

Empire Wind Scallop Monitoring Survey 2024 Annual Report

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ACRONYMS AND TERMS

AIS	automatic information system
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
EW 1	Empire Wind 1
EW 2	Empire Wind 2
FBMP	Fisheries and Benthic Monitoring Plan
ft	feet
GPS	global positioning system
HabCam	Habitat Mapping Camera
in	inch(es)
INSPIRE	INSPIRE Environmental, Inc.
km	kilometer(s)
Lease Area	Renewable Energy Lease Area OCS-A 0512
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
SSHO	Site Safety and Health Officer
VIMS	Virginia Institute of Marine Science
VMS	Vessel Monitoring System
VTR	Vessel Trip Reporting

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 (Lease Area). The 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 Lease Area will be developed as two wind farms, known as Empire Wind 1 (EW 1) and Empire Wind 2 (EW 2). Monitoring efforts are combined for the proposed wind farms, covering the entire Lease Area as described in the Empire Wind Fisheries and Benthic Monitoring Plan (FBMP) (INSPIRE Environmental [INSPIRE] 2023a). The results provided in this report pertain to samples collected across the entire Lease Area.

The New York Bight supports diverse fish and invertebrate assemblages (Guida et al. 2017; Thorne et al. 2020; NJDEP 2022). As such, the Empire Wind FBMP was designed to assess potential impacts of offshore wind (OSW) development activities within the Lease Area on these biological communities. This FBMP 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) *Offshore Wind Project Monitoring Framework and Guidelines* (ROSA 2021). The Empire Wind team created this FBMP using an iterative process that consisted of 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 2023a) includes a survey designed to document the distribution and abundance of Atlantic sea scallops (*Placopecten magellanicus*) in the 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 Carolina 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 nearly \$360 million dollars in 2023 (ex-vessel value; NOAA 2025a). The scallop dredge fleet is moderately active in the eastern portion of the Lease Area, with the highest vessel activity over roughly 18 mi (16 nm, 29 km) from the eastern boundary of the Lease Area (Figure 1-2). The

Atlantic sea scallop dredge fishery accounted for the highest revenue of any commercial fisheries within the Lease Area from 2008 to 2019 (INSPIRE 2023a). Across all fisheries, commercial fishing vessel activity within the Lease Area has steadily decreased from 2008 to the present day (NOAA 2025b).

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 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). Sound detection in scallops occurs within the range of pile driving noise (Duarte et al. 2021) and juveniles are more sensitive than subadults to low frequency sound, exhibiting greater valve gape reduction (Jezequel et al. 2023). Subadult scallops in the immediate vicinity of pile driving (<3.3 feet [ft], <10 m) responded to the sound via reduced valve opening, increased metabolic rates, and exhibited weaker anti-predator behavior (Cones et al. 2024). In addition to noise impacts, the physical structure of wind turbine foundations affecting hydrodynamics and larval transport is another potential mode of OSW impacts on scallops. A modelling study found flow changed around monopiles and enhanced offshore water transport that may affect larval distribution and settlement patterns (Chen et al. 2024); however, empirical data are not available to validate this prediction.

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 from capture and handling.

1.2 Study Objectives

This report provides results of the second year of pre-construction scallop monitoring (August 2024) in the Lease Area and Reference Area to satisfy the following goals of providing:

- Site-specific information about Atlantic sea scallop baseline densities in the Lease Area;
- Baseline data to examine potential shifts in scallop distributions in the Lease Area that may be associated with OSW construction and/or operation; and
- Baseline data to examine potential changes in scallop densities in the 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 Lease Area and Reference Area is based on seafloor imagery collected with a PV camera system. Several long-term fisheries-independent scallop surveys use similar methods to assess the distribution and density of scallops in the region. For instance, 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 (CFF) 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). Impacts from the disturbance of bottom habitat are relatively small in optical surveys compared to dredge surveys that, in addition to physical disruption, can result in aqueous carbon dioxide (CO₂) 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 Lease Area but distant from any potential direct effects of OSW 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, 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 across other surveys. The Reference Area is also a key component of the statistical analysis, specifically the Before-After-Control-Impact (BACI) design, that is used to detect potential differences in sea scallop densities (see Section 2.3 for details).

2.1 Sampling Design

A power analysis based on estimated scallop densities in the Lease Area in 2012 was conducted using data recently detailed in Stokesbury et al. (2022). This analysis indicated that 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 2023a). Results of this power analysis were used to inform the BACI sampling design presented hereafter.

The Lease Area and the Reference Area have water depths that range from 72 to 138 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 every 3.5 mi (5.6 km) (INSPIRE 2023a) in the Lease Area (Figure 2-1) and Reference Area (Figure 2-2). Replicate images were collected at each station while the vessel moved slowly to collect multiple PV images in rapid succession across the 98-ft (30-m) watch circle for each PV deployment (see Section 2.2; 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* from 14 to 22 August 2024. Image collection followed the Empire Wind FBMP (INSPIRE 2023a) and the associated field survey plan (INSPIRE 2023b). Survey participants included Kristy Gustafson (Lead Field Scientist/ Site Safety and Health Officer [SSHO]), Zach McKelvey (Field Scientist), Mitchell Kennedy (Field Scientist), Jack Reynolds (Field Scientist), Sharon Valenta (Field Technician), Maddie Sachs (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 capture a properly illuminated and scaled image, respectively. An adjustable-length stainless-steel trigger cable with a counterweight was attached to a hermetically sealed switch, which 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 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 4 ft 10 inches (in) (1.5 m) was primarily used. The pair of parallel scaling lasers projected two red dots onto the seafloor that were separated by a distance of approximately 10 in (26 centimeters [cm]) regardless of the image’s field of view.

Prior to field operations, the internal clock in the camera was synchronized with the global positioning system (GPS). Each image was assigned a unique time stamp in the digital file attributes by the camera 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 2019a) was followed throughout the survey. In brief, 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 (7.5 to 24.8 ft² [0.7 to 2.3 m²]) in this study, which is similar to the field of view obtained from drop camera surveys conducted by SMAST (6.5 to 26.9 ft² [0.6 m² to 2.5 m²]) (Stokesbury et al. 2022).

During set-up and testing of the PV camera, the laser positions on the PV camera were checked and calibrated to ensure a separation of approximately 10 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 500, shutter speed was 1/30s and the f-stop was f-14. Images were stored as compressed raw Nikon electronic format (NEF) files (approximately 30 megabytes (MB) each). Images were checked periodically throughout the survey to confirm that the initial camera settings were still resulting in the collection of the highest quality images possible. Despite these standard practices, the ability of the PV system to collect usable images is also highly dependent on the clarity of the water column. For this study, the field of view averaged 14.1 ft² (1.31 m²). 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 BACI design (Underwood 1991; Smith et al. 1993; Kerr et al. 2019) was used to assess potential impacts of the OSW development on sea scallop abundance and distribution in the Lease Area as compared to within the Reference Area. Analysts initially reviewed each image for sea scallop presence and, in addition, identified co-occurring macrofauna such as crustaceans, finfish species, sea star, sand dollars and snails, among others.

On a per-image basis, the analyst utilized the number of pixels between the parallel scaling lasers to calculate the number of centimeters in a single pixel. Using Adobe Photoshop, each identified scallop was measured for shell height, using the pixel to centimeter conversion calculated for that image. In instances where a scallop was present and the parallel scaling lasers were not visible, the station average for number of centimeters in one pixel was applied. The total number of scallops observed in the second year of sampling was too small to warrant a statistical analysis (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 INSPIREs standard operating procedure for sediment profile and PV imaging sample collection (INSPIRE 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.
- Laser positioning checks 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.
- Collected images and data were time stamped both digitally and in hand-written logs to ensure proper identification and synchronization with navigational data.
- Image analysis parameters were checked thoroughly by senior scientists to ensure quality and accuracy.
- Quality Assurance/Quality Control checks were performed by INSPIRE on all replicate images.

3.0 RESULTS

A complete set of PV images was collected from 120 stations from 14 to 22 August 2024; a total of 959 PV images were collected and analyzed for the survey (Appendix A).

Vessel operations adhered to the specific vessel strike avoidance measures provided by the BOEM (2023) as part of the Atlantic Outer Continental Shelf Leases Project Design Criteria and Best Management Practices. Scientific sampling activities did not result in the incidental take of any marine mammals or other federally endangered species.

3.1 Scallop Imagery in the Lease Area and Reference Area

A total of 13 scallops were observed throughout the entire area surveyed, specifically the Lease Area and Reference Area. Three scallops were observed at stations 1, 28, and 56 in the Lease Area (Figures 3-1 and 3-2) and ten scallops were observed at Station 88 (n=2), Station 89 (n=3), and Station 109 (n=5) in the Reference Area (Figures 3-3 and 3-4). Average water depths, corrected for tide height at the time of sampling ranged from 75.1 to 145.7 ft (22.9 to 44.4 m). The largest scallop shell height recorded was 1.7 in (42.0 mm) at Station 89, whereas the remaining shell heights ranged from 0.2 to 1.6 in (5.8 to 40.3 mm) (Appendix B).

3.2 Non-Scallop Biological Resources Observed in PV Imagery

Although scallop resources were scarce within the Lease Area and Reference Area, PV imagery captured other benthic fauna throughout each area. Sand dollars (*Echinarachnius parma*) were common in both areas surveyed and present in both as dense aggregations (Figure 3-5) and dead tests (exoskeletons) (Figure 3-6). Infaunal organisms included Cerianthid tube-dwelling anemones, Astarte clam, sea stars, and hermit crabs (Figure 3-7). Other more mobile benthic organisms were also documented, including species like northern sea robin (*Prionotus carolinus*) and little/winter skate (*Leucoraja* spp.) as well as crabs and squid (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 thirteen 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 second year of baseline monitoring for the Empire Wind scallop survey, which was conducted from 14 to 2 August 2024. All planned stations were successfully sampled and between seven and eight high-quality replicate images from each station were analyzed.

The observation of 13 living Atlantic sea scallops across surveyed stations is consistent with results from the first year of baseline monitoring in the Lease Area and Reference Area (in which only two scallops were observed) as well as other studies that have found relatively low scallop abundances in the areas surveyed. Scallops aggregate across a range of spatial scales, ranging from 'clumps' (cm²) and 'patches' (m²) to 'beds' (km²) and 'grounds' (>10 km²) (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 Lease Area, for example, 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 m²) were not conducted. Likewise, biological information could not be inferred from the spacing of scallops, such as the number of scallops observed per quadrat, which could reflect reproductive capacity. Studies that assess scallop abundances in areas that overlap with the 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 Lease Area does not substantially overlap with high-value, commercial scallop grounds. A heat map of Vessel Monitoring System (VMS) data aggregated from 2015 to 2016 and at transit speeds indicative of dredging (<5 knots) depicts relatively low commercial scallop vessel activity in the western portion of the Lease Area and higher activity in the eastern portion of the Lease Area with deeper habitat (Figure 1-2). The highest commercial scallop vessel activity that is depicted is in areas approximately 18 mi (29 km) to the east of the eastern boundary of the Lease Area.

More recently, Livermore and Guilfoos (2024) demonstrated that using a machine learning approach to analyze automatic information system (AIS) data yields a more precise spatial delineation of fishing effort in Southern New England wind energy areas compared to when the machine learning approach is applied to VMS and Vessel Trip Reporting (VTR) data. The AIS transmits a vessel's location (typically once per minute) and is only required on vessels greater than 65 ft (20 m) in length. Given these various shortcomings, Livermore and Guilfoos (2024) recommended the use of multiple fishery-dependent data sources for OSW planning decisions and mitigation purposes.

4.2 Scallop Fishery-Independent Studies

Several site assessment surveys were conducted at the Lease Area in recent years to better understand the abundance and distribution of sea scallops, which support a productive and lucrative regional fishery. Results of these studies provide additional data to supplement sea scallop observations detailed in this report. For instance, a 2019 benthic survey using sediment profile and PV imagery collected PV imagery at 157 stations within the Lease Area and along potential export cable routes. Sea scallops were observed at low abundances at five stations along potential cable routes but not along portions of the cable route within the 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 2022) is conducted every summer by NOAA Fisheries in partnership with the Virginia Institute of Marine Science (VIMS), CFF, and SMAST. The areas sampled in a portion of the Empire Wind Lease Area were surveyed by the CFF Habcam and the VIMS dredge survey (Figure 4-1). The low number of sea scallops within the Lease Area in this baseline survey is supported by the

historically low dredge survey collections in this area. For example, data collected across the main sea scallop habitats in the Northeast U.S. continental shelf from 1978 to 2017 conducted by VIMS indicated low sea scallop densities in the Lease Area and Reference Area (Figure 4-2). Sea scallop dredge surveys conducted by VIMS in 2017 and 2019 within the Lease Area collected sea scallops 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 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).

Although not near the Lease Area, another benthic monitoring survey using similar survey methods was conducted at the Vineyard Wind Lease Areas, located southeast of Martha's Vineyard, Massachusetts. 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). However, scallops were observed at a few stations at the Lease Area OCS-A 0501N study area during July and October 2019 (Bethoney et al. 2020c).

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. These species were identified as potentially vulnerable to habitat disturbance from OSW construction and operation. Sea scallops were widely distributed within the Lease Area, with the greatest concentrations at depths exceeding 115 ft (35 m). Sea scallops were also observed in benthic imagery collected off of Long Island, New York at depths less than 131 ft (40 m) in 2011 using an autonomous underwater vehicle (AUV) and ranged in density from 0.12 to 2.20 ft² (0.01 to 0.20 m²) (Walker et al. 2016). Station locations in the AUV survey were in the vicinity of the Lease Area and Reference Area but may not have overlapped.

4.3 Non-Scallop Biological Resources

Sand dollars were the most dominant organism observed, appearing in dense aggregations in both the Lease Area and Reference Area. Sea stars were also present in both survey areas and are a major predator of sea scallops (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). Images of Cerianthid tube-dwelling anemones, Astarte clam, and hermit crabs were also collected.

5.0 SUMMARY

The seafloor was surveyed using non-extractive PV imagery to assess Atlantic sea scallop distributions and abundances in the Lease Area and associated Reference Area in August 2024. Results from the second year of the Empire Wind scallop survey are summarized below.

- Survey sampling was successfully conducted at 60 stations in the Lease Area and 60 stations in the Reference Area. Seven to eight replicate images were analyzed for each station.
- Thirteen scallops were observed across all stations in both areas surveyed. Three sea scallops were observed at three stations in the Lease Area and ten sea scallops were observed at three stations in the Reference Area. Sea scallop measurements indicate the individuals were mostly juveniles. Stations with sea scallop observations ranged in depth from 85.6 to 133.9 ft (26.1 to 40.8 m).
- Other organisms observed in the PV imagery included dense aggregations of sand dollars in both the Lease Area and the Reference Area. Cerianthid tube-dwelling anemones, Astarte clam, sea stars, and hermit crabs were also observed in collected PV images.
- Mobile organisms, such as squid, crabs, and fish were present in both areas.
- Survey results remain consistent with fishery-dependent and fishery-independent data, which indicate the Lease Area and the Reference Area are located in areas with low-value scallop habitat.

