.6	1.3	31.3	
Reference	PV	085	D	6/19/2023	22:44:25	22:44:00	680953.67	4493605.82	40.5734663	-72.8621901	32.6	1.3	31.3	
Reference	PV	085	E	6/19/2023	22:45:00	22:45:00	680958.84	4493594.92	40.5733671	-72.8621322	32.6	1.3	31.3	
Reference	PV	085	F	6/19/2023	22:45:27	22:45:00	680972.3	4493588.55	40.5733068	-72.8619751	32.6	1.3	31.3	Outside of watch circle.
Reference	PV	085	G	6/19/2023	22:45:55	22:46:00	680955.91	4493591.28	40.573335	-72.8621678	32.6	1.3	31.3	
Reference	PV	085	H	6/19/2023	22:46:26	22:46:00	680950.46	4493595.49	40.573374	-72.862231	32.6	1.3	31.3	
Reference	PV	085	I	6/19/2023	22:47:08	22:47:00	680971.1	4493603.76	40.573444	-72.8619849	32.6	1.3	31.3	
Reference	PV	095	A	6/19/2023	23:03:16	23:03:00	680955.67	4492001.23	40.5590204	-72.8626263	37.8	1.3	36.5	
Reference	PV	095	B	6/19/2023	23:04:02	23:04:00	680949.08	4491994.47	40.5589609	-72.862706	37.8	1.3	36.5	
Reference	PV	095	C	6/19/2023	23:04:43	23:05:00	680966.53	4491995.11	40.5589629	-72.8624998	37.8	1.2	36.6	
Reference	PV	095	D	6/19/2023	23:05:19	23:05:00	680959.58	4491991.51	40.558932	-72.8625829	37.8	1.2	36.6	
Reference	PV	095	E	6/19/2023	23:06:05	23:06:00	680964.45	4492005.21	40.5590543	-72.8625215	37.8	1.2	36.6	
Reference	PV	095	F	6/19/2023	23:06:40	23:07:00	680963.23	4491998.6	40.558995	-72.8625378	37.8	1.2	36.6	
Reference	PV	095	G	6/19/2023	23:07:18	23:07:00	680958.54	4492009.04	40.55909	-72.8625902	37.8	1.2	36.6	
Reference	PV	095	H	6/19/2023	23:07:50	23:08:00	680953.09	4492007.34	40.5590759	-72.862655	37.8	1.2	36.6	
Reference	PV	105	A	6/19/2023	23:25:06	23:25:00	680947.82	4490400.51	40.5446113	-72.8631773	34.1	1.2	33.0	
Reference	PV	105	B	6/19/2023	23:25:38	23:26:00	680956.78	4490397.49	40.5445822	-72.8630724	34.1	1.2	33.0	
Reference	PV	105	C	6/19/2023	23:26:10	23:26:00	680964.09	4490405.86	40.544656	-72.8629837	34.1	1.2	33.0	
Reference	PV	105	D	6/19/2023	23:26:40	23:27:00	680955.64	4490412.05	40.5447135	-72.8630817	34.1	1.1	33.0	
Reference	PV	105	E	6/19/2023	23:27:08	23:27:00	680955.92	4490408.12	40.5446781	-72.8630795	34.1	1.1	33.0	
Reference	PV	105	F	6/19/2023	23:27:44	23:28:00	680953.72	4490397.65	40.5445843	-72.8631085	34.1	1.1	33.0	
Reference	PV	105	H	6/19/2023	23:28:45	23:29:00	680964.31	4490398.6	40.5445905	-72.8629832	34.1	1.1	33.0	
Reference	PV	105	I	6/19/2023	23:29:19	23:29:00	680959.27	4490402.05	40.5446227	-72.8630417	34.1	1.1	33.0	
Reference	PV	106	I	6/19/2023	23:57:14	23:57:00	683832.71	4490409.1	40.5440537	-72.82913	38.1	1.0	37.1	
Reference	PV	106	J	6/19/2023	23:57:49	23:58:00	683842.05	4490404.35	40.5440089	-72.8290212	38.1	1.0	37.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	106	K	6/19/2023	23:58:09	23:58:00	683839.92	4490399.15	40.5439626	-72.8290478	38.1	1.0	37.1	
Reference	PV	106	L	6/19/2023	23:58:50	23:59:00	683852.3	4490399.07	40.5439591	-72.8289017	38.1	1.0	37.1	
Reference	PV	116	I	6/20/2023	0:13:34	0:14:00	683849.84	4488801.88	40.529581	-72.8293951	37.2	0.9	36.3	
Reference	PV	116	J	6/20/2023	0:14:16	0:14:00	683846.16	4488798.38	40.5295503	-72.8294395	37.2	0.9	36.3	
Reference	PV	116	K	6/20/2023	0:14:45	0:15:00	683839.74	4488796.26	40.5295326	-72.8295159	37.2	0.9	36.3	
Reference	PV	116	L	6/20/2023	0:15:16	0:15:00	683836.62	4488794.29	40.5295156	-72.8295533	37.2	0.9	36.3	
Reference	PV	115	A	6/20/2023	0:35:39	0:36:00	680969.49	4488792.66	40.5301316	-72.8633817	35.1	0.8	34.3	
Reference	PV	115	B	6/20/2023	0:36:23	0:36:00	680962.11	4488793.66	40.5301423	-72.8634684	35.1	0.8	34.3	
Reference	PV	115	C	6/20/2023	0:37:47	0:38:00	680964.75	4488810.25	40.530291	-72.8634326	35.1	0.8	34.3	
Reference	PV	115	D	6/20/2023	0:38:19	0:38:00	680955.91	4488812.95	40.5303173	-72.8635361	35.1	0.8	34.3	
Reference	PV	115	E	6/20/2023	0:39:11	0:39:00	680947.69	4488801.06	40.530212	-72.8636365	35.1	0.8	34.3	
Reference	PV	115	F	6/20/2023	0:40:20	0:40:00	680959.47	4488796.76	40.5301707	-72.8634987	35.1	0.8	34.3	
Reference	PV	115	G	6/20/2023	0:41:17	0:41:00	680959.78	4488807.66	40.5302688	-72.8634919	35.1	0.8	34.3	
Reference	PV	115	H	6/20/2023	0:42:14	0:42:00	680966.65	4488798.42	40.5301841	-72.8634135	35.1	0.8	34.3	
Reference	PV	115	I	6/20/2023	0:43:02	0:43:00	680954.67	4488790.87	40.5301188	-72.863557	35.1	0.8	34.3	
Reference	PV	114	A	6/20/2023	1:21:24	1:21:00	678090.05	4488793.43	40.5307621	-72.8973557	34.1	0.6	33.6	
Reference	PV	114	B	6/20/2023	1:22:00	1:22:00	678091.39	4488803	40.5308479	-72.8973372	34.1	0.6	33.6	
Reference	PV	114	C	6/20/2023	1:22:39	1:23:00	678085.76	4488811.26	40.5309235	-72.8974013	34.1	0.6	33.6	
Reference	PV	114	D	6/20/2023	1:23:21	1:23:00	678072.26	4488811.92	40.5309324	-72.8975604	34.1	0.6	33.6	
Reference	PV	114	E	6/20/2023	1:24:04	1:24:00	678069.29	4488802.51	40.5308483	-72.8975981	34.1	0.6	33.6	
Reference	PV	114	F	6/20/2023	1:24:46	1:25:00	678075.49	4488794.59	40.5307756	-72.8975271	34.1	0.6	33.6	
Reference	PV	114	G	6/20/2023	1:25:26	1:25:00	678078.56	4488788.68	40.5307218	-72.8974926	34.1	0.6	33.6	
Reference	PV	114	H	6/20/2023	1:26:22	1:26:00	678069	4488798.77	40.5308147	-72.8976025	34.1	0.5	33.6	
Reference	PV	104	A	6/20/2023	1:47:04	1:47:00	678086.28	4490390.24	40.5451388	-72.8969505	32.6	0.4	32.2	
Reference	PV	104	B	6/20/2023	1:47:58	1:48:00	678091.86	4490400.61	40.5452309	-72.8968817	32.6	0.4	32.2	
Reference	PV	104	C	6/20/2023	1:48:37	1:49:00	678086.5	4490409.16	40.5453091	-72.8969425	32.6	0.4	32.2	
Reference	PV	104	D	6/20/2023	1:49:14	1:49:00	678078.84	4490411.6	40.5453327	-72.8970323	32.6	0.4	32.2	
Reference	PV	104	E	6/20/2023	1:49:55	1:50:00	678070.62	4490403.94	40.5452655	-72.8971314	32.6	0.4	32.2	
Reference	PV	104	F	6/20/2023	1:50:34	1:51:00	678067.5	4490393.94	40.5451761	-72.8971711	32.6	0.4	32.2	
Reference	PV	104	G	6/20/2023	1:51:24	1:51:00	678076.3	4490390.85	40.5451464	-72.8970681	32.6	0.4	32.2	
Reference	PV	104	H	6/20/2023	1:52:05	1:52:00	678084.84	4490397.56	40.545205	-72.8969654	32.6	0.4	32.2	
Reference	PV	104	I	6/20/2023	1:52:52	1:53:00	678083.52	4490406.37	40.5452846	-72.8969785	32.6	0.4	32.2	
Reference	PV	104	J	6/20/2023	1:53:44	1:54:00	678075.62	4490398.72	40.5452174	-72.8970739	32.6	0.4	32.2	
Reference	PV	094	A	6/20/2023	2:13:53	2:14:00	678086.32	4491988.98	40.559532	-72.8964994	31.7	0.3	31.4	
Reference	PV	094	B	6/20/2023	2:14:43	2:15:00	678090.17	4491994.09	40.5595772	-72.8964526	31.7	0.3	31.4	
Reference	PV	094	C	6/20/2023	2:15:16	2:15:00	678090.44	4492004.94	40.5596748	-72.8964463	31.7	0.3	31.4	
Reference	PV	094	D	6/20/2023	2:15:49	2:16:00	678086.14	4492010.57	40.5597264	-72.8964955	31.7	0.3	31.4	
Reference	PV	094	E	6/20/2023	2:16:19	2:16:00	678072.45	4492010.43	40.5597281	-72.8966571	31.7	0.3	31.4	
Reference	PV	094	F	6/20/2023	2:19:11	2:19:00	678069.13	4491998.88	40.5596248	-72.8966996	31.7	0.3	31.4	
Reference	PV	094	G	6/20/2023	2:19:54	2:20:00	678072.26	4491990.47	40.5595484	-72.896665	31.7	0.3	31.4	
Reference	PV	094	H	6/20/2023	2:20:56	2:21:00	678083.5	4491994.93	40.5595862	-72.8965311	31.7	0.3	31.4	
Reference	PV	094	I	6/20/2023	2:21:38	2:22:00	678079.59	4492003.41	40.5596634	-72.8965748	31.7	0.3	31.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	095	I	6/20/2023	2:54:29	2:54:00	680953.28	4492002.04	40.5590282	-72.8626543	33.5	0.2	33.3	
Reference	PV	095	J	6/20/2023	2:55:06	2:55:00	680957.41	4491995.03	40.5589642	-72.8626075	33.5	0.2	33.3	
Reference	PV	095	K	6/20/2023	2:55:42	2:56:00	680958.73	4491989.55	40.5589145	-72.8625935	33.5	0.2	33.4	
Reference	PV	084	A	6/20/2023	3:18:50	3:19:00	678091.58	4493602.87	40.5740604	-72.8959822	29.9	0.1	29.8	
Reference	PV	084	B	6/20/2023	3:19:26	3:19:00	678089.01	4493607.94	40.5741066	-72.8960111	29.9	0.1	29.8	
Reference	PV	084	C	6/20/2023	3:19:59	3:20:00	678080.12	4493612.57	40.5741502	-72.8961148	29.9	0.1	29.8	
Reference	PV	084	D	6/20/2023	3:20:41	3:21:00	678072.28	4493607.55	40.5741067	-72.8962087	29.9	0.1	29.8	
Reference	PV	084	E	6/20/2023	3:21:28	3:21:00	678069.47	4493599.28	40.5740329	-72.8962442	29.9	0.1	29.8	
Reference	PV	084	F	6/20/2023	3:22:10	3:22:00	678082.37	4493597.95	40.5740181	-72.8960923	29.9	0.1	29.8	
Reference	PV	084	G	6/20/2023	3:22:55	3:23:00	678090.4	4493596.05	40.5739993	-72.895998	29.9	0.1	29.8	
Reference	PV	084	H	6/20/2023	3:23:27	3:23:00	678082.85	4493590.27	40.5739489	-72.8960888	29.9	0.1	29.8	
Reference	PV	084	I	6/20/2023	3:24:11	3:24:00	678072.83	4493592.05	40.5739671	-72.8962066	29.9	0.1	29.8	
Reference	PV	074	A	6/20/2023	3:41:15	3:41:00	678091.83	4495195.66	40.5884	-72.8955297	28.7	0.1	28.6	