6.0 REFERENCES

- Atwood, T.B., A. Witt, J. Mayorga, E. Hammill, and E. Sala. 2020. Global patterns in marine sediment carbon stocks. *Frontiers in Marine Science* 7, 165, doi: 10.3389/fmars.2020.00165.
- Barbeau, M.A., R.E. Scheibling, B.G. Hatcher, L.H. Taylor, and A.W. Hennigar. 1994. Survival analysis of tethered juvenile sea scallops *Placopecten magellanicus* in field experiments: effects of predators, scallop size and density, site and season. *Mar. Ecol. Prog. Ser.* 115: 243–256.
- Bethoney, N.D., C. Riley, and K.D.E. Stokesbury. 2020a. 2019 Drop Camera Survey of Benthic Communities and Substrate in Vineyard Wind Lease Area OCS-A 0522 South Study Area. University of Massachusetts Dartmouth - SMAST, New Bedford, MA. SMAST-CE-REP-2020-075. 40 pp.
- Bethoney, N.D., C. Riley, and K.D.E. Stokesbury. 2020b. 2019 Drop Camera Survey of Benthic Communities and Substrate in Vineyard Wind Lease Area OCS-A 0501 South Study Area. University of Massachusetts Dartmouth - SMAST, New Bedford, MA. SMAST-CE-REP-2020-075. 32 pp.
- Bethoney, N.D., C. Riley, and K.D.E. Stokesbury. 2020c. 2019 Drop Camera Survey of Benthic Communities and Substrate in Vineyard Wind Lease Area OCS-A 0501 North and a Control Area. University of Massachusetts Dartmouth - SMAST, New Bedford, MA. SMAST-CE-REP-2020-075. 49 pp.
- Brand, A.R. 2006. Scallop ecology: distributions and behaviour. In: Shumway SE, Parsons GJ (eds) *Scallops: biology, ecology and aquaculture*, 2nd edn. Elsevier, Amsterdam, p 651–744.
- Bureau of Ocean Energy Management (BOEM). 2019. Guidelines for providing information on fisheries for renewable energy development on the Atlantic outer continental shelf pursuant to 30 CFR Part 585. Office of Renewable Energy Programs. June 2019.
- Bureau of Ocean Energy Management (BOEM) Office of Renewable Energy Programs. 2023. Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585. March 27, 2023.
- Carey, J.D., R.A. Wahle, and K.D.E. Stokesbury. 2013. Spatial scaling of juvenile-adult associations in northwest Atlantic sea scallop *Placopecten magellanicus* populations. *Mar. Ecol. Prog. Ser.* 493:185-194.
- Chen, C., L. Zhao, H. Lin, P. He, S. Li, Z. Wu, J. Qi, Q. Xu, K. Stokesbury, and L. Wang. 2024. Potential impacts of offshore wind energy development on physical processes and scallop larval dispersal over the US. *Progress in Oceanography* 224: 103263.

- Cones, S.F., Y. Jezequel, S. Jarriel, N. Aoki, H. Brewer, J. Collins, L. Chauvaud, and T.A. Mooney. 2024. Offshore windfarm construction elevates metabolic rate and increases predation vulnerability of a key marine invertebrate. *Environmental Pollution* 360 (2024) 124709.
- Duarte, C. M., L. Chapuis, S.P. Collin, D.P. Costa, R.P. Devassy, V.M. Eguiluz, C. Erbe, T.A. Gordon, B.S. Halpern, H.R. Harding, M.N. Havlik, M. Meekan, N.D. Merchant, J.L. Miksis-Olds, M. Parsons, M. Predragovic, A.N. Radford, C.A. Radford, S.D. Simpson, H. Slabbekoorn, E. Staaterman, I.C. Van Opzeeland, J. Winderen, X. Zhang, and F. Juanes. 2021. The soundscape of the Anthropocene Ocean. *Science* 371, eaba4658.
- Ferraro, D.M., A.C. Trembanis, D.C. Millerand, and D.B. Rudders. 2017. Estimates of sea scallop (*Placopecten magellanicus*) incidental mortality from photographic multiple before-after-control-impact surveys. *J. Shell. Res.* 36:615-626.
- Grothues T.M., E.J. Hunter, C.M. Iwicky, G.L. Taghon, and S. Borsetti. 2021. Data synthesis of NY Bight fish, fisheries, and sand features; volume 2: data synthesis and analysis. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2021-036. 90 p.
- Guida, V., A. Drohan, H. Welch, J. McHenry, D. Johnson, V. Kentner, J. Brink, D. Timmons, and E. Estela-Gomez. 2017. Habitat Mapping and Assessment of Northeast Wind Energy Areas. Sterling, VA: US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2017-088. 312 p.
- Harris, B.P., C.F. Adams, and K.D.E. Stokesbury. 2018. Sea scallops exhibit strong local spatiotemporal structure associated with seabed stability and high flows. *Ecosphere* 9(3):e02133.10.1002/ecs2.2133.
- Hart, D.R. 2006. Effects of sea stars and crabs on sea scallop *Placopecten magellanicus* recruitment in the Mid-Atlantic Bight (USA). *Mar. Ecol. Prog. Ser.* 306: 209–221.
- Henry, L. and E. Kenchington. 2004. Differences between epilithic and epizoic hydroid assemblages from commercial scallop grounds in the Bay of Fundy, northwest Atlantic. *Mar. Ecol. Prog/ Ser.* 266: 123–134.
- Hogan, F., B. Hooker, B. Jensen, L. Johnston, A. Lipsky, E. Methratta, A. Silva, and A. Hawkins. 2023. Fisheries and Offshore Wind Interactions: Synthesis of Science. NOAA Technical Memorandum NMFS-NE-291. 388p.
- INSPIRE Environmental. 2019a. Standard Operating Procedure for Sediment Profile and Plan View Imaging Sample Collection and Image Analysis. Prepared by INSPIRE Environmental, March 2019.

- INSPIRE Environmental. 2019b. Benthic Assessment Survey of Proposed Export Cable Routes in Support of the Equinor Wind OCS-A 0512 Offshore Wind Farm Project – Data Report. Prepared for Equinor, Empire Offshore Wind LLC. November 2019. 73 pp. plus Figures and Appendices.
- INSPIRE Environmental. 2023a. Empire Wind Fisheries and Benthic Monitoring Plan. Prepared for Equinor, Empire Offshore Wind LLC. May 2023. 76 pp.
- INSPIRE Environmental. 2023b. Field Survey Plan for the Empire Wind Scallop Monitoring Plan View Imaging (PV) Survey. Prepared for Equinor, Empire Offshore Wind LLC. May 2023. 22 pp.
- Jezequel, Y., S. Cones, and T.A. Mooney. 2023. Sound sensitivity of the giant scallop (*Placopecten magellanicus*) is life stage, intensity, and frequency dependent. *Journal of the Acoustical Society of America* 153: 1130-1137.
- Kerr, L.A., J.P. Kritzer, and S.X. Cadrin. 2019. Strengths and limitations of before-after-control-impact analysis for testing the effects of marine protected areas on managed populations. *ICES J. Mar. Sci.* 76:1039-1051.
- Livermore, J. and T. Guilfoos. 2024. Scallop fishing activity characterization in Southern New England: Offshore wind demands and fisheries-dependent methods. *PLoS ONE* 19(11): e0313197. <https://doi.org/10.1371/journal.pone.0313197>.
- Nadeau, M. and G. Cliché. 1998. Predation of juvenile sea scallops (*Placopecten magellanicus*) by crabs (*Cancer irroratus* and *Hyas* sp.) and starfish (*Asterias vulgaris*, *Leptasterias Polaris*, and *Crossaster papposus*). *J Shellfish Res* 17: 905–910.
- National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). 2022. 2022 NOAA Northeast Sea Scallop Survey Results. <https://www.fisheries.noaa.gov/feature-story/2022-noaa-northeast-sea-scallop-survey-results>. Accessed January 2025.
- National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). 2025a. Commercial Fisheries Statistics: annual commercial landing statistics. NMFS Office of Science and Technology. <https://www.fisheries.noaa.gov/national/sustainable-fisheries/commercial-fisheries-landings>. Accessed January 2025.
- National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). 2025b. Socioeconomic Impacts of Atlantic Offshore Wind Development. Socioeconomic Impacts of Atlantic Offshore Wind Development | NOAA Fisheries. Accessed January 2025.

New Jersey Department of Environmental Protection (NJDEP). 2022. Open Stock Assessment Program. <https://dep.nj.gov/njfw/fishing/marine/ocean-stock-assessment-program/>. Accessed January 2025.

New York State Energy Research and Development Authority (NYSERDA). 2017. New York State Offshore Wind Master Plan: Fish and Fisheries Study. NYSERDA Report 17-25j. 140 pp.

Posgay, J.A. 1957. The range of the sea scallop. *Nautilus* 71:55-57.

Responsible Offshore Science Alliance (ROSA). 2021. Offshore wind project monitoring framework and guidelines. March 2021. Available online at Resources | ROSA 2021 Updated (rosascience.org).

Rudders, D. 2015. Virginia Institute of Marine Science Dredge Survey Methods Report. From: http://www.cio.noaa.gov/services_programs/prplans/pdfs/ID310_Draft_Product_2-VIMS%20S_Methods%20Review.pdf.

Rudders, D. and S. Roman. 2018. A Cooperative High Precision Dredge Survey to Assess the mid-Atlantic Sea Scallop Resource: Final Report. Marine Resource Report No. 2018-05. Virginia Institute of Marine Science, College of William and Mary. <http://dx.doi.org/doi:10.21220/m2-t95p-9p39>.

Rudders, D., S. Roman, E. Mohr, and K. Clark. 2019. Results for the 2019 VIMS Industry Cooperative Surveys of the Mid-Atlantic, Nantucket Lightship Closed Area, Closed Area I, and Closed Area II Resource Areas. Marine Resource Report No. 2019-7. Virginia Institute of Marine Science, William & Mary. doi:10.25773/b152-a296.

Sala, E., J. Mayorga, D. Bradley, and 23 others. 2021. Protecting the global ocean for biodiversity, food and climate. *Nature* 592: 397- 402.

Smith, E.P., D.R. Orvos, and J. Cairns. 1993. Impact assessment using the before-after-control-impact (BACI) model: concerns and comments. *Canadian Journal of Fisheries and Aquatic Science* 50: 627–637.

Squires, H.J. 1962. Giant scallops in Newfoundland coastal waters. *Bull. Fish. Res. Bd. Can.* 135:29.

Stokesbury, K.D.E. 2002. Estimation of sea scallop abundance in closed areas of Georges Bank, USA. *Trans. Am. Fish. Soc.* 131: 1081-1092.

Stokesbury, K.D.E. and J.H. Himmelman. 1995. Biological and physical variables associated with aggregations of the giant scallop *Placopecten magellanicus*. *Can. J. Fish. Aquat. Sci.* 52: 743–753.

Stokesbury, K.D.E. and N.D. Bethoney. 2020. How many sea scallops are there and why does it matter? *Front. Ecol. Environ.* 18:513-519.

- Stokesbury, K., G. Fay, and R. Griffin. 2022. A framework for categorizing the interactions of offshore windfarms and fisheries. *ICES J. Mar. Sci.* 79. 10.1093/icesjms/fsac118.
- Thorne, L., J. Nye, J. Warren, and C. Flagg. 2020. Development and implementation of an ocean ecosystem monitoring program for New York Bight. Annual Report, MOU #AM10560 NYS DEC & SUNY Stony Brook for the period January 1, 2020 – December 31, 2020. New York State Environmental Protection Fund Ocean and Great Lakes Program and Stony Brook University School of Marine and Atmospheric Sciences. https://www.dec.ny.gov/docs/fish_marine_pdf/dmrsomasmonitoring.pdf.
- Tremblay M.J., J.W. Loder, F.E. Werner, C.E. Naimie, F.H. Page, and M.M. Sinclair. 1994. Drift of sea scallop larvae *Placopecten magellanicus* on Georges Bank: a model study of the roles of mean advection, larval behavior and larval origin. *Deep-Sea Res II* 41: 7–49.
- Underwood, A.J. 1991. Beyond BACI: experimental designs for detecting human and environmental impacts on temporal variations in natural populations. *Aus. J. Mar. Fresh. Res.* 42:569-587.
- Walker, J.H., A.C. Trembanis, and D.C. Miller. 2016. Assessing the use of a camera system within an autonomous underwater vehicle for monitoring the distribution and density of sea scallops (*Placopecten magellanicus*) in the Mid-Atlantic Bight. *Fish. Bull.* 114:261-273.
- Zang, Z., R. Ji, D.R. Hart, D. Jin, C. Chen, Y. Liu, and C.S. Davis. 2023. Effects of warming and fishing on Atlantic sea scallop (*Placopecten magellanicus*) size structure in the Mid-Atlantic rotationally closed areas. *ICES J. Mar. Sci.* 80: 1351-1366. <https://doi.org/10.1093/icesjms/fsad063>.

Empire Wind Scallop Monitoring Survey 2024 Annual Report

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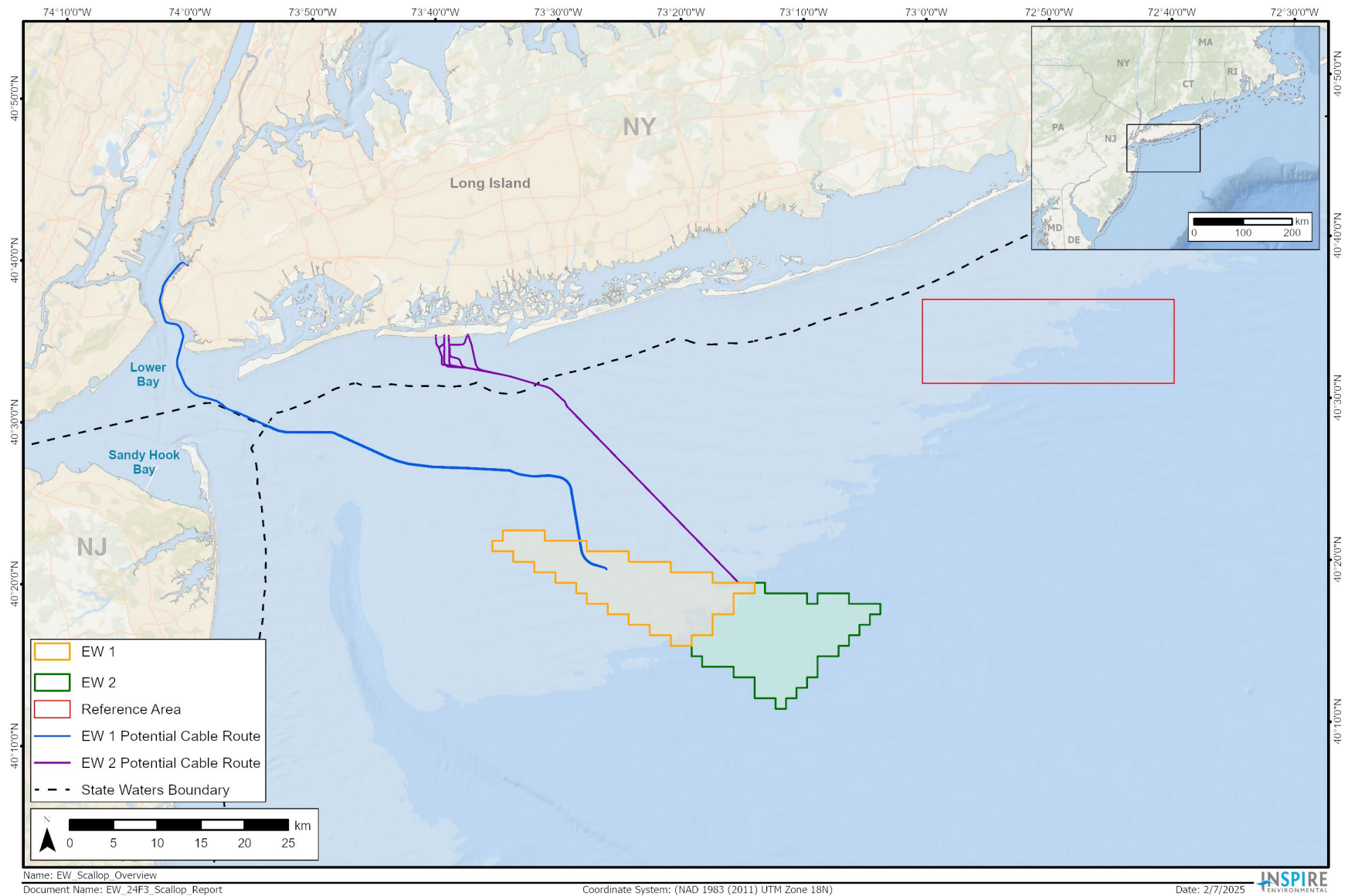