Reference	PV	074	B	6/20/2023	3:42:11	3:42:00	678091.99	4495204.5	40.5884795	-72.8955253	28.7	0.1	28.6	
Reference	PV	074	C	6/20/2023	3:42:59	3:43:00	678084.71	4495212.62	40.5885542	-72.895609	28.7	0.1	28.6	
Reference	PV	074	D	6/20/2023	3:43:38	3:44:00	678072.21	4495209.45	40.5885283	-72.8957575	28.7	0.1	28.6	
Reference	PV	074	E	6/20/2023	3:44:27	3:44:00	678069.74	4495202.74	40.5884685	-72.8957886	28.7	0.1	28.6	
Reference	PV	074	F	6/20/2023	3:45:01	3:45:00	678081.38	4495200.85	40.5884489	-72.8956516	28.7	0.1	28.6	
Reference	PV	074	G	6/20/2023	3:45:50	3:46:00	678083.26	4495188.41	40.5883365	-72.895633	28.7	0.1	28.6	
Reference	PV	074	H	6/20/2023	3:47:17	3:47:00	678072.57	4495188.75	40.5883419	-72.8957591	28.7	0.1	28.6	
Reference	PV	074	I	6/20/2023	3:48:27	3:48:00	678069.82	4495195.63	40.5884044	-72.8957896	28.7	0.1	28.6	
Reference	PV	064	A	6/20/2023	4:11:14	4:11:00	678090.19	4496793.49	40.6027852	-72.8950978	29.0	0.1	28.9	
Reference	PV	064	B	6/20/2023	4:11:52	4:12:00	678094.3	4496799	40.602834	-72.8950477	29.0	0.1	28.9	
Reference	PV	064	C	6/20/2023	4:12:37	4:13:00	678088.75	4496809.25	40.6029274	-72.8951103	29.0	0.1	28.9	
Reference	PV	064	D	6/20/2023	4:13:16	4:13:00	678077.74	4496809.44	40.6029315	-72.8952403	29.0	0.1	28.9	
Reference	PV	064	E	6/20/2023	4:14:29	4:14:00	678071.76	4496804	40.6028838	-72.8953125	29.0	0.1	28.9	
Reference	PV	064	F	6/20/2023	4:15:02	4:15:00	678080.61	4496798.71	40.6028343	-72.8952095	29.0	0.1	28.9	
Reference	PV	064	G	6/20/2023	4:16:05	4:16:00	678073.76	4496789.66	40.6027543	-72.8952929	29.0	0.1	28.9	
Reference	PV	064	H	6/20/2023	4:16:36	4:17:00	678085.04	4496789.38	40.6027493	-72.8951598	29.0	0.1	28.9	
Reference	PV	063	A	6/20/2023	4:51:22	4:51:00	675207.76	4496800.24	40.6034617	-72.9291429	26.5	0.2	26.4	
Reference	PV	063	B	6/20/2023	4:52:08	4:52:00	675209.62	4496808.58	40.6035364	-72.9291186	26.5	0.2	26.4	
Reference	PV	063	C	6/20/2023	4:52:40	4:53:00	675199.94	4496813.7	40.6035846	-72.9292315	26.5	0.2	26.4	
Reference	PV	063	D	6/20/2023	4:53:16	4:53:00	675193.72	4496810.43	40.6035564	-72.9293059	26.5	0.2	26.4	
Reference	PV	063	E	6/20/2023	4:53:47	4:54:00	675188.37	4496802.3	40.6034844	-72.9293714	26.5	0.2	26.4	
Reference	PV	063	F	6/20/2023	4:54:24	4:54:00	675199.4	4496798.4	40.6034469	-72.9292422	26.5	0.2	26.4	
Reference	PV	063	G	6/20/2023	4:55:16	4:55:00	675206.91	4496792.24	40.6033899	-72.9291552	26.5	0.2	26.4	
Reference	PV	063	H	6/20/2023	4:55:51	4:56:00	675197.16	4496789.31	40.6033656	-72.9292711	26.5	0.2	26.4	
Reference	PV	063	I	6/20/2023	4:56:52	4:57:00	675191.32	4496794.04	40.6034094	-72.9293388	26.5	0.2	26.4	
Reference	PV	073	A	6/20/2023	5:13:56	5:14:00	675199.76	4495197.48	40.5890338	-72.9296827	26.2	0.2	26.0	
Reference	PV	073	B	6/20/2023	5:14:37	5:15:00	675205.37	4495209.15	40.5891377	-72.9296133	26.2	0.2	26.0	
Reference	PV	073	C	6/20/2023	5:15:49	5:16:00	675198.47	4495213.63	40.5891795	-72.9296935	26.2	0.2	26.0	
Reference	PV	073	E	6/20/2023	5:17:12	5:17:00	675187.73	4495201.19	40.5890697	-72.9298238	26.2	0.2	26.0	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	073	F	6/20/2023	5:17:53	5:18:00	675190.07	4495191.28	40.58898	-72.9297989	26.2	0.2	26.0	
Reference	PV	073	G	6/20/2023	5:18:30	5:19:00	675197.85	4495187	40.5889399	-72.9297082	26.2	0.2	26.0	
Reference	PV	073	H	6/20/2023	5:19:17	5:19:00	675210.62	4495194.83	40.5890076	-72.9295552	26.2	0.2	26.0	
Reference	PV	073	I	6/20/2023	5:20:18	5:20:00	675209.37	4495204.75	40.5890972	-72.9295672	26.2	0.2	26.0	
Reference	PV	083	A	6/20/2023	5:40:14	5:40:00	675206.49	4493590.61	40.5745657	-72.9300494	26.5	0.3	26.2	
Reference	PV	083	B	6/20/2023	5:40:53	5:41:00	675211.19	4493596.84	40.5746208	-72.9299922	26.5	0.3	26.2	
Reference	PV	083	D	6/20/2023	5:42:07	5:42:00	675202.86	4493611.25	40.5747523	-72.9300866	26.5	0.3	26.2	
Reference	PV	083	E	6/20/2023	5:43:07	5:43:00	675193.38	4493611.89	40.5747601	-72.9301983	26.5	0.3	26.2	
Reference	PV	083	F	6/20/2023	5:43:34	5:44:00	675190.24	4493605.33	40.5747017	-72.9302372	26.5	0.3	26.2	
Reference	PV	083	G	6/20/2023	5:44:29	5:44:00	675201.12	4493599.36	40.5746456	-72.9301104	26.5	0.3	26.2	
Reference	PV	083	H	6/20/2023	5:45:07	5:45:00	675196.09	4493588.35	40.5745476	-72.9301729	26.5	0.3	26.2	
Reference	PV	083	I	6/20/2023	5:46:18	5:46:00	675191.07	4493594.03	40.5745998	-72.9302306	26.5	0.3	26.2	
Reference	PV	083	J	6/20/2023	5:47:14	5:47:00	675189.89	4493600.03	40.574654	-72.9302428	26.5	0.3	26.2	
Reference	PV	093	A	6/20/2023	6:13:46	6:14:00	675192.81	4492004.4	40.5602879	-72.9306511	31.1	0.4	30.7	
Reference	PV	093	C	6/20/2023	6:14:58	6:15:00	675203.52	4491989.64	40.5601528	-72.9305287	31.1	0.4	30.7	
Reference	PV	093	D	6/20/2023	6:17:32	6:18:00	675188.55	4492001.36	40.5602615	-72.9307022	31.1	0.4	30.6	
Reference	PV	093	E	6/20/2023	6:18:47	6:19:00	675201.51	4492007.71	40.5603159	-72.9305474	31.1	0.4	30.6	
Reference	PV	093	F	6/20/2023	6:19:22	6:19:00	675202.97	4492000.36	40.5602494	-72.9305322	31.1	0.4	30.6	
Reference	PV	093	G	6/20/2023	6:19:50	6:20:00	675196.1	4491992.81	40.5601829	-72.9306154	31.1	0.5	30.6	
Reference	PV	093	H	6/20/2023	6:20:18	6:20:00	675192.68	4491990.71	40.5601647	-72.9306564	31.1	0.5	30.6	
Reference	PV	093	I	6/20/2023	6:21:02	6:21:00	675194.08	4491997.58	40.5602263	-72.930638	31.1	0.5	30.6	
Reference	PV	103	A	6/20/2023	6:41:10	6:41:00	675193.16	4490395.63	40.545804	-72.931093	29.6	0.5	29.0	
Reference	PV	103	B	6/20/2023	6:42:00	6:42:00	675199.79	4490399.52	40.5458376	-72.9310136	29.6	0.5	29.0	
Reference	PV	103	C	6/20/2023	6:42:25	6:42:00	675193	4490406.74	40.5459041	-72.9310918	29.6	0.5	29.0	
Reference	PV	103	D	6/20/2023	6:43:00	6:43:00	675197.45	4490409.5	40.545928	-72.9310385	29.6	0.5	29.0	
Reference	PV	103	E	6/20/2023	6:43:58	6:44:00	675191.74	4490396.62	40.5458132	-72.9311094	29.6	0.5	29.0	
Reference	PV	103	F	6/20/2023	6:44:54	6:45:00	675206.46	4490403.98	40.5458764	-72.9309337	29.6	0.6	29.0	
Reference	PV	103	G	6/20/2023	6:45:37	6:46:00	675204.55	4490390.04	40.5457513	-72.9309601	29.6	0.6	29.0	
Reference	PV	103	H	6/20/2023	6:46:06	6:46:00	675201.39	4490395.63	40.5458023	-72.9309958	29.6	0.6	29.0	
Reference	PV	103	I	6/20/2023	6:46:58	6:47:00	675191.07	4490401.65	40.5458587	-72.931116	29.6	0.6	29.0	
Reference	PV	103	J	6/20/2023	6:48:06	6:48:00	675193.96	4490388.92	40.5457434	-72.9310854	29.6	0.6	29.0	
Reference	PV	113	A	6/20/2023	7:06:12	7:06:00	675198.11	4488801.34	40.5314494	-72.9314763	32.9	0.6	32.3	
Reference	PV	113	B	6/20/2023	7:06:45	7:07:00	675192.02	4488800.16	40.5314401	-72.9315484	32.9	0.6	32.3	
Reference	PV	113	C	6/20/2023	7:07:43	7:08:00	675196.8	4488789.78	40.5313457	-72.9314949	32.9	0.6	32.3	
Reference	PV	113	D	6/20/2023	7:08:32	7:09:00	675192.68	4488797.97	40.5314203	-72.9315413	32.9	0.6	32.3	
Reference	PV	113	E	6/20/2023	7:09:53	7:10:00	675198.76	4488810.16	40.5315287	-72.9314661	32.9	0.7	32.3	
Reference	PV	113	F	6/20/2023	7:11:13	7:11:00	675195.41	4488803.68	40.5314711	-72.9315075	32.9	0.7	32.3	
Reference	PV	113	G	6/20/2023	7:12:32	7:13:00	675202.93	4488805.01	40.5314815	-72.9314184	32.9	0.7	32.3	
Reference	PV	113	H	6/20/2023	7:13:37	7:14:00	675204.48	4488791.98	40.5313638	-72.9314037	32.9	0.7	32.3	
Reference	PV	113	I	6/20/2023	7:14:25	7:14:00	675196.82	4488795.87	40.5314005	-72.931493	32.9	0.7	32.3	
Reference	PV	112	A	6/20/2023	7:50:05	7:50:00	672314.31	4488810.63	40.5321375	-72.9655015	32.0	0.8	31.2	
Reference	PV	112	B	6/20/2023	7:50:46	7:51:00	672319.11	4488801.22	40.5320518	-72.9654475	32.0	0.8	31.2	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	112	C	6/20/2023	7:51:22	7:51:00	672326.35	4488797.92	40.5320206	-72.9653629	32.0	0.8	31.2	
Reference	PV	112	D	6/20/2023	7:52:11	7:52:00	672324.23	4488810.03	40.53213	-72.9653846	32.0	0.8	31.2	
Reference	PV	112	E	6/20/2023	7:52:41	7:53:00	672317.79	4488803.18	40.5320697	-72.9654625	32.0	0.8	31.2	
Reference	PV	112	F	6/20/2023	7:53:46	7:54:00	672313.46	4488807.09	40.5321058	-72.9655125	32.0	0.8	31.2	
Reference	PV	112	G	6/20/2023	7:54:18	7:54:00	672309.06	4488800.31	40.5320457	-72.9655663	32.0	0.8	31.2	
Reference	PV	112	H	6/20/2023	7:55:12	7:55:00	672314.61	4488789.65	40.5319485	-72.9655037	32.0	0.8	31.2	
Reference	PV	112	I	6/20/2023	7:55:53	7:56:00	672316.66	4488796.26	40.5320076	-72.9654777	32.0	0.8	31.2	
Reference	PV	102	A	6/20/2023	8:12:08	8:12:00	672308.89	4490399.43	40.546443	-72.9651325	27.1	0.9	26.2	