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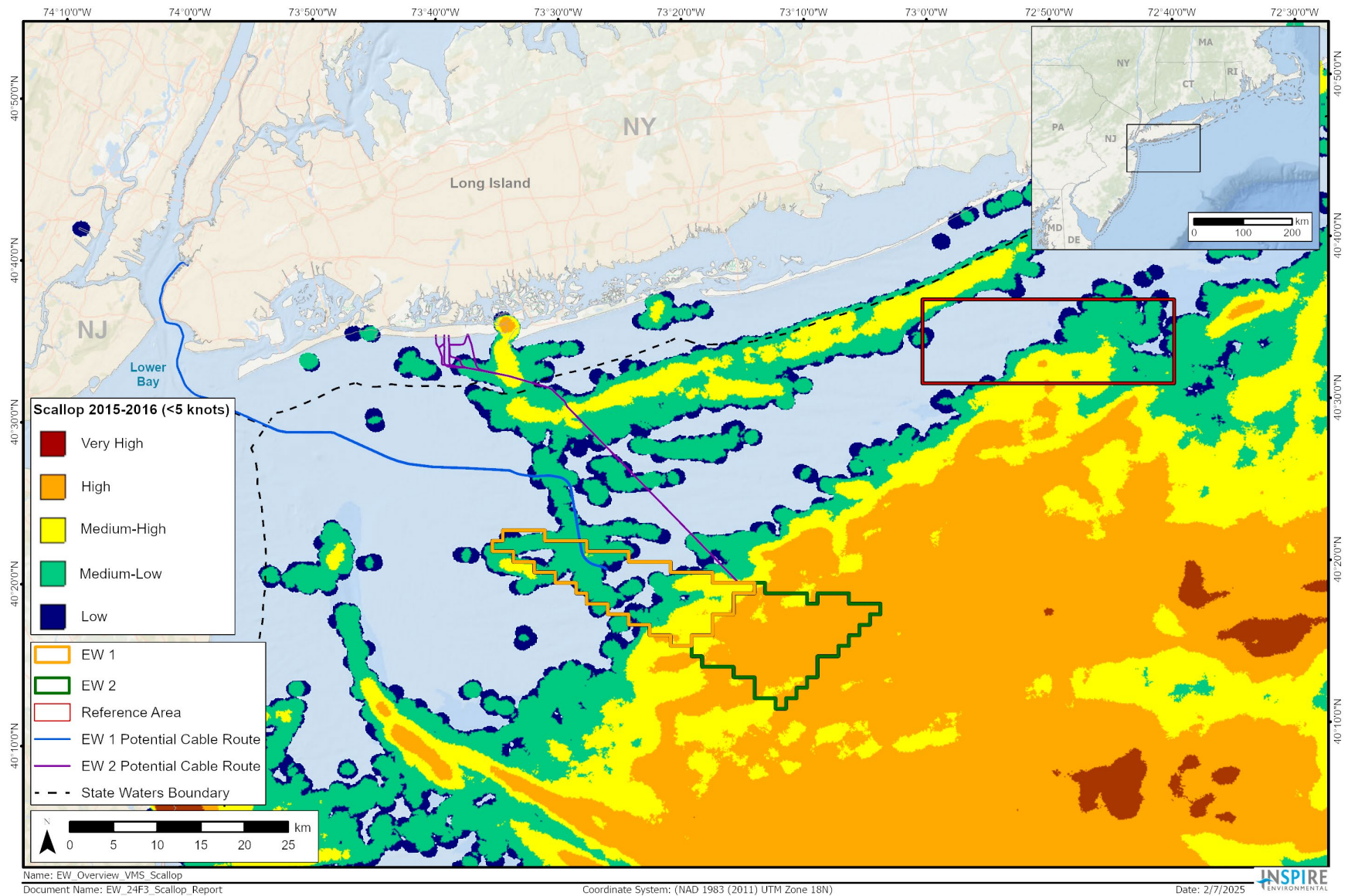


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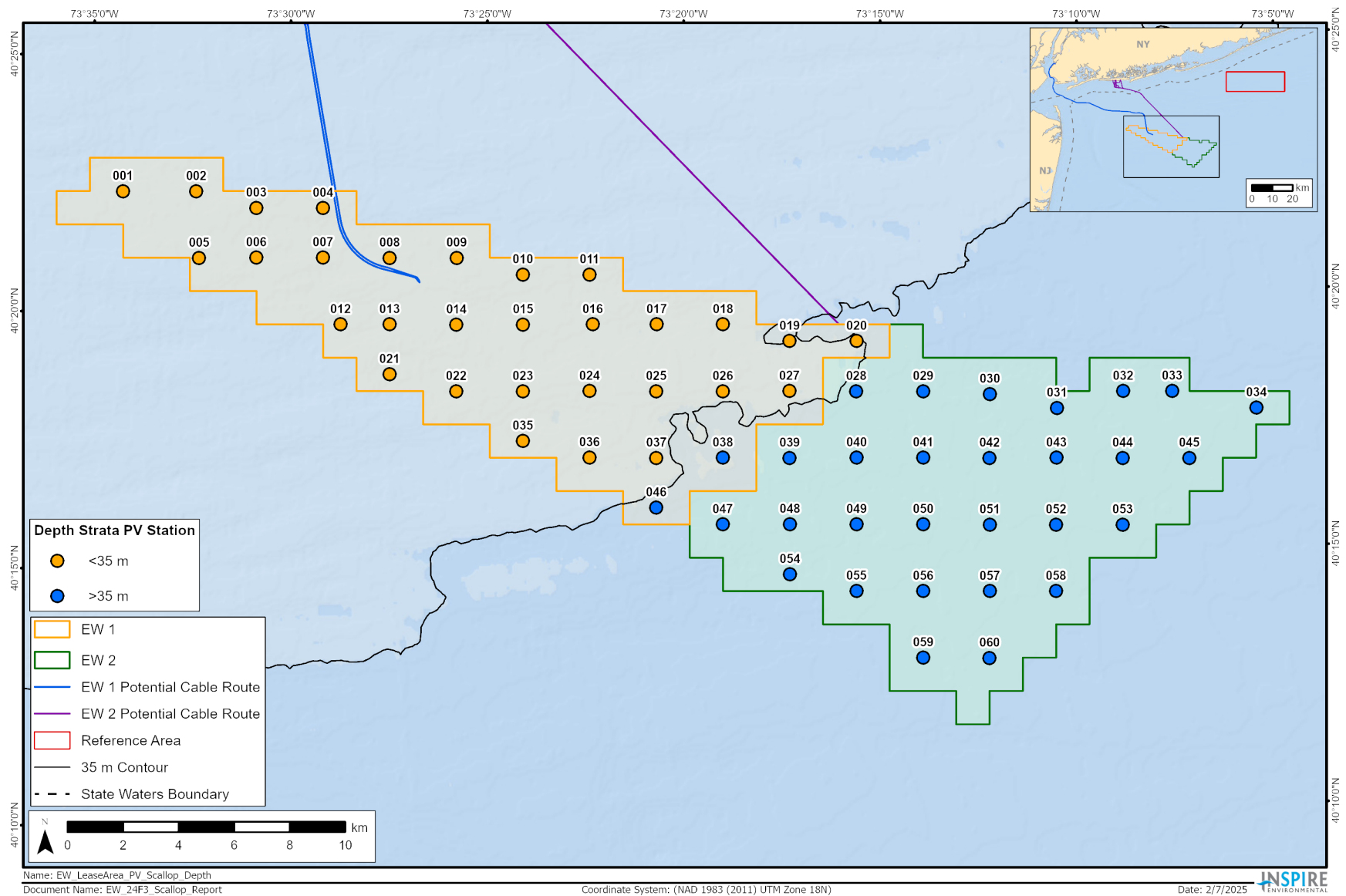


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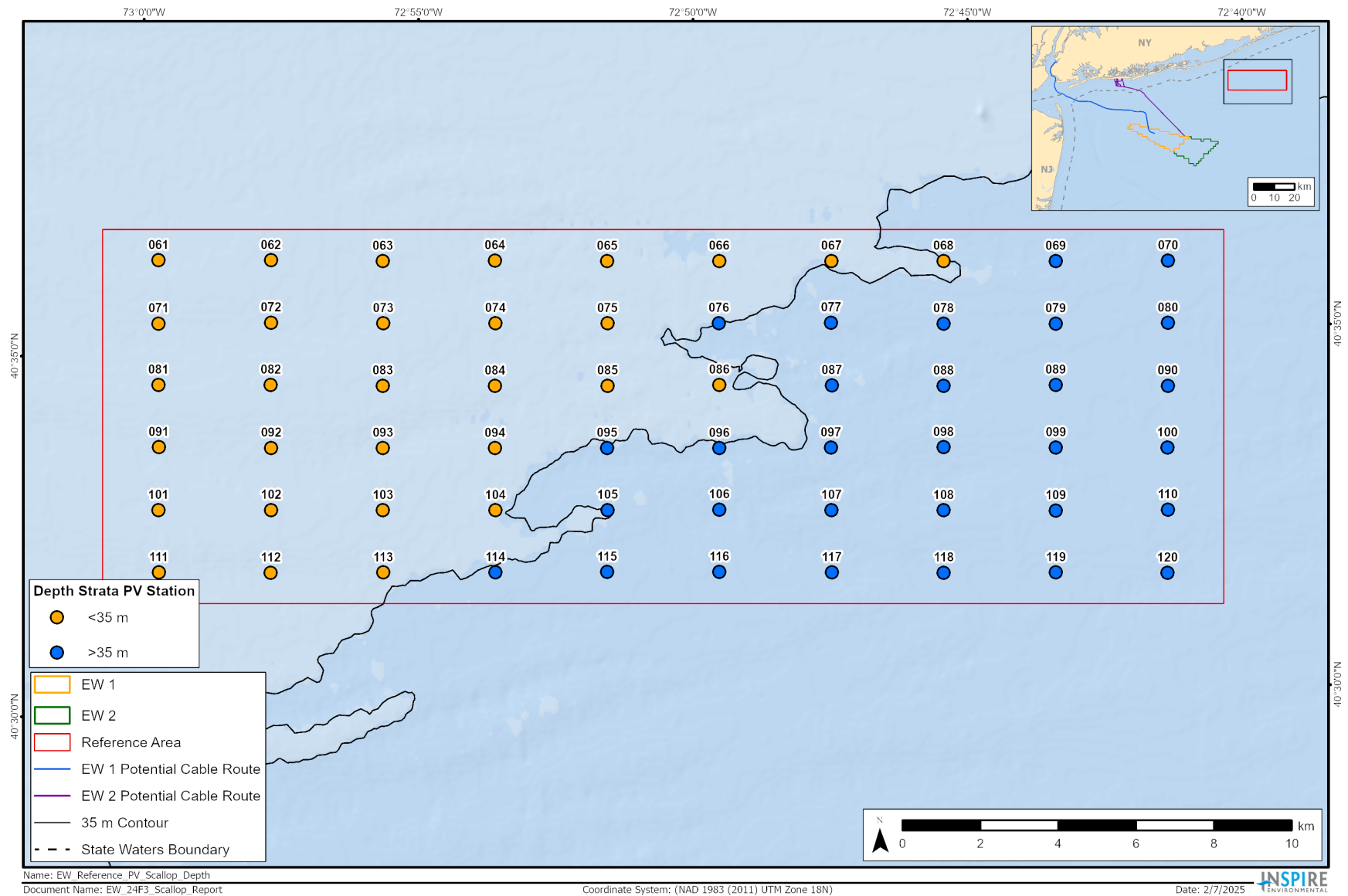


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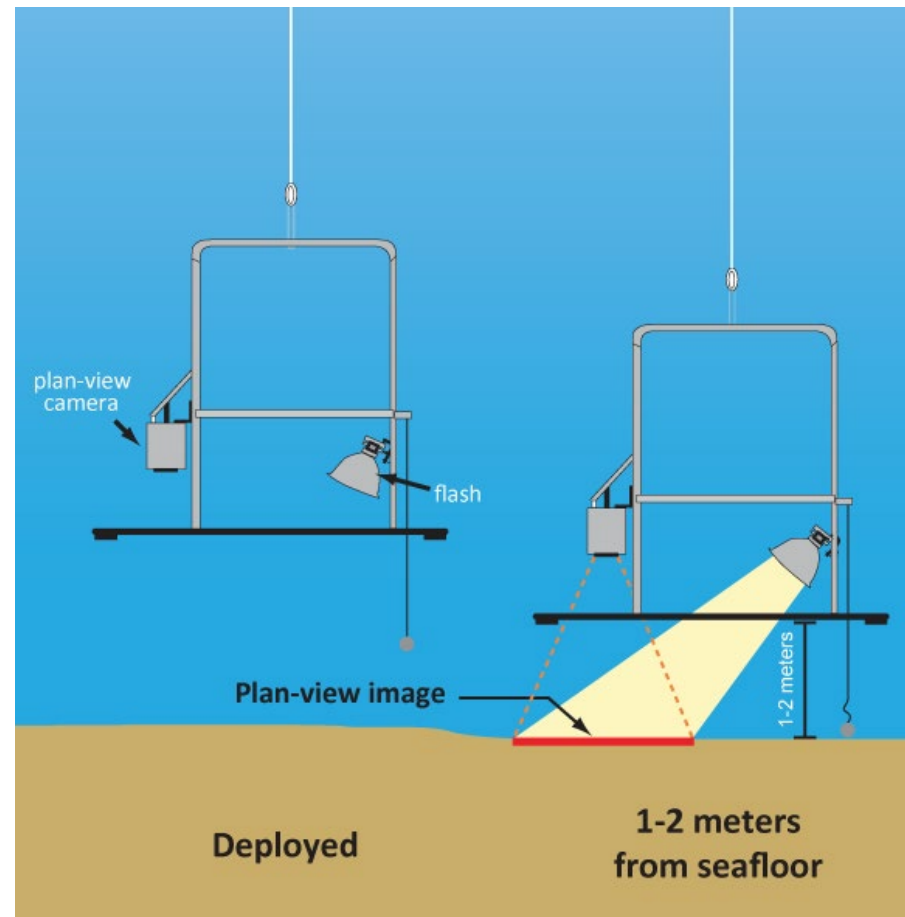