Reference	PV	102	B	6/20/2023	8:12:46	8:13:00	672311.54	4490391.43	40.5463704	-72.9651034	27.1	0.9	26.2	
Reference	PV	102	C	6/20/2023	8:13:21	8:13:00	672318.6	4490397.36	40.5464224	-72.9650185	27.1	0.9	26.2	
Reference	PV	102	D	6/20/2023	8:15:11	8:15:00	672308.9	4490403.39	40.5464787	-72.9651313	27.1	0.9	26.2	
Reference	PV	102	E	6/20/2023	8:17:03	8:17:00	672316.9	4490413.25	40.5465658	-72.9650342	27.1	0.9	26.2	
Reference	PV	102	F	6/20/2023	8:19:04	8:19:00	672321.89	4490406.82	40.5465068	-72.9649771	27.1	0.9	26.2	
Reference	PV	102	G	6/20/2023	8:19:48	8:20:00	672322.97	4490401.84	40.5464618	-72.9649657	27.1	0.9	26.2	
Reference	PV	102	H	6/20/2023	8:20:26	8:20:00	672326.21	4490391.23	40.5463656	-72.9649304	27.1	0.9	26.2	
Reference	PV	102	I	6/20/2023	8:20:58	8:21:00	672319.5	4490388.27	40.5463403	-72.9650104	27.1	0.9	26.2	
Reference	PV	102	J	6/20/2023	8:21:49	8:22:00	672312.26	4490398.32	40.5464323	-72.9650931	27.1	0.9	26.2	
Reference	PV	092	A	6/20/2023	8:43:13	8:43:00	672308.6	4491996.96	40.560826	-72.9647003	26.5	1.0	25.5	
Reference	PV	092	B	6/20/2023	8:43:39	8:44:00	672310.17	4491990.6	40.5607684	-72.9646835	26.5	1.0	25.5	
Reference	PV	092	C	6/20/2023	8:44:42	8:45:00	672318.28	4491999.05	40.5608428	-72.9645855	26.5	1.0	25.5	
Reference	PV	092	D	6/20/2023	8:45:38	8:46:00	672327.7	4491996.08	40.5608141	-72.9644751	26.5	1.0	25.5	
Reference	PV	092	E	6/20/2023	8:46:12	8:46:00	672320.65	4491987.96	40.5607425	-72.9645605	26.5	1.0	25.5	
Reference	PV	092	F	6/20/2023	8:46:48	8:47:00	672319.92	4491993.77	40.5607949	-72.9645676	26.5	1.0	25.5	
Reference	PV	092	G	6/20/2023	8:47:56	8:48:00	672318.5	4492011.72	40.5609568	-72.9645794	26.5	1.0	25.5	
Reference	PV	092	H	6/20/2023	8:48:38	8:49:00	672306.31	4492002.91	40.5608801	-72.9647257	26.5	1.0	25.5	
Reference	PV	092	I	6/20/2023	8:49:52	8:50:00	672316.6	4492005.83	40.5609042	-72.9646035	26.5	1.0	25.5	
Reference	PV	092	J	6/20/2023	8:50:27	8:50:00	672316.4	4492009.34	40.5609359	-72.9646049	26.5	1.0	25.5	
Reference	PV	082	A	6/20/2023	9:18:01	9:18:00	672307.29	4493599.95	40.5752584	-72.9642783	22.9	1.1	21.8	
Reference	PV	082	B	6/20/2023	9:18:48	9:19:00	672318.34	4493607.02	40.5753197	-72.9641459	22.9	1.1	21.8	
Reference	PV	082	C	6/20/2023	9:19:21	9:19:00	672314.14	4493610.86	40.5753552	-72.9641945	22.9	1.1	21.8	
Reference	PV	082	D	6/20/2023	9:19:55	9:20:00	672313.92	4493606.04	40.5753118	-72.9641984	22.9	1.1	21.8	
Reference	PV	082	E	6/20/2023	9:21:25	9:21:00	672330.59	4493598.17	40.5752375	-72.9640037	22.9	1.1	21.8	
Reference	PV	082	F	6/20/2023	9:21:59	9:22:00	672320.13	4493605.16	40.5753026	-72.9641253	22.9	1.1	21.8	
Reference	PV	082	G	6/20/2023	9:22:36	9:23:00	672315.15	4493599.51	40.5752528	-72.9641857	22.9	1.1	21.8	
Reference	PV	082	H	6/20/2023	9:23:08	9:23:00	672308.92	4493591.39	40.575181	-72.9642614	22.9	1.1	21.8	
Reference	PV	082	I	6/20/2023	9:24:39	9:25:00	672317.71	4493592.43	40.5751885	-72.9641574	22.9	1.1	21.8	
Reference	PV	072	A	6/20/2023	9:42:49	9:43:00	672326.28	4495189.27	40.5895634	-72.96362	24.4	1.1	23.3	
Reference	PV	072	B	6/20/2023	9:43:22	9:43:00	672320.63	4495195.55	40.5896211	-72.9636851	24.4	1.1	23.3	
Reference	PV	072	C	6/20/2023	9:43:51	9:44:00	672318.77	4495205.24	40.5897087	-72.9637044	24.4	1.1	23.3	
Reference	PV	072	D	6/20/2023	9:44:43	9:45:00	672312.11	4495207.89	40.589734	-72.9637823	24.4	1.1	23.3	
Reference	PV	072	E	6/20/2023	9:45:21	9:45:00	672319.13	4495211.78	40.5897675	-72.9636983	24.4	1.1	23.3	
Reference	PV	072	F	6/20/2023	9:46:25	9:46:00	672322.64	4495201.59	40.589675	-72.9636597	24.4	1.1	23.3	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	072	G	6/20/2023	9:46:58	9:47:00	672315.56	4495197.42	40.589639	-72.9637444	24.4	1.1	23.3	
Reference	PV	072	H	6/20/2023	9:47:34	9:48:00	672307.8	4495199.37	40.5896581	-72.9638355	24.4	1.1	23.3	
Reference	PV	062	A	6/20/2023	10:04:09	10:04:00	672312.85	4496801.06	40.6040774	-72.9633382	22.6	1.1	21.4	
Reference	PV	062	B	6/20/2023	10:04:37	10:05:00	672310.65	4496805.46	40.6041174	-72.9633629	22.6	1.1	21.4	
Reference	PV	062	C	6/20/2023	10:05:23	10:05:00	672313.18	4496808.63	40.6041455	-72.9633322	22.6	1.1	21.4	
Reference	PV	062	D	6/20/2023	10:06:24	10:06:00	672321.92	4496809.44	40.6041509	-72.9632287	22.6	1.1	21.4	
Reference	PV	062	F	6/20/2023	10:07:40	10:08:00	672328.58	4496792.07	40.6039932	-72.9631548	22.6	1.1	21.4	
Reference	PV	062	G	6/20/2023	10:08:18	10:08:00	672319.33	4496793.41	40.6040072	-72.9632637	22.6	1.1	21.4	
Reference	PV	062	H	6/20/2023	10:08:54	10:09:00	672306.89	4496798.55	40.604056	-72.9634093	22.6	1.1	21.4	
Reference	PV	062	I	6/20/2023	10:09:49	10:10:00	672312.05	4496790.81	40.6039853	-72.9633504	22.6	1.1	21.4	
Reference	PV	062	J	6/20/2023	10:10:41	10:11:00	672307.99	4496798.39	40.6040544	-72.9633963	22.6	1.1	21.4	
Reference	PV	061	A	6/20/2023	10:43:15	10:43:00	669436.6	4496793.96	40.6046078	-72.9973162	22.6	1.1	21.5	
Reference	PV	061	B	6/20/2023	10:43:55	10:44:00	669440.08	4496802.28	40.604682	-72.9972728	22.6	1.1	21.5	
Reference	PV	061	C	6/20/2023	10:44:26	10:44:00	669438.51	4496809.58	40.604748	-72.9972894	22.6	1.1	21.5	
Reference	PV	061	D	6/20/2023	10:45:02	10:45:00	669434.65	4496811.8	40.6047688	-72.9973344	22.6	1.1	21.5	
Reference	PV	061	E	6/20/2023	10:45:36	10:46:00	669429.07	4496805.21	40.6047106	-72.9974021	22.6	1.1	21.5	
Reference	PV	061	F	6/20/2023	10:46:22	10:46:00	669433.77	4496797.42	40.6046395	-72.9973487	22.6	1.1	21.5	
Reference	PV	061	G	6/20/2023	10:47:05	10:47:00	669429.18	4496796.8	40.6046349	-72.9974031	22.6	1.1	21.5	
Reference	PV	061	H	6/20/2023	10:47:58	10:48:00	669431.58	4496804.32	40.6047021	-72.9973727	22.6	1.1	21.5	
Reference	PV	061	I	6/20/2023	10:48:55	10:49:00	669448.99	4496807.91	40.6047309	-72.9971661	22.6	1.1	21.5	
Reference	PV	061	J	6/20/2023	10:49:38	10:50:00	669446.5	4496796.5	40.6046286	-72.9971985	22.6	1.1	21.5	
Reference	PV	071	A	6/20/2023	11:06:27	11:06:00	669426.72	4495197.92	40.5902401	-72.9978618	24.4	1.0	23.4	
Reference	PV	071	B	6/20/2023	11:07:07	11:07:00	669429.85	4495201.67	40.5902732	-72.9978238	24.4	1.0	23.4	
Reference	PV	071	C	6/20/2023	11:08:18	11:08:00	669433.16	4495208.18	40.5903312	-72.997783	24.4	1.0	23.4	
Reference	PV	071	D	6/20/2023	11:08:53	11:09:00	669438.21	4495210.01	40.5903466	-72.9977228	24.4	1.0	23.4	
Reference	PV	071	E	6/20/2023	11:09:52	11:10:00	669434.68	4495200.92	40.5902655	-72.997767	24.4	1.0	23.4	
Reference	PV	071	F	6/20/2023	11:10:26	11:10:00	669438.22	4495191.24	40.5901776	-72.9977278	24.4	1.0	23.4	
Reference	PV	071	G	6/20/2023	11:11:18	11:11:00	669433.81	4495193.11	40.5901953	-72.9977793	24.4	1.0	23.4	
Reference	PV	071	H	6/20/2023	11:12:13	11:12:00	669447.64	4495202.33	40.5902755	-72.9976135	24.4	1.0	23.4	
Reference	PV	071	I	6/20/2023	11:13:01	11:13:00	669443.82	4495209.2	40.5903382	-72.9976568	24.4	1.0	23.4	
Reference	PV	081	A	6/20/2023	11:31:08	11:31:00	669443.11	4493590.21	40.5757619	-72.9981	23.2	1.0	22.2	
Reference	PV	081	B	6/20/2023	11:31:38	11:32:00	669443.02	4493599.26	40.5758434	-72.9980986	23.2	0.9	22.2	
Reference	PV	081	C	6/20/2023	11:32:29	11:32:00	669442.87	4493609.75	40.5759379	-72.9980976	23.2	0.9	22.2	
Reference	PV	081	D	6/20/2023	11:33:17	11:33:00	669428.9	4493607.91	40.5759242	-72.998263	23.2	0.9	22.2	
Reference	PV	081	E	6/20/2023	11:33:51	11:34:00	669431.97	4493601.21	40.5758632	-72.9982286	23.2	0.9	22.2	
Reference	PV	081	F	6/20/2023	11:34:32	11:35:00	669432.67	4493593.26	40.5757915	-72.9982224	23.2	0.9	22.2	
Reference	PV	081	G	6/20/2023	11:35:33	11:36:00	669440.13	4493598.12	40.5758337	-72.998133	23.2	0.9	22.2	
Reference	PV	081	H	6/20/2023	11:36:13	11:36:00	669444.65	4493607.16	40.5759142	-72.9980772	23.2	0.9	22.2	
Reference	PV	081	I	6/20/2023	11:37:24	11:37:00	669434.43	4493610.41	40.5759456	-72.998197	23.2	0.9	22.2	
Reference	PV	091	A	6/20/2023	11:55:51	11:56:00	669445.09	4492006.2	40.5615	-72.9985017	26.8	0.9	26.0	
Reference	PV	091	B	6/20/2023	11:56:34	11:57:00	669440.98	4492006.63	40.5615047	-72.9985501	26.8	0.9	26.0	
Reference	PV	091	C	6/20/2023	11:57:22	11:57:00	669436.09	4492013.09	40.5615639	-72.9986061	26.8	0.9	26.0	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	Tide (EST)	X_NAD83_UTM18N_m	Y_NAD83_UTM18N_m	Latitude_NAD83_N	Longitude_NAD83_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference	PV	091	D	6/20/2023	11:58:09	11:58:00	669433.99	4492006.61	40.561506	-72.9986326	26.8	0.9	26.0	