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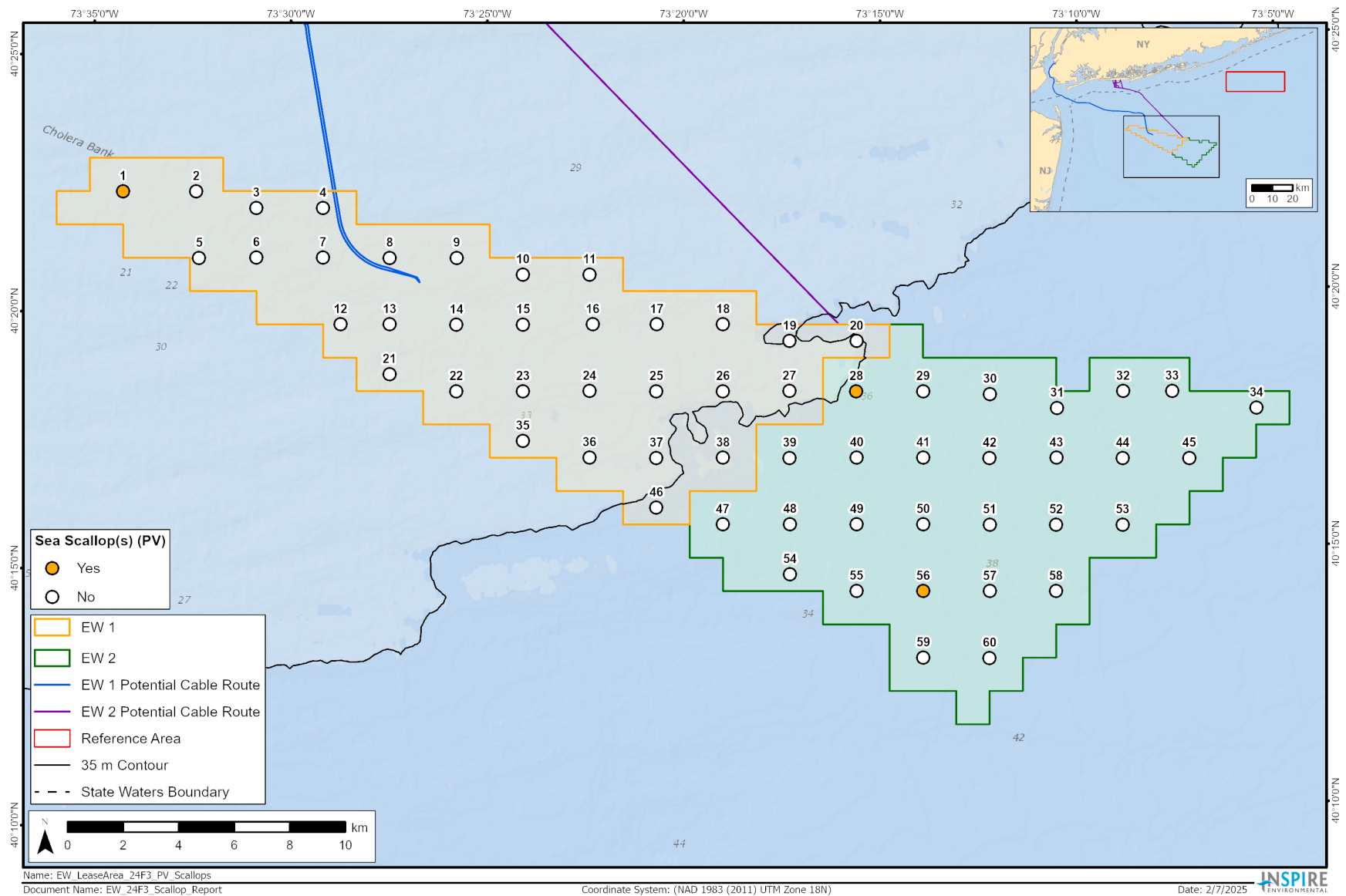


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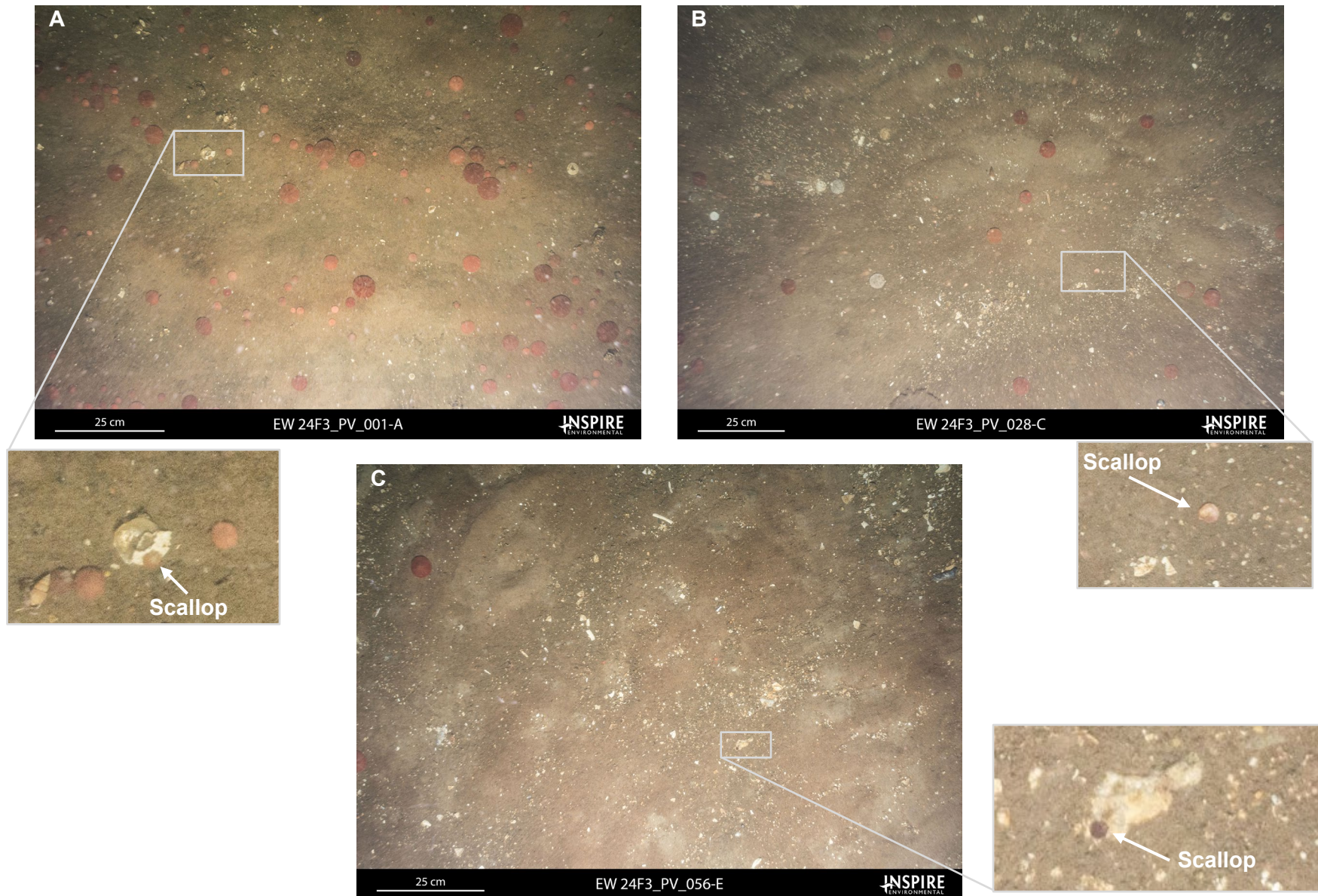


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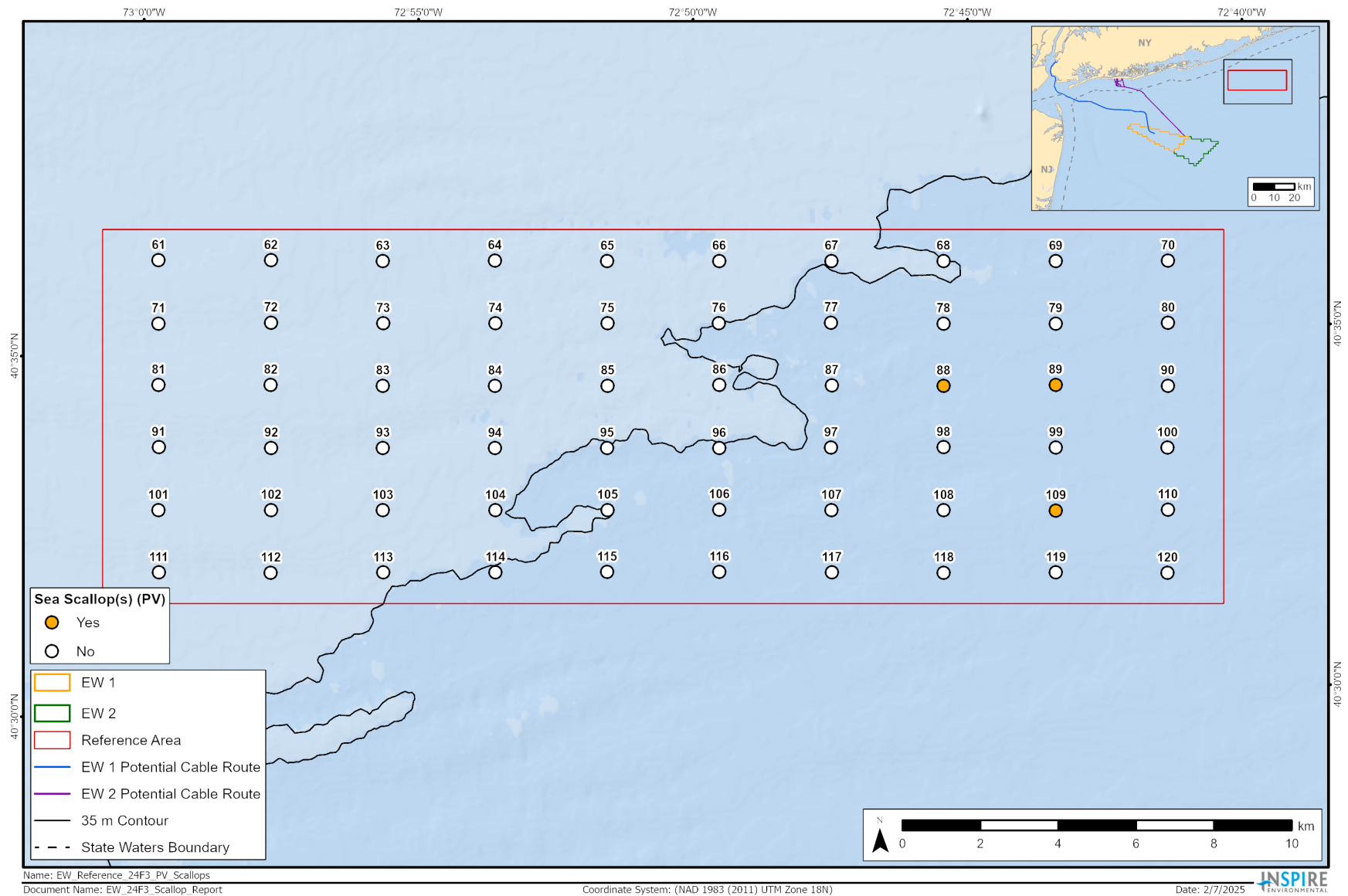


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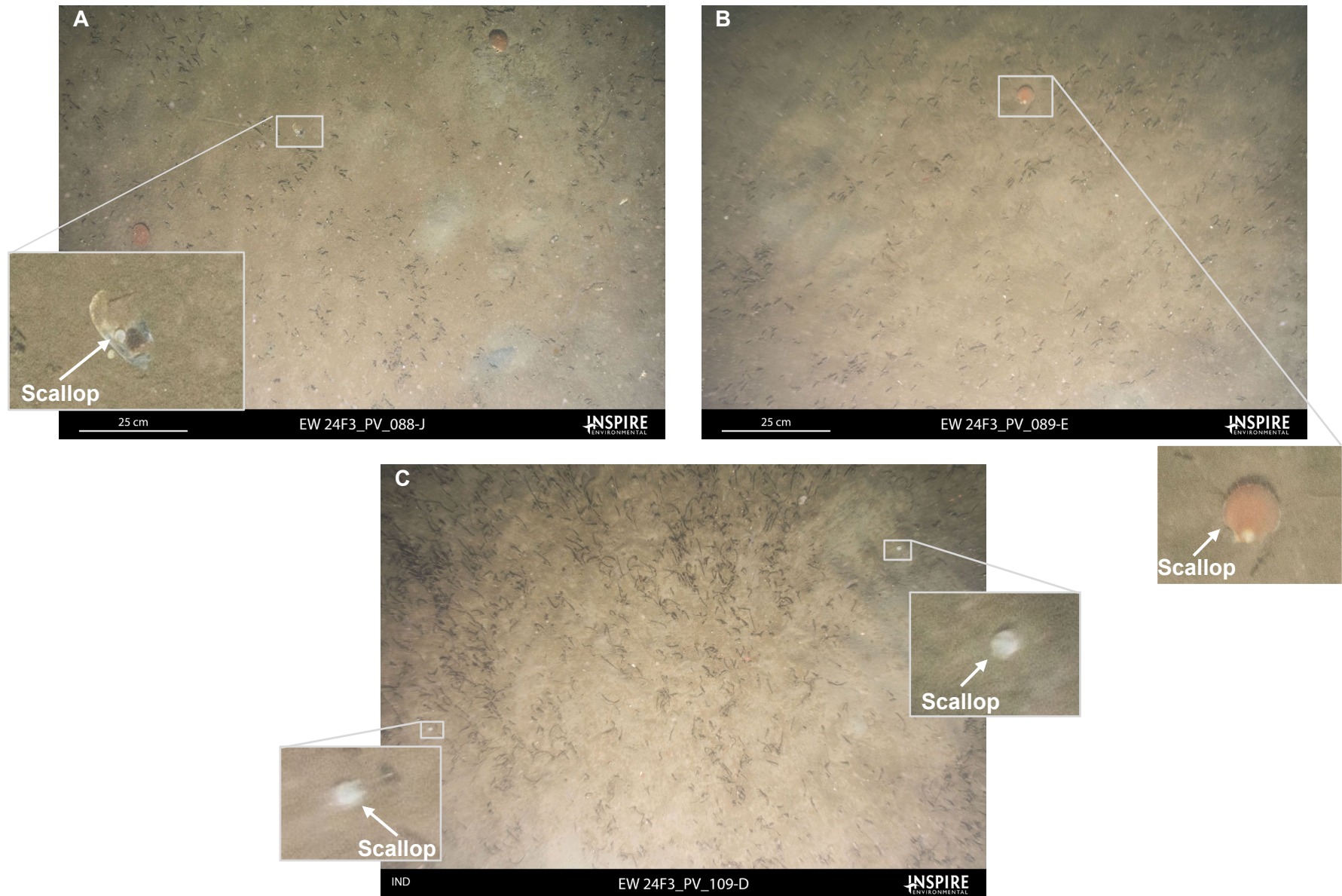