Reference	PV	091	E	6/20/2023	11:59:17	11:59:00	669433.09	4492001.03	40.5614559	-72.9986447	26.8	0.9	26.0	
Reference	PV	091	F	6/20/2023	11:59:59	12:00:00	669429.94	4491992.13	40.5613765	-72.9986843	26.8	0.8	26.0	
Reference	PV	091	G	6/20/2023	12:01:09	12:01:00	669434.44	4492000.21	40.5614483	-72.998629	26.8	0.8	26.0	
Reference	PV	091	H	6/20/2023	12:01:47	12:02:00	669439.55	4491992.3	40.561376	-72.9985708	26.8	0.8	26.0	
Reference	PV	091	I	6/20/2023	12:02:35	12:03:00	669445.45	4492002.95	40.5614707	-72.9984983	26.8	0.8	26.0	
Reference	PV	101	A	6/20/2023	12:16:43	12:17:00	669448.4	4490401.32	40.5470499	-72.998893	26.5	0.8	25.7	
Reference	PV	101	B	6/20/2023	12:17:11	12:17:00	669447.21	4490409.14	40.5471206	-72.998905	26.5	0.8	25.7	
Reference	PV	101	C	6/20/2023	12:17:43	12:18:00	669435.39	4490414.07	40.5471674	-72.9990431	26.5	0.8	25.7	
Reference	PV	101	D	6/20/2023	12:18:10	12:18:00	669430.76	4490407.55	40.5471096	-72.9990995	26.5	0.8	25.7	
Reference	PV	101	E	6/20/2023	12:18:44	12:19:00	669429.14	4490399.46	40.5470371	-72.9991208	26.5	0.8	25.7	
Reference	PV	101	F	6/20/2023	12:19:44	12:20:00	669441.39	4490407.03	40.5471028	-72.9989742	26.5	0.8	25.7	
Reference	PV	101	G	6/20/2023	12:20:53	12:21:00	669446.52	4490393.37	40.5469787	-72.9989173	26.5	0.8	25.7	
Reference	PV	101	H	6/20/2023	12:21:29	12:21:00	669442.88	4490392.52	40.5469718	-72.9989605	26.5	0.8	25.7	
Reference	PV	101	I	6/20/2023	12:22:21	12:22:00	669434.26	4490390.56	40.5469559	-72.9990628	26.5	0.8	25.8	
Reference	PV	111	A	6/20/2023	12:35:59	12:36:00	669438.89	4488789.59	40.5325407	-72.9994372	30.5	0.7	29.8	
Reference	PV	111	B	6/20/2023	12:36:30	12:37:00	669449.82	4488798.24	40.5326164	-72.9993059	30.5	0.7	29.8	
Reference	PV	111	C	6/20/2023	12:37:19	12:37:00	669446.24	4488809.28	40.5327165	-72.9993451	30.5	0.7	29.8	
Reference	PV	111	D	6/20/2023	12:37:48	12:38:00	669433.28	4488811.15	40.532736	-72.9994976	30.5	0.7	29.8	
Reference	PV	111	E	6/20/2023	12:38:30	12:39:00	669429.98	4488804.12	40.5326734	-72.9995384	30.5	0.7	29.8	
Reference	PV	111	F	6/20/2023	12:39:11	12:39:00	669440.31	4488806.38	40.5326916	-72.9994159	30.5	0.7	29.8	
Reference	PV	111	G	6/20/2023	12:40:06	12:40:00	669438.75	4488798.96	40.5326251	-72.9994363	30.5	0.7	29.8	
Reference	PV	111	H	6/20/2023	12:40:54	12:41:00	669439.51	4488793.45	40.5325754	-72.9994288	30.5	0.7	29.8	
Reference	PV	111	I	6/20/2023	12:41:31	12:42:00	669428.53	4488795.87	40.5325994	-72.9995577	30.5	0.7	29.8	
Lease Area	PV	002	I	6/20/2023	15:51:13	15:51:00	623600.78	4470003.89	40.3714565	-73.5441066	24.1	0.2	23.9	
Lease Area	PV	002	J	6/20/2023	15:51:47	15:52:00	623609.28	4470008.68	40.3714984	-73.5440056	24.1	0.2	23.9	
Lease Area	PV	002	K	6/20/2023	15:52:19	15:52:00	623602.11	4470013.4	40.371542	-73.5440891	24.1	0.2	23.9	
Lease Area	PV	002	L	6/20/2023	15:52:48	15:53:00	623590.77	4470008.55	40.3715	-73.5442236	24.1	0.2	23.9	
Lease Area	PV	002	O	6/20/2023	15:56:07	15:56:00	623592.67	4469990.43	40.3713365	-73.5442047	24.1	0.2	23.9	
Lease Area	PV	002	P	6/20/2023	15:56:45	15:57:00	623599.97	4469988.87	40.3713214	-73.5441191	24.1	0.2	23.9	
Lease Area	PV	002	Q	6/20/2023	15:57:15	15:57:00	623609.24	4469995.46	40.3713794	-73.5440087	24.1	0.2	23.9	
Lease Area	PV	001	I	6/20/2023	16:11:47	16:12:00	621209.09	4469991.48	40.371696	-73.5722723	24.4	0.2	24.2	
Lease Area	PV	001	J	6/20/2023	16:12:39	16:13:00	621211.58	4470000.71	40.3717787	-73.5722413	24.4	0.2	24.2	
Lease Area	PV	001	K	6/20/2023	16:13:15	16:13:00	621209.12	4470009.75	40.3718605	-73.5722685	24.4	0.2	24.2	
Lease Area	PV	001	L	6/20/2023	16:13:37	16:14:00	621197.72	4470011.01	40.3718735	-73.5724025	24.4	0.2	24.2	
Lease Area	PV	001	M	6/20/2023	16:14:08	16:14:00	621190.61	4470006.97	40.3718382	-73.572487	24.4	0.2	24.2	
Lease Area	PV	001	N	6/20/2023	16:29:53	16:30:00	621193.07	4469998.05	40.3717575	-73.5724597	24.4	0.3	24.1	
Lease Area	PV	001	O	6/20/2023	16:30:26	16:30:00	621200.46	4469991.98	40.3717017	-73.5723739	24.4	0.3	24.1	
Lease Area	PV	001	P	6/20/2023	16:31:08	16:31:00	621203.81	4469997.38	40.3717499	-73.5723334	24.4	0.3	24.1	
Lease Area	PV	001	Q	6/20/2023	16:31:32	16:32:00	621207.77	4470004.5	40.3718134	-73.5722854	24.4	0.3	24.1	

Appendix B - Plan View Image Analysis Results by Station