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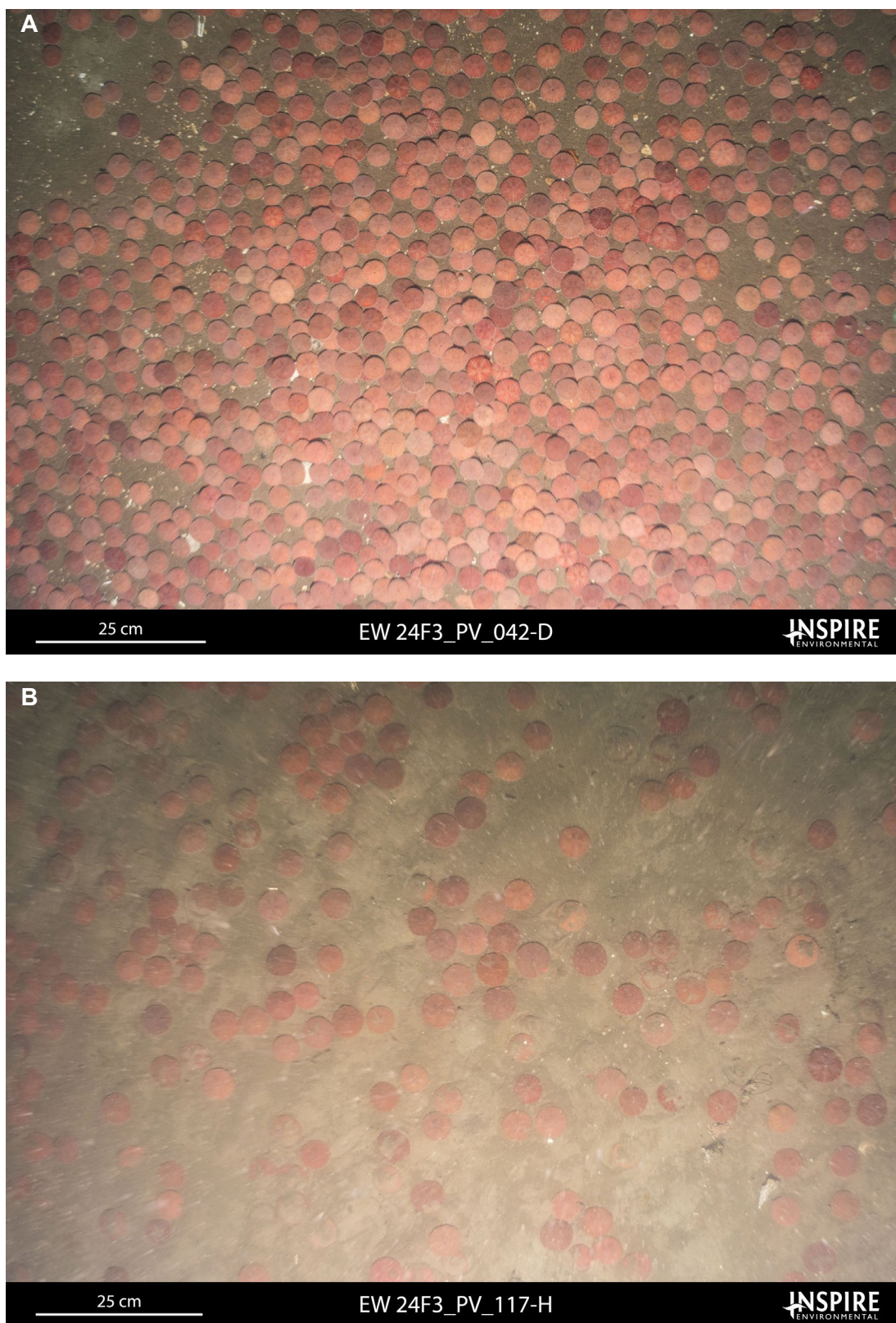


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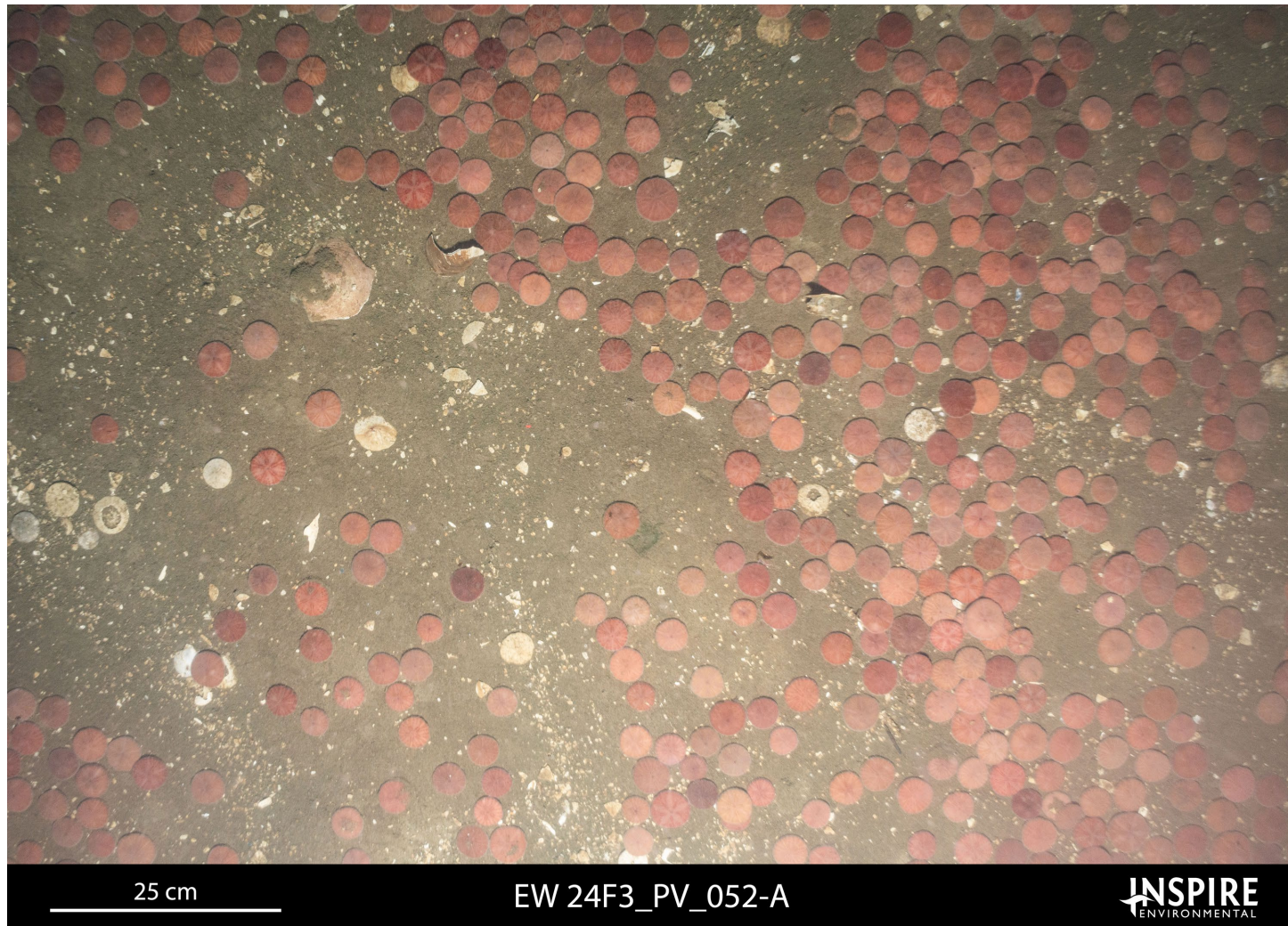


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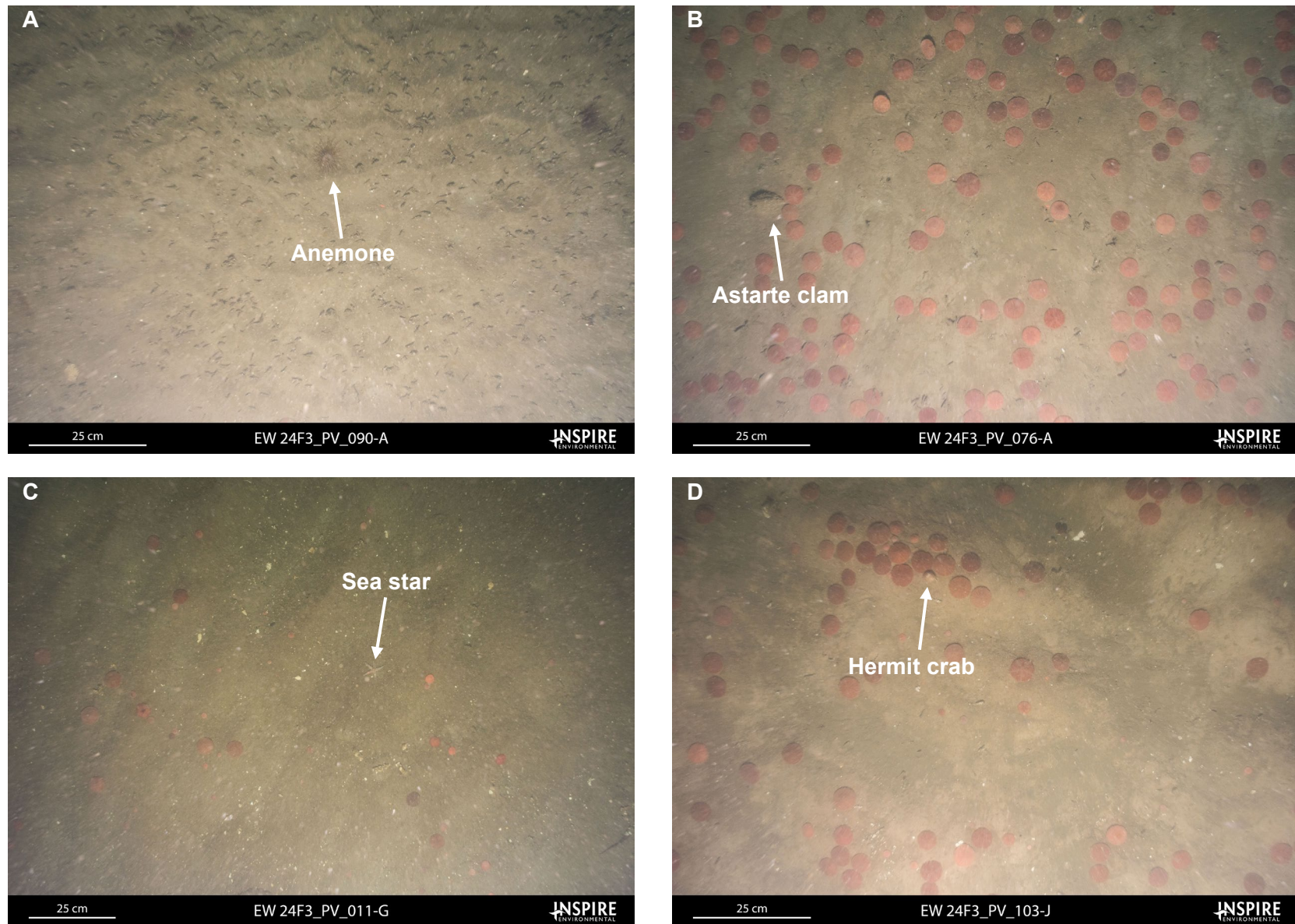


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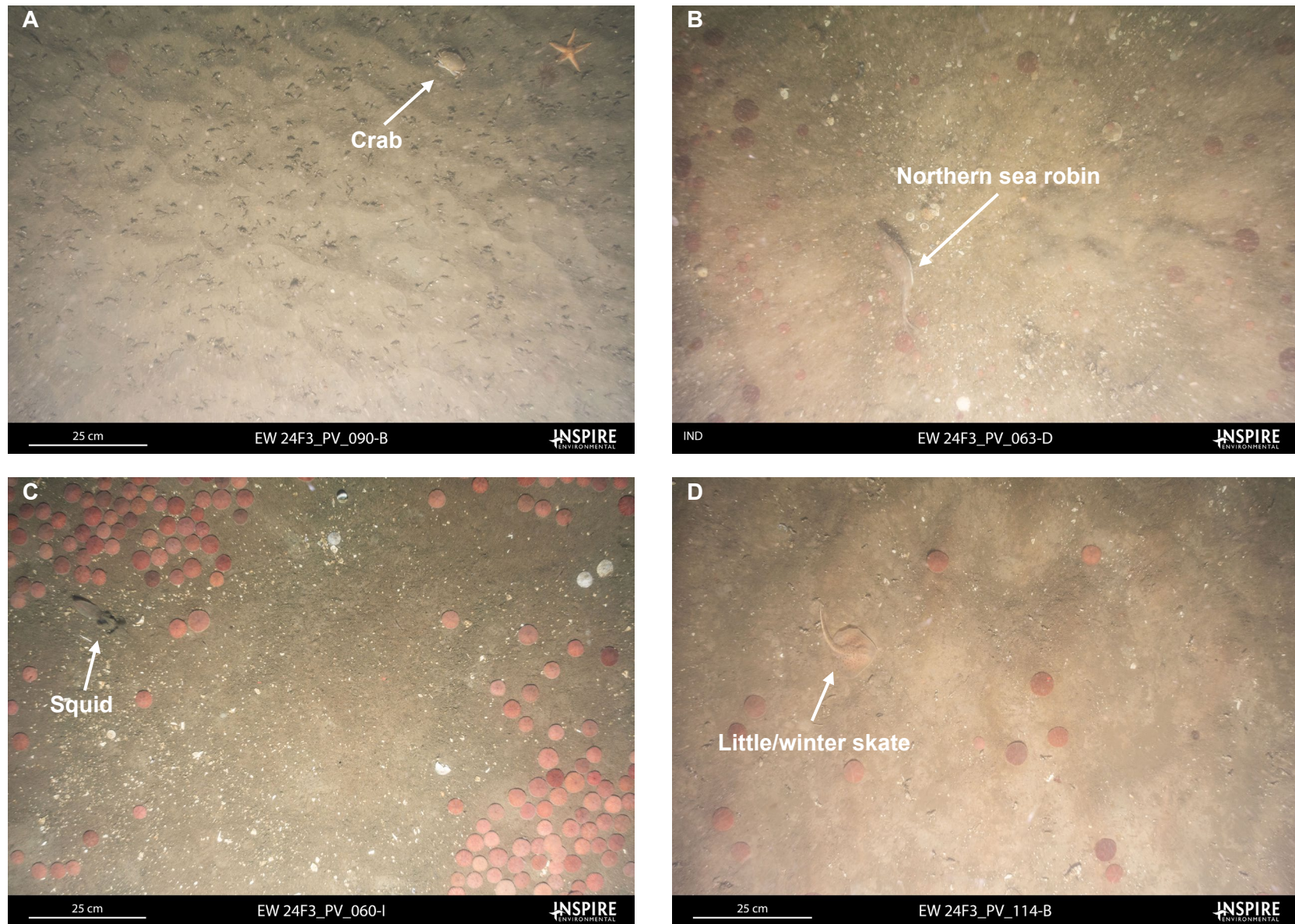