Area	Station ID	PV Replicate (n)	Mean Tide Corrected Depth (m)	Type of Sea Scallops	Other Notable Observations
Lease Area	001	17	23.8	None	
Lease Area	002	15	23.4	None	
Lease Area	003	9	24.9	None	
Lease Area	004	8	25.9	None	
Lease Area	005	9	22.6	None	
Lease Area	006	9	24.4	None	
Lease Area	007	8	26.3	None	
Lease Area	008	8	27.7	None	Squid Eggs
Lease Area	009	9	29.7	Sea Scallop Shells	
Lease Area	010	7	27.6	None	
Lease Area	011	8	29.4	None	
Lease Area	012	8	28.1	None	Squid
Lease Area	013	8	28.8	None	
Lease Area	014	12	28.8	None	Squid
Lease Area	015	8	29.5	None	
Lease Area	016	8	30.5	None	Elasmobranch, Squid
Lease Area	017	8	30.8	None	
Lease Area	018	8	30.9	Sea Scallop Shell	
Lease Area	019	12	32.8	Sea Scallop Shells	Squid Eggs
Lease Area	020	8	33.0	None	
Lease Area	021	8	29.2	None	
Lease Area	022	8	28.8	None	
Lease Area	023	8	29.4	None	Squid
Lease Area	024	8	30.1	None	
Lease Area	025	8	30.1	None	Sand Dollars, Skate
Lease Area	026	8	31.5	None	Flatfish
Lease Area	027	8	32.0	None	
Lease Area	028	8	33.7	None	
Lease Area	029	8	34.7	None	
Lease Area	030	8	35.8	None	Flatfish
Lease Area	031	8	35.6	None	Squid
Lease Area	032	9	37.0	None	
Lease Area	033	8	37.7	None	
Lease Area	034	8	38.5	Sea Scallop Shell	Sea Mouse
Lease Area	035	7	30.6	None	Flatfish
Lease Area	036	8	31.0	None	Flatfish
Lease Area	037	7	32.7	None	Squid
Lease Area	038	8	33.1	Sea Scallop Shell	
Lease Area	039	8	33.7	Sea Scallop Shells	
Lease Area	040	8	38.2	Sea Scallop Shell	
Lease Area	041	7	34.8	None	
Lease Area	042	8	35.7	None	
Lease Area	043	8	37.1	None	
Lease Area	044	8	37.2	None	
Lease Area	045	8	38.1	None	
Lease Area	046	8	34.2	None	
Lease Area	047	9	33.9	None	
Lease Area	048	8	34.8	None	Flatfish
Lease Area	049	8	36.3	None	

Area	Station ID	PV Replicate (n)	Mean Tide Corrected Depth (m)	Type of Sea Scallops	Other Notable Observations
Lease Area	050	8	36.2	None	
Lease Area	051	8	36.6	None	
Lease Area	052	8	37.8	None	Flatfish
Lease Area	053	7	37.7	None	
Lease Area	054	8	37.4	None	
Lease Area	055	10	36.9	Sea Scallop Shell	
Lease Area	056	8	37.7	Sea Scallop Shell	
Lease Area	057	8	38.1	Sea Scallop Shell	
Lease Area	058	8	38.9	Sea Scallop Shells	
Lease Area	059	9	37.8	None	
Lease Area	060	8	38.5	None	Flatfish
Reference	061	10	21.5	None	
Reference	062	9	21.4	None	
Reference	063	9	26.4	None	
Reference	064	8	28.9	None	
Reference	065	8	30.2	None	
Reference	066	9	31.8	None	
Reference	067	8	31.2	None	
Reference	068	9	35.8	None	
Reference	069	8	34.9	None	
Reference	070	11	34.9	None	
Reference	071	9	23.4	None	
Reference	072	8	23.3	None	
Reference	073	8	26.0	None	
Reference	074	9	28.6	None	Fish
Reference	075	18	28.2	None	Fish
Reference	076	9	32.7	None	Fish, Skate
Reference	077	7	34.8	None	
Reference	078	9	35.8	None	
Reference	079	9	35.3	None	
Reference	080	8	36.1	None	
Reference	081	9	22.2	None	Fish
Reference	082	9	21.8	None	Sea Robin
Reference	083	9	26.2	None	Fish
Reference	084	9	29.8	None	
Reference	085	9	31.3	None	
Reference	086	8	33.7	None	
Reference	087	8	35.3	None	
Reference	088	8	37.6	None	Flatfish
Reference	089	8	36.5	None	
Reference	090	8	36.8	None	Cerianthids
Reference	091	9	26.0	None	Sea Robin
Reference	092	10	25.5	None	
Reference	093	8	30.7	None	
Reference	094	9	31.4	None	Fish
Reference	095	11	35.7	None	Fish
Reference	096	8	34.7	None	Fish
Reference	097	8	35.6	None	
Reference	098	9	37.5	None	Skate

Area	Station ID	PV Replicate (n)	Mean Tide Corrected Depth (m)	Type of Sea Scallops	Other Notable Observations
Reference	099	7	37.2	None	Cerianthids
Reference	100	8	37.2	None	Cerianthids
Reference	101	9	25.7	None	
Reference	102	10	26.2	None	
Reference	103	10	29.0	None	
Reference	104	10	32.2	None	
Reference	105	8	33.0	None	Sea Robin
Reference	106	11	37.3	None	
Reference	107	8	35.0	None	
Reference	108	8	37.5	None	Fish
Reference	109	9	38.2	None	Cerianthids
Reference	110	8	38.5	None	
Reference	111	9	29.8	None	Skate
Reference	112	9	31.2	None	
Reference	113	9	32.3	None	
Reference	114	8	33.6	None	
Reference	115	9	34.3	None	
Reference	116	10	36.1	Sea Scallop	Fish
Reference	117	7	39.0	None	
Reference	118	13	38.5	None	
Reference	119	12	40.2	None	Cerianthids, Fish
Reference	120	8	41.1	Sea Scallop	Cerianthids, Fish, Squid Eggs