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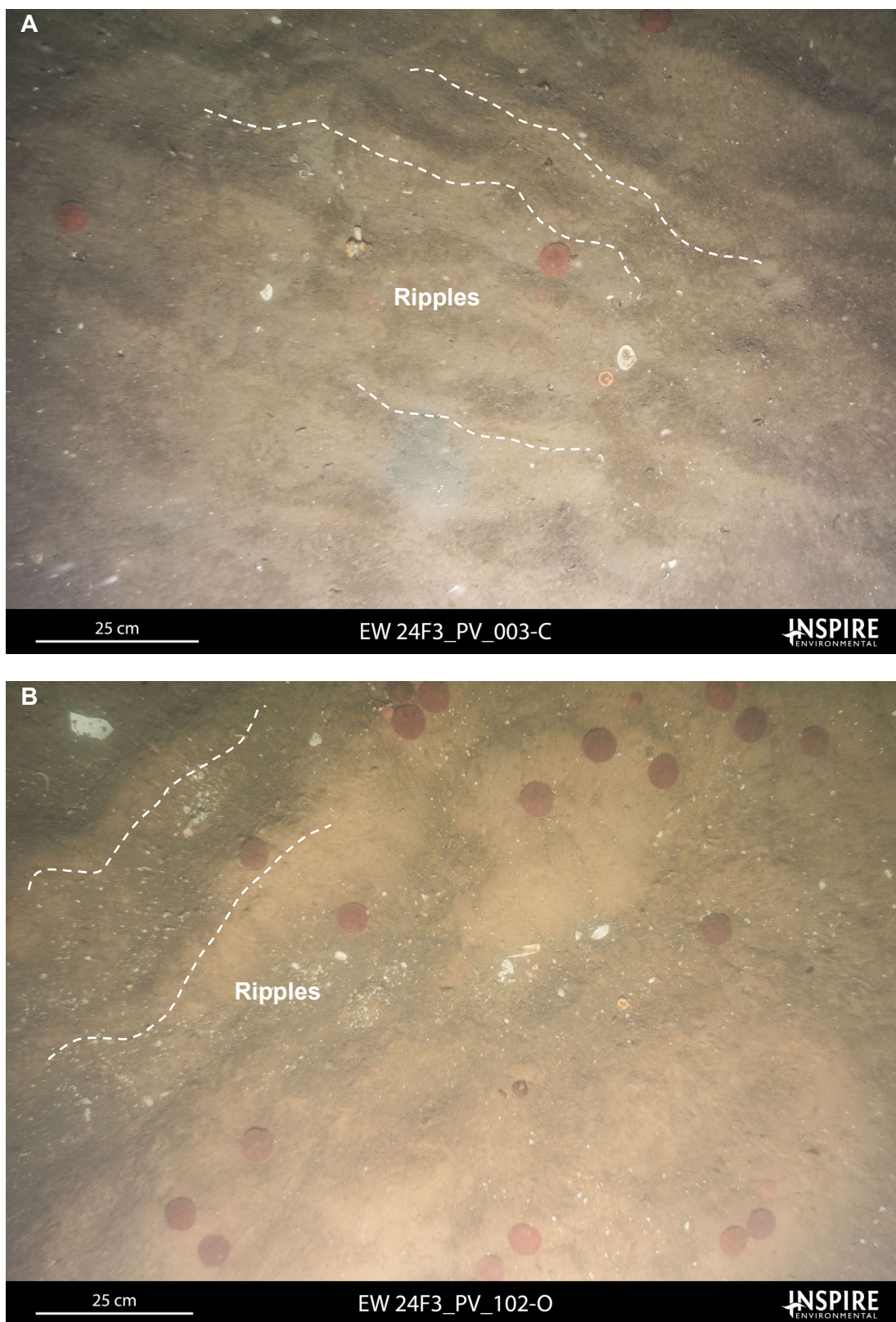


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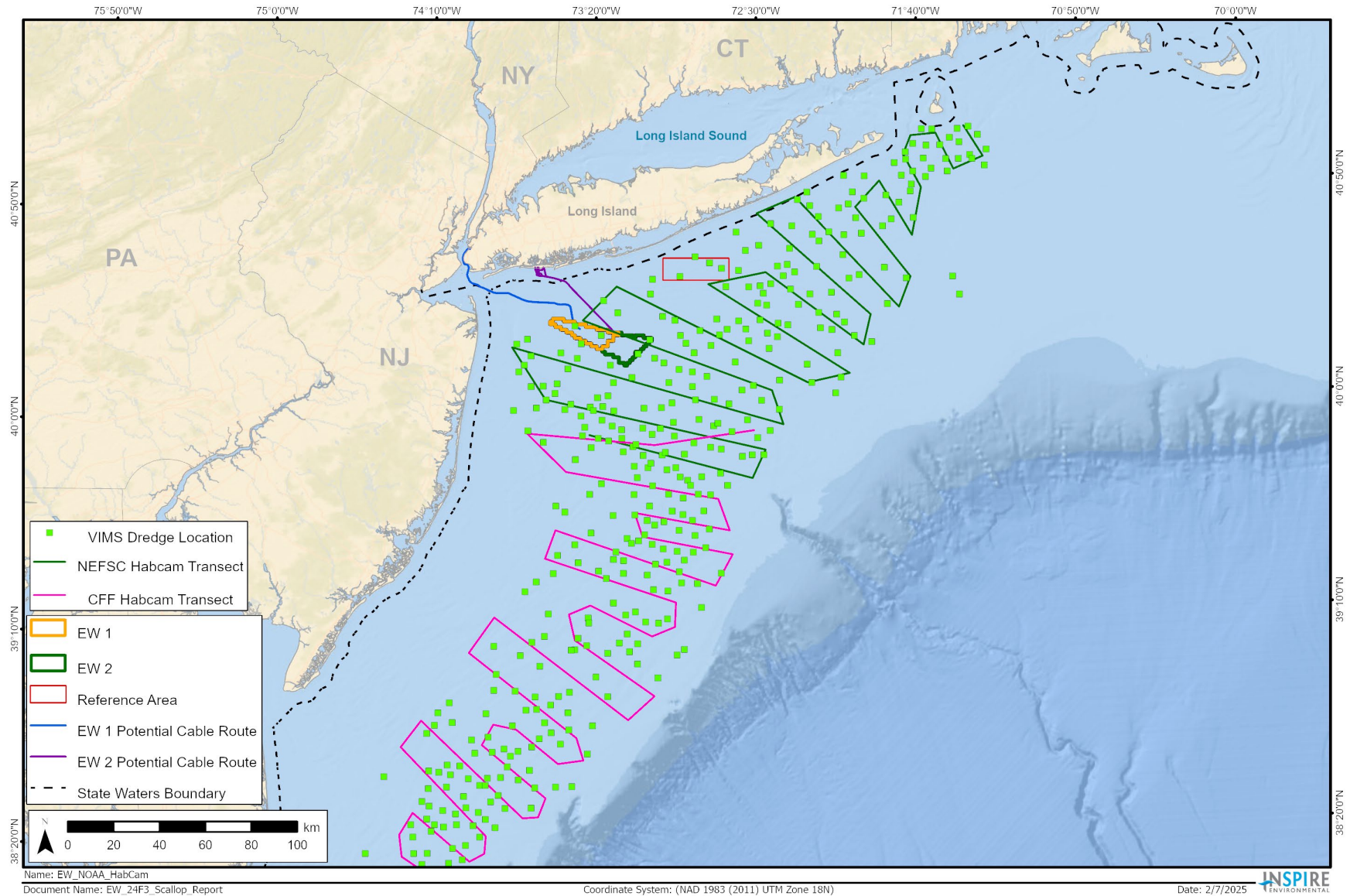


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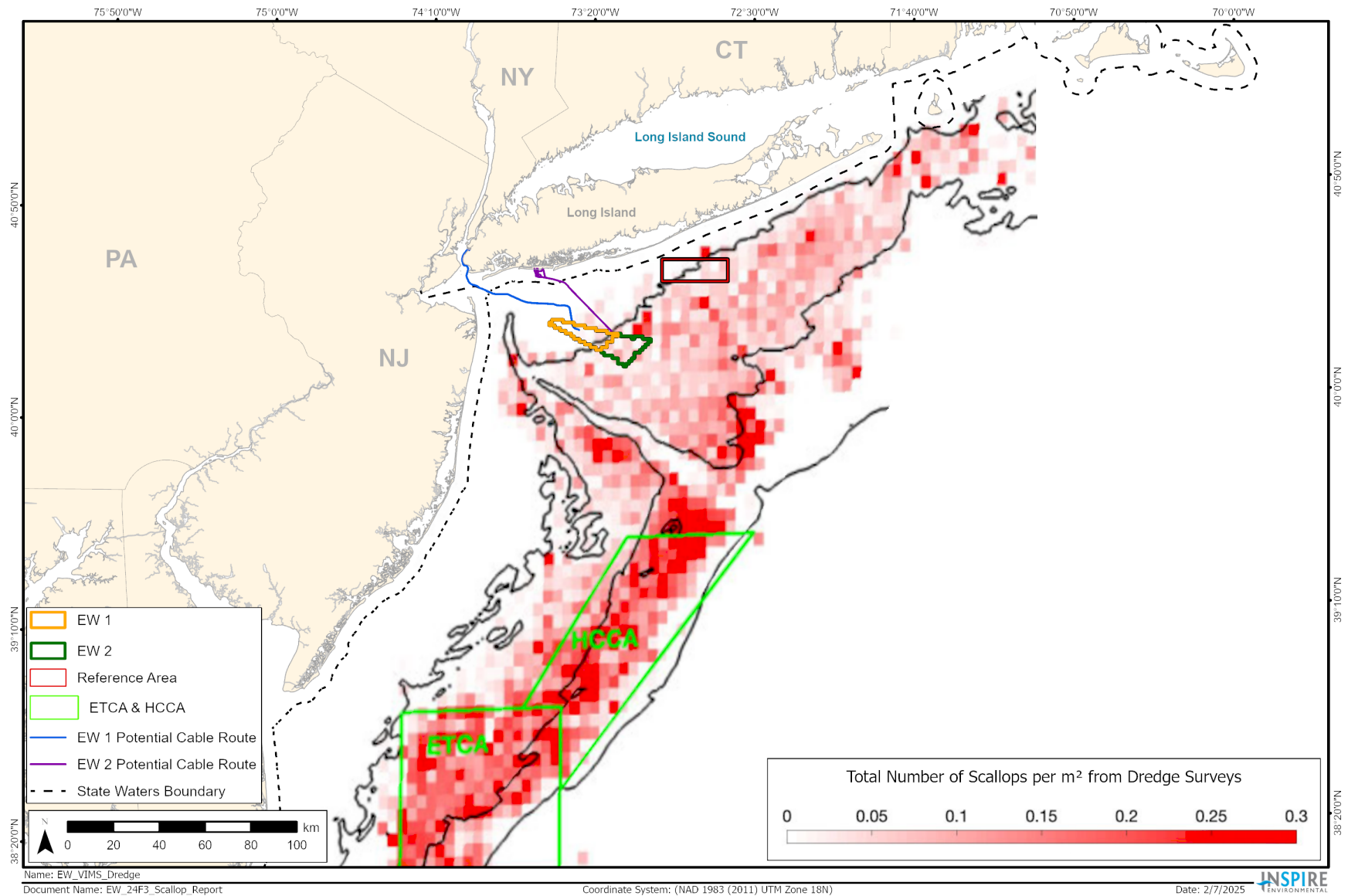


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APPENDICES

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LIST OF APPENDICES

Appendix A Plan View Station Location Details

Appendix B Plan View Image Analysis Results by Station

Appendix A – Plan View Station Location Details

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	001	A	8/15/2024	3:35:39	621186.96	4469994.02	40.3717221	-73.5725324	26.5	0.4	26.1	Tide heights are to the closest minute.
Lease Area	PV	001	B	8/15/2024	3:36:44	621197.32	4469990.66	40.3716903	-73.5724111	26.5	0.4	26.1	
Lease Area	PV	001	C	8/15/2024	3:37:44	621206.41	4469993.25	40.3717123	-73.5723036	26.5	0.4	26.1	
Lease Area	PV	001	D	8/15/2024	3:39:37	621191.17	4469997.07	40.3717489	-73.5724823	26.5	0.4	26.1	
Lease Area	PV	001	E	8/15/2024	3:40:41	621198.00	4469996.36	40.3717415	-73.5724020	26.5	0.4	26.1	
Lease Area	PV	001	F	8/15/2024	3:41:54	621210.37	4469996.41	40.3717402	-73.5722563	26.5	0.4	26.1	
Lease Area	PV	001	G	8/15/2024	3:43:13	621192.84	4470005.33	40.3718231	-73.5724611	26.5	0.4	26.1	
Lease Area	PV	001	H	8/15/2024	3:44:22	621200.73	4470003.53	40.3718057	-73.5723685	26.5	0.4	26.1	
Lease Area	PV	002	A	8/15/2024	4:13:17	623828.95	4469984.79	40.3712507	-73.5414236	25.0	0.5	24.5	
Lease Area	PV	002	B	8/15/2024	4:14:52	623823.79	4469986.78	40.3712694	-73.5414839	25.0	0.5	24.5	
Lease Area	PV	002	D	8/15/2024	4:17:03	623815.03	4469986.89	40.3712716	-73.5415871	25.0	0.5	24.5	
Lease Area	PV	002	E	8/15/2024	4:18:10	623824.06	4469988.10	40.3712812	-73.5414805	25.0	0.5	24.5	
Lease Area	PV	002	F	8/15/2024	4:19:31	623816.88	4469992.78	40.3713244	-73.5415641	25.0	0.5	24.5	
Lease Area	PV	002	G	8/15/2024	4:20:47	623826.98	4469989.80	40.3712961	-73.5414458	25.0	0.5	24.5	
Lease Area	PV	002	H	8/15/2024	4:22:40	623823.65	4469996.61	40.3713579	-73.5414837	25.0	0.5	24.5	
Lease Area	PV	002	I	8/15/2024	4:23:52	623832.06	4470003.82	40.3714216	-73.5413832	25.0	0.5	24.5	
Lease Area	PV	003	A	8/15/2024	4:43:51	625990.59	4469390.59	40.3655753	-73.5160871	27.7	0.6	27.2	
Lease Area	PV	003	B	8/15/2024	4:45:06	625997.34	4469388.51	40.3655555	-73.5160080	27.7	0.6	27.2	
Lease Area	PV	003	C	8/15/2024	4:46:24	626006.47	4469392.69	40.3655918	-73.5158997	27.7	0.6	27.1	
Lease Area	PV	003	D	8/15/2024	4:48:19	625989.15	4469397.55	40.3656382	-73.5161027	27.7	0.6	27.1	
Lease Area	PV	003	E	8/15/2024	4:49:37	626000.45	4469395.34	40.3656166	-73.5159701	27.7	0.6	27.1	
Lease Area	PV	003	F	8/15/2024	4:50:54	626007.54	4469398.35	40.3656426	-73.5158860	27.7	0.6	27.1	
Lease Area	PV	003	G	8/15/2024	4:52:29	625991.62	4469401.96	40.3656775	-73.5160727	27.7	0.6	27.1	
Lease Area	PV	003	H	8/15/2024	4:54:45	625991.40	4469410.12	40.3657511	-73.5160737	27.7	0.6	27.1	
Lease Area	PV	004	A	8/15/2024	5:20:09	628393.21	4469386.84	40.3651750	-73.4877991	29.3	0.7	28.6	
Lease Area	PV	004	B	8/15/2024	5:21:33	628398.21	4469389.98	40.3652025	-73.4877396	29.3	0.7	28.6	
Lease Area	PV	004	C	8/15/2024	5:22:23	628403.70	4469391.33	40.3652138	-73.4876747	29.3	0.7	28.6	
Lease Area	PV	004	D	8/15/2024	5:24:08	628390.84	4469393.34	40.3652339	-73.4878257	29.3	0.7	28.6	
Lease Area	PV	004	E	8/15/2024	5:25:12	628396.24	4469396.21	40.3652589	-73.4877616	29.3	0.7	28.6	
Lease Area	PV	004	F	8/15/2024	5:26:08	628408.13	4469396.83	40.3652627	-73.4876215	29.3	0.7	28.6	
Lease Area	PV	004	G	8/15/2024	5:27:27	628392.36	4469401.92	40.3653110	-73.4878061	29.3	0.7	28.6	
Lease Area	PV	004	H	8/15/2024	5:29:05	628399.22	4469399.43	40.3652875	-73.4877258	29.3	0.7	28.6	
Lease Area	PV	005	A	8/15/2024	2:49:12	623932.16	4467587.63	40.3496458	-73.5406739	25.9	0.3	25.6	
Lease Area	PV	005	B	8/15/2024	2:51:09	623944.05	4467588.61	40.3496528	-73.5405338	25.9	0.3	25.6	
Lease Area	PV	005	C	8/15/2024	2:52:41	623930.30	4467593.14	40.3496957	-73.5406947	25.9	0.3	25.6	
Lease Area	PV	005	D	8/15/2024	2:53:37	623940.23	4467587.59	40.3496442	-73.5405789	25.9	0.3	25.6	
Lease Area	PV	005	E	8/15/2024	2:54:44	623947.87	4467593.87	40.3496996	-73.5404878	25.9	0.3	25.6	
Lease Area	PV	005	F	8/15/2024	2:56:08	623932.45	4467599.58	40.3497533	-73.5406682	25.9	0.3	25.6	
Lease Area	PV	005	H	8/15/2024	2:58:09	623951.92	4467595.03	40.3497095	-73.5404399	25.9	0.3	25.6	
Lease Area	PV	005	I	8/15/2024	2:59:29	623943.52	4467602.58	40.3497787	-73.5405373	25.9	0.3	25.6	
Lease Area	PV	006	A	8/15/2024	1:56:06	625988.23	4467601.09	40.3494590	-73.5164682	27.1	0.3	26.8	
Lease Area	PV	006	B	8/15/2024	1:57:30	625994.49	4467593.15	40.3493866	-73.5163961	27.1	0.3	26.8	
Lease Area	PV	006	C	8/15/2024	1:59:23	626003.55	4467590.45	40.3493609	-73.5162900	27.1	0.3	26.8	
Lease Area	PV	006	D	8/15/2024	2:00:24	626006.28	4467599.91	40.3494457	-73.5162560	27.1	0.3	26.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 3_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	006	E	8/15/2024	2:08:49	625992.76	4467602.64	40.3494723	-73.5164146	27.1	0.3	26.8	
Lease Area	PV	006	F	8/15/2024	2:09:32	625994.34	4467605.91	40.3495015	-73.5163954	27.1	0.3	26.8	
Lease Area	PV	006	G	8/15/2024	2:10:15	626003.85	4467604.82	40.3494903	-73.5162836	27.1	0.3	26.8	
Lease Area	PV	006	H	8/15/2024	2:10:55	626004.03	4467610.09	40.3495377	-73.5162805	27.1	0.3	26.8	
Lease Area	PV	007	A	8/15/2024	0:35:59	628389.05	4467601.42	40.3490960	-73.4882074	28.7	0.5	28.2	
Lease Area	PV	007	B	8/15/2024	0:37:59	628396.12	4467610.16	40.3491736	-73.4881224	28.7	0.5	28.2	
Lease Area	PV	007	I	8/15/2024	5:46:11	628399.11	4467604.10	40.3491186	-73.4880884	29.0	0.8	28.2	
Lease Area	PV	007	J	8/15/2024	5:47:57	628408.44	4467606.79	40.3491414	-73.4879781	29.0	0.8	28.2	
Lease Area	PV	007	K	8/15/2024	5:48:57	628403.12	4467601.19	40.3490917	-73.4880418	29.0	0.8	28.2	
Lease Area	PV	007	L	8/15/2024	5:50:06	628400.43	4467594.78	40.3490344	-73.4880748	29.0	0.8	28.2	
Lease Area	PV	007	M	8/15/2024	5:50:58	628401.72	4467591.71	40.3490066	-73.4880602	29.0	0.8	28.2	
Lease Area	PV	007	N	8/15/2024	5:52:07	628388.86	4467593.17	40.3490217	-73.4882113	29.0	0.8	28.2	
Lease Area	PV	008	E	8/15/2024	0:04:27	630795.86	4467592.95	40.3486458	-73.4598783	30.8	0.6	30.2	
Lease Area	PV	008	I	8/16/2024	13:15:02	630799.71	4467612.12	40.3488179	-73.4598291	30.8	0.4	30.4	
Lease Area	PV	008	J	8/16/2024	13:16:17	630806.66	4467609.18	40.3487903	-73.4597479	30.8	0.4	30.4	
Lease Area	PV	008	K	8/16/2024	13:17:26	630792.43	4467611.39	40.3488125	-73.4599149	30.8	0.4	30.4	
Lease Area	PV	008	L	8/16/2024	13:18:42	630788.23	4467604.86	40.3487543	-73.4599657	30.8	0.4	30.4	
Lease Area	PV	008	M	8/16/2024	13:20:29	630810.36	4467598.72	40.3486955	-73.4597065	30.8	0.4	30.4	
Lease Area	PV	008	O	8/16/2024	13:23:39	630795.09	4467588.45	40.3486054	-73.4598883	30.8	0.4	30.4	
Lease Area	PV	008	P	8/16/2024	13:25:17	630789.47	4467593.94	40.3486558	-73.4599533	30.8	0.4	30.4	
Lease Area	PV	009	A	8/14/2024	22:57:06	633203.16	4467592.05	40.3482569	-73.4315425	32.6	0.8	31.8	
Lease Area	PV	009	E	8/14/2024	23:02:49	633194.36	4467596.68	40.3483000	-73.4316451	32.6	0.8	31.8	
Lease Area	PV	009	H	8/14/2024	23:07:14	633212.36	4467598.88	40.3483169	-73.4314328	32.6	0.8	31.8	
Lease Area	PV	009	J	8/15/2024	8:20:38	633190.60	4467592.15	40.3482598	-73.4316903	32.6	1.0	31.6	
Lease Area	PV	009	K	8/15/2024	8:22:04	633187.88	4467602.52	40.3483536	-73.4317202	32.6	1.0	31.6	
Lease Area	PV	009	L	8/15/2024	8:23:47	633211.07	4467602.77	40.3483522	-73.4314472	32.6	1.0	31.6	
Lease Area	PV	009	M	8/15/2024	8:25:43	633191.24	4467609.35	40.3484146	-73.4316792	32.6	1.0	31.6	
Lease Area	PV	009	N	8/15/2024	8:26:56	633200.44	4467612.58	40.3484422	-73.4315702	32.6	1.0	31.6	
Lease Area	PV	010	A	8/14/2024	22:25:24	635591.02	4466994.62	40.3424919	-73.4035628	30.5	1.0	29.5	
Lease Area	PV	010	B	8/14/2024	22:26:53	635597.16	4466999.23	40.3425324	-73.4034895	30.5	0.9	29.5	
Lease Area	PV	010	C	8/14/2024	22:28:22	635602.00	4466996.42	40.3425063	-73.4034332	30.5	0.9	29.6	
Lease Area	PV	010	D	8/14/2024	22:29:54	635597.96	4467003.28	40.3425688	-73.4034793	30.5	0.9	29.6	
Lease Area	PV	010	E	8/14/2024	22:31:20	635587.97	4466999.87	40.3425397	-73.4035976	30.5	0.9	29.6	
Lease Area	PV	010	F	8/14/2024	22:32:48	635590.41	4467004.75	40.3425832	-73.4035678	30.5	0.9	29.6	
Lease Area	PV	010	G	8/14/2024	22:34:19	635598.20	4467008.16	40.3426127	-73.4034754	30.5	0.9	29.6	
Lease Area	PV	010	H	8/14/2024	22:35:58	635606.44	4467008.82	40.3426173	-73.4033783	30.5	0.9	29.6	
Lease Area	PV	011	A	8/14/2024	21:53:47	637993.03	4466989.76	40.3420544	-73.3752934	32.3	1.1	31.2	
Lease Area	PV	011	B	8/14/2024	21:55:43	638001.64	4466996.73	40.3421158	-73.3751906	32.3	1.1	31.2	
Lease Area	PV	011	C	8/14/2024	21:57:25	638012.52	4467000.32	40.3421463	-73.3750618	32.3	1.1	31.2	
Lease Area	PV	011	D	8/14/2024	21:58:52	637990.06	4466996.41	40.3421148	-73.3753270	32.3	1.1	31.3	
Lease Area	PV	011	E	8/14/2024	22:00:50	638006.99	4467007.84	40.3422149	-73.3751252	32.3	1.0	31.3	
Lease Area	PV	011	F	8/14/2024	22:02:29	637987.80	4467003.19	40.3421762	-73.3753521	32.3	1.0	31.3	
Lease Area	PV	011	G	8/14/2024	22:04:04	637999.54	4467003.97	40.3421813	-73.3752137	32.3	1.0	31.3	
Lease Area	PV	011	H	8/14/2024	22:05:37	637995.49	4467012.41	40.3422580	-73.3752596	32.3	1.0	31.3	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 3_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	012	A	8/15/2024	6:38:43	629022.98	4465199.58	40.3273670	-73.4812305	31.1	0.9	30.2	
Lease Area	PV	012	C	8/15/2024	6:42:15	629030.20	4465195.74	40.3273313	-73.4811463	31.1	0.9	30.2	
Lease Area	PV	012	D	8/15/2024	6:43:31	629043.64	4465191.77	40.3272934	-73.4809890	31.1	0.9	30.2	
Lease Area	PV	012	E	8/15/2024	6:44:39	629045.70	4465200.49	40.3273717	-73.4809630	31.1	0.9	30.2	
Lease Area	PV	012	F	8/15/2024	6:46:20	629024.09	4465206.85	40.3274323	-73.4812160	31.1	0.9	30.2	
Lease Area	PV	012	G	8/15/2024	6:47:36	629034.74	4465211.44	40.3274720	-73.4810897	31.1	0.9	30.2	
Lease Area	PV	012	H	8/15/2024	6:48:38	629036.93	4465200.49	40.3273730	-73.4810662	31.1	0.9	30.2	
Lease Area	PV	012	I	8/15/2024	6:49:47	629044.99	4465206.48	40.3274257	-73.4809701	31.1	0.9	30.2	
Lease Area	PV	013	A	8/15/2024	7:16:35	630789.35	4465198.82	40.3270853	-73.4604452	32.0	1.0	31.0	
Lease Area	PV	013	B	8/15/2024	7:17:49	630794.57	4465190.60	40.3270104	-73.4603855	32.0	1.0	31.0	
Lease Area	PV	013	C	8/15/2024	7:19:07	630807.02	4465190.98	40.3270119	-73.4602389	32.0	1.0	31.0	
Lease Area	PV	013	D	8/15/2024	7:20:16	630797.92	4465195.85	40.3270572	-73.4603450	32.0	1.0	31.0	
Lease Area	PV	013	E	8/15/2024	7:21:40	630812.34	4465199.04	40.3270837	-73.4601746	32.0	1.0	31.0	
Lease Area	PV	013	F	8/15/2024	7:23:04	630789.17	4465207.28	40.3271615	-73.4604456	32.0	1.0	31.0	
Lease Area	PV	013	G	8/15/2024	7:24:36	630800.11	4465203.51	40.3271258	-73.4603176	32.0	1.0	31.0	
Lease Area	PV	013	H	8/15/2024	7:25:34	630808.27	4465206.76	40.3271538	-73.4602210	32.0	1.0	31.0	
Lease Area	PV	014	A	8/15/2024	7:47:10	633196.75	4465187.33	40.3266012	-73.4321195	32.0	1.0	31.0	
Lease Area	PV	014	B	8/15/2024	7:48:24	633188.97	4465193.58	40.3266588	-73.4322097	32.0	1.0	31.0	
Lease Area	PV	014	C	8/15/2024	7:50:07	633207.42	4465192.04	40.3266420	-73.4319929	32.0	1.0	31.0	
Lease Area	PV	014	D	8/15/2024	7:51:24	633199.89	4465196.89	40.3266868	-73.4320805	32.0	1.0	31.0	
Lease Area	PV	014	E	8/15/2024	7:52:42	633188.03	4465200.72	40.3267232	-73.4322193	32.0	1.0	31.0	
Lease Area	PV	014	F	8/15/2024	7:53:34	633190.81	4465208.52	40.3267930	-73.4321849	32.0	1.0	31.0	
Lease Area	PV	014	G	8/15/2024	7:55:03	633210.60	4465203.03	40.3267404	-73.4319532	32.0	1.0	31.0	
Lease Area	PV	014	H	8/15/2024	7:56:02	633206.48	4465210.02	40.3268040	-73.4320002	32.0	1.0	31.0	
Lease Area	PV	015	A	8/15/2024	8:50:27	635598.09	4465189.38	40.3262332	-73.4038628	32.6	1.0	31.6	
Lease Area	PV	015	B	8/15/2024	8:52:00	635608.25	4465192.51	40.3262597	-73.4037425	32.6	1.0	31.6	
Lease Area	PV	015	C	8/15/2024	8:53:34	635588.77	4465194.52	40.3262810	-73.4039713	32.6	1.0	31.6	
Lease Area	PV	015	D	8/15/2024	8:54:29	635587.18	4465201.75	40.3263464	-73.4039885	32.6	1.0	31.6	
Lease Area	PV	015	E	8/15/2024	8:56:14	635600.73	4465199.71	40.3263258	-73.4038295	32.6	1.0	31.6	
Lease Area	PV	015	F	8/15/2024	8:57:24	635612.09	4465199.37	40.3263209	-73.4036959	32.6	1.0	31.6	
Lease Area	PV	015	G	8/15/2024	8:58:17	635608.69	4465206.59	40.3263865	-73.4037344	32.6	1.0	31.6	
Lease Area	PV	015	H	8/15/2024	8:59:36	635592.73	4465208.20	40.3264035	-73.4039218	32.6	1.0	31.6	
Lease Area	PV	016	I	8/16/2024	12:26:17	638102.84	4465196.73	40.3258889	-73.3743887	30.8	0.6	30.2	
Lease Area	PV	016	J	8/16/2024	12:27:21	638112.36	4465206.24	40.3259729	-73.3742746	33.8	0.6	33.3	
Lease Area	PV	016	K	8/16/2024	12:28:43	638117.48	4465197.59	40.3258942	-73.3742162	33.8	0.6	33.3	
Lease Area	PV	016	L	8/16/2024	12:29:55	638104.95	4465205.40	40.3259666	-73.3743620	33.8	0.6	33.3	
Lease Area	PV	016	M	8/16/2024	12:31:14	638112.75	4465217.17	40.3260713	-73.3742677	33.8	0.6	33.3	
Lease Area	PV	016	N	8/16/2024	12:32:46	638100.21	4465209.34	40.3260029	-73.3744169	33.8	0.6	33.3	
Lease Area	PV	016	O	8/16/2024	12:34:28	638105.16	4465201.19	40.3259286	-73.3743604	33.8	0.6	33.3	
Lease Area	PV	016	P	8/16/2024	12:35:50	638100.05	4465213.90	40.3260439	-73.3744178	33.8	0.6	33.3	
Lease Area	PV	017	B	8/14/2024	20:40:21	640412.26	4465196.74	40.3255038	-73.3472151	35.4	1.3	34.1	
Lease Area	PV	017	C	8/14/2024	20:42:30	640401.77	4465197.51	40.3255125	-73.3473383	35.4	1.3	34.1	
Lease Area	PV	017	H	8/14/2024	20:51:25	640397.24	4465211.15	40.3256361	-73.3473886	35.4	1.3	34.1	
Lease Area	PV	017	I	8/15/2024	9:32:55	640390.28	4465197.07	40.3255105	-73.3474736	35.1	0.9	34.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	017	J	8/15/2024	9:34:27	640400.64	4465193.10	40.3254730	-73.3473526	35.1	0.9	34.1	
Lease Area	PV	017	K	8/15/2024	9:35:45	640410.51	4465193.13	40.3254716	-73.3472365	35.1	0.9	34.1	
Lease Area	PV	017	L	8/15/2024	9:36:51	640410.11	4465202.21	40.3255534	-73.3472392	35.1	0.9	34.1	
Lease Area	PV	017	N	8/15/2024	9:38:56	640391.74	4465208.54	40.3256135	-73.3474539	35.1	0.9	34.1	
Lease Area	PV	018	A	8/14/2024	19:40:19	642801.16	4465197.64	40.3251068	-73.3191066	35.1	1.3	33.7	
Lease Area	PV	018	B	8/14/2024	19:41:47	642795.31	4465187.71	40.3250183	-73.3191777	35.1	1.3	33.7	
Lease Area	PV	018	C	8/14/2024	19:43:20	642809.90	4465200.21	40.3251284	-73.3190032	35.1	1.3	33.7	
Lease Area	PV	018	D	8/14/2024	19:45:44	642790.40	4465193.58	40.3250721	-73.3192341	35.1	1.3	33.7	
Lease Area	PV	018	E	8/14/2024	19:47:35	642805.28	4465191.70	40.3250526	-73.3190595	35.1	1.3	33.7	
Lease Area	PV	018	F	8/14/2024	19:49:36	642808.20	4465208.12	40.3251999	-73.3190215	35.1	1.3	33.7	
Lease Area	PV	018	G	8/14/2024	19:51:57	642788.80	4465202.01	40.3251482	-73.3192511	35.1	1.3	33.7	
Lease Area	PV	018	H	8/14/2024	19:54:29	642795.05	4465211.31	40.3252309	-73.3191755	35.1	1.3	33.7	
Lease Area	PV	019	A	8/14/2024	19:05:23	645201.53	4464599.02	40.3193021	-73.2910000	36.3	1.3	35.0	
Lease Area	PV	019	B	8/14/2024	19:07:06	645203.55	4464588.41	40.3192062	-73.2909786	36.3	1.3	35.0	
Lease Area	PV	019	C	8/14/2024	19:08:49	645188.25	4464596.91	40.3192854	-73.2911567	36.3	1.3	35.0	
Lease Area	PV	019	D	8/14/2024	19:11:00	645208.98	4464594.67	40.3192616	-73.2909133	36.3	1.3	35.0	
Lease Area	PV	019	E	8/14/2024	19:12:56	645207.59	4464609.18	40.3193925	-73.2909264	36.3	1.3	35.0	
Lease Area	PV	019	F	8/14/2024	19:15:19	645194.60	4464586.95	40.3191946	-73.2910843	36.3	1.3	35.0	
Lease Area	PV	019	G	8/14/2024	19:17:15	645189.28	4464604.69	40.3193553	-73.2911428	36.3	1.3	35.0	
Lease Area	PV	019	H	8/14/2024	19:19:10	645198.44	4464612.47	40.3194237	-73.2910333	36.3	1.3	35.0	
Lease Area	PV	020	A	8/14/2024	18:29:57	647609.49	4464596.53	40.3188576	-73.2626715	36.3	1.2	35.1	
Lease Area	PV	020	B	8/14/2024	18:31:40	647607.24	4464608.19	40.3189630	-73.2626953	36.3	1.2	35.1	
Lease Area	PV	020	C	8/14/2024	18:33:31	647602.18	4464588.08	40.3187828	-73.2627594	36.3	1.2	35.1	
Lease Area	PV	020	D	8/14/2024	18:35:28	647595.94	4464609.55	40.3189772	-73.2628279	36.3	1.2	35.1	
Lease Area	PV	020	E	8/14/2024	18:37:49	647595.92	4464592.39	40.3188227	-73.2628321	36.3	1.2	35.0	
Lease Area	PV	020	F	8/14/2024	18:39:23	647587.65	4464601.21	40.3189036	-73.2629273	36.3	1.2	35.0	
Lease Area	PV	020	G	8/14/2024	18:41:11	647600.85	4464603.42	40.3189211	-73.2627715	36.3	1.2	35.0	
Lease Area	PV	020	H	8/14/2024	18:42:41	647602.12	4464595.64	40.3188509	-73.2627584	36.3	1.2	35.0	
Lease Area	PV	021	A	8/15/2024	12:14:39	630787.67	4463403.17	40.3109139	-73.4608324	35.4	0.4	34.9	
Lease Area	PV	021	B	8/15/2024	12:16:05	630790.36	4463393.10	40.3108227	-73.4608028	35.4	0.4	34.9	
Lease Area	PV	021	C	8/15/2024	12:17:30	630798.19	4463386.77	40.3107645	-73.4607119	35.4	0.4	34.9	
Lease Area	PV	021	D	8/15/2024	12:18:52	630809.13	4463392.30	40.3108126	-73.4605821	35.4	0.4	34.9	
Lease Area	PV	021	F	8/15/2024	12:21:30	630791.75	4463411.05	40.3109842	-73.4607827	35.4	0.4	34.9	
Lease Area	PV	021	G	8/15/2024	12:23:08	630804.67	4463411.12	40.3109828	-73.4606307	35.4	0.4	34.9	
Lease Area	PV	021	H	8/15/2024	12:24:43	630809.83	4463402.50	40.3109043	-73.4605718	35.4	0.4	34.9	
Lease Area	PV	021	I	8/15/2024	12:26:13	630798.84	4463405.57	40.3109337	-73.4607005	35.4	0.4	34.9	
Lease Area	PV	022	A	8/15/2024	11:44:12	633190.53	4462793.34	40.3050421	-73.4326913	32.3	0.5	31.8	
Lease Area	PV	022	B	8/15/2024	11:45:53	633187.40	4462803.92	40.3051379	-73.4327260	32.3	0.5	31.8	
Lease Area	PV	022	C	8/15/2024	11:47:22	633200.63	4462786.76	40.3049813	-73.4325739	32.3	0.5	31.8	
Lease Area	PV	022	D	8/15/2024	11:48:18	633209.02	4462794.60	40.3050505	-73.4324736	32.3	0.5	31.8	
Lease Area	PV	022	E	8/15/2024	11:49:12	633196.81	4462799.52	40.3050968	-73.4326162	32.3	0.5	31.8	
Lease Area	PV	022	F	8/15/2024	11:50:15	633190.89	4462810.15	40.3051935	-73.4326836	32.3	0.5	31.8	
Lease Area	PV	022	G	8/15/2024	11:51:24	633202.14	4462811.56	40.3052044	-73.4325510	32.3	0.5	31.8	
Lease Area	PV	022	H	8/15/2024	11:52:27	633208.66	4462806.15	40.3051546	-73.4324754	32.3	0.5	31.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	023	A	8/15/2024	11:11:14	635592.04	4462790.53	40.3046306	-73.4044427	32.3	0.6	31.7	
Lease Area	PV	023	B	8/15/2024	11:13:02	635588.35	4462797.27	40.3046919	-73.4044846	32.3	0.6	31.7	
Lease Area	PV	023	C	8/15/2024	11:14:31	635600.52	4462788.04	40.3046068	-73.4043434	32.3	0.6	31.7	
Lease Area	PV	023	D	8/15/2024	11:15:33	635609.35	4462792.19	40.3046427	-73.4042387	32.3	0.6	31.7	
Lease Area	PV	023	E	8/15/2024	11:16:59	635600.04	4462799.89	40.3047136	-73.4043466	32.3	0.6	31.7	
Lease Area	PV	023	F	8/15/2024	11:18:06	635588.59	4462805.22	40.3047634	-73.4044801	32.3	0.6	31.7	
Lease Area	PV	023	G	8/15/2024	11:19:22	635595.57	4462810.95	40.3048139	-73.4043968	32.3	0.6	31.7	
Lease Area	PV	023	H	8/15/2024	11:20:05	635607.46	4462807.79	40.3047835	-73.4042576	32.3	0.6	31.7	
Lease Area	PV	024	A	8/15/2024	10:42:23	637990.18	4462797.23	40.3042983	-73.3762321	32.6	0.7	31.9	
Lease Area	PV	024	B	8/15/2024	10:43:36	637994.08	4462788.66	40.3042205	-73.3761881	32.6	0.7	31.9	
Lease Area	PV	024	C	8/15/2024	10:44:36	638007.57	4462790.36	40.3042336	-73.3760291	32.6	0.7	31.9	
Lease Area	PV	024	D	8/15/2024	10:46:06	637999.91	4462795.93	40.3042850	-73.3761180	32.6	0.7	31.9	
Lease Area	PV	024	E	8/15/2024	10:47:17	638012.65	4462799.61	40.3043161	-73.3759673	32.6	0.7	31.9	
Lease Area	PV	024	F	8/15/2024	10:48:39	637988.73	4462804.53	40.3043643	-73.3762476	32.6	0.7	31.9	
Lease Area	PV	024	G	8/15/2024	10:49:48	637994.13	4462811.16	40.3044231	-73.3761827	32.6	0.7	31.9	
Lease Area	PV	024	H	8/15/2024	10:51:02	638000.73	4462802.76	40.3043464	-73.3761068	32.6	0.7	31.9	
Lease Area	PV	025	A	8/15/2024	10:07:17	640393.50	4462790.56	40.3038380	-73.3479641	32.6	0.8	31.8	
Lease Area	PV	025	B	8/15/2024	10:08:48	640406.37	4462791.07	40.3038404	-73.3478126	32.6	0.8	31.8	
Lease Area	PV	025	C	8/15/2024	10:10:31	640410.34	4462799.32	40.3039140	-73.3477641	32.6	0.8	31.8	
Lease Area	PV	025	D	8/15/2024	10:12:07	640387.53	4462796.75	40.3038947	-73.3480330	32.6	0.8	31.8	
Lease Area	PV	025	F	8/15/2024	10:14:33	640390.03	4462805.38	40.3039720	-73.3480017	32.6	0.8	31.8	
Lease Area	PV	025	G	8/15/2024	10:15:28	640396.74	4462811.10	40.3040224	-73.3479215	32.6	0.8	31.8	
Lease Area	PV	025	H	8/15/2024	10:16:32	640404.24	4462809.42	40.3040060	-73.3478336	32.6	0.8	31.8	
Lease Area	PV	025	I	8/15/2024	10:17:54	640410.85	4462804.92	40.3039644	-73.3477569	32.6	0.8	31.8	
Lease Area	PV	026	A	8/15/2024	18:13:54	642795.15	4462789.09	40.3034178	-73.3197152	35.4	1.0	34.3	
Lease Area	PV	026	B	8/15/2024	18:15:23	642807.92	4462791.64	40.3034386	-73.3195644	35.4	1.0	34.3	
Lease Area	PV	026	C	8/15/2024	18:16:55	642788.96	4462795.36	40.3034753	-73.3197866	35.4	1.0	34.3	
Lease Area	PV	026	D	8/15/2024	18:18:18	642811.41	4462799.88	40.3035122	-73.3195215	35.4	1.0	34.3	
Lease Area	PV	026	E	8/15/2024	18:19:51	642789.88	4462804.43	40.3035568	-73.3197738	35.4	1.0	34.3	
Lease Area	PV	026	F	8/15/2024	18:21:05	642801.19	4462801.53	40.3035288	-73.3196414	35.4	1.0	34.3	
Lease Area	PV	026	G	8/15/2024	18:22:31	642810.82	4462807.76	40.3035832	-73.3195267	35.4	1.0	34.3	
Lease Area	PV	026	H	8/15/2024	18:23:48	642794.25	4462810.38	40.3036097	-73.3197210	35.4	1.1	34.3	
Lease Area	PV	027	A	8/15/2024	18:45:07	645190.17	4462799.20	40.3030961	-73.2915422	35.4	1.1	34.2	
Lease Area	PV	027	B	8/15/2024	18:46:40	645210.62	4462800.30	40.3031025	-73.2913014	35.4	1.1	34.2	
Lease Area	PV	027	C	8/15/2024	18:48:07	645188.47	4462802.10	40.3031225	-73.2915616	35.4	1.1	34.2	
Lease Area	PV	027	D	8/15/2024	18:49:47	645208.61	4462792.93	40.3030365	-73.2913268	35.4	1.1	34.2	
Lease Area	PV	027	E	8/15/2024	18:50:55	645191.64	4462790.86	40.3030208	-73.2915268	35.4	1.2	34.2	
Lease Area	PV	027	F	8/15/2024	18:52:21	645201.86	4462789.01	40.3030023	-73.2914070	35.4	1.2	34.2	
Lease Area	PV	027	G	8/15/2024	18:54:00	645195.97	4462810.36	40.3031956	-73.2914715	35.4	1.2	34.2	
Lease Area	PV	027	H	8/15/2024	18:55:23	645200.33	4462799.01	40.3030927	-73.2914228	35.4	1.2	34.2	
Lease Area	PV	028	A	8/14/2024	17:59:33	647599.84	4462788.39	40.3025767	-73.2632023	37.2	1.1	36.1	
Lease Area	PV	028	B	8/14/2024	18:01:00	647591.29	4462798.12	40.3026658	-73.2633006	37.2	1.1	36.1	
Lease Area	PV	028	C	8/14/2024	18:02:30	647610.42	4462797.83	40.3026598	-73.2630757	37.2	1.1	36.0	
Lease Area	PV	028	D	8/14/2024	18:04:15	647607.76	4462801.18	40.3026904	-73.2631062	37.2	1.1	36.0	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	028	E	8/14/2024	18:05:48	647598.02	4462803.24	40.3027107	-73.2632203	37.2	1.2	36.0	
Lease Area	PV	028	F	8/14/2024	18:07:21	647587.31	4462797.06	40.3026570	-73.2633477	37.2	1.2	36.0	
Lease Area	PV	028	G	8/14/2024	18:08:52	647594.37	4462793.30	40.3026218	-73.2632655	37.2	1.2	36.0	
Lease Area	PV	028	H	8/14/2024	18:10:27	647592.88	4462804.60	40.3027239	-73.2632804	37.2	1.2	36.0	
Lease Area	PV	029	A	8/14/2024	17:27:40	650007.45	4462791.12	40.3021726	-73.2348841	38.1	1.0	37.1	
Lease Area	PV	029	B	8/14/2024	17:30:03	650000.40	4462788.76	40.3021526	-73.2349676	38.1	1.0	37.1	
Lease Area	PV	029	C	8/14/2024	17:31:35	650003.58	4462795.15	40.3022095	-73.2349287	38.1	1.0	37.1	
Lease Area	PV	029	D	8/14/2024	17:33:04	649990.78	4462798.49	40.3022419	-73.2350784	38.1	1.0	37.1	
Lease Area	PV	029	E	8/14/2024	17:34:26	650000.60	4462810.73	40.3023504	-73.2349601	38.1	1.0	37.1	
Lease Area	PV	029	F	8/14/2024	17:36:01	649998.09	4462802.26	40.3022745	-73.2349916	38.1	1.1	37.1	
Lease Area	PV	029	G	8/14/2024	17:37:29	649995.37	4462809.67	40.3023418	-73.2350218	38.1	1.1	37.1	
Lease Area	PV	029	H	8/14/2024	17:38:56	649990.95	4462803.61	40.3022880	-73.2350752	38.1	1.1	37.0	
Lease Area	PV	030	A	8/14/2024	16:06:11	652412.29	4462688.22	40.3008108	-73.2066242	39.3	0.7	38.6	
Lease Area	PV	030	B	8/14/2024	16:07:16	652409.70	4462690.62	40.3008329	-73.2066541	39.3	0.7	38.6	
Lease Area	PV	030	C	8/14/2024	16:08:30	652408.24	4462684.85	40.3007812	-73.2066727	39.3	0.7	38.6	
Lease Area	PV	030	D	8/14/2024	16:09:36	652406.50	4462680.01	40.3007380	-73.2066943	39.3	0.7	38.6	
Lease Area	PV	030	E	8/14/2024	16:10:44	652399.97	4462678.58	40.3007263	-73.2067714	39.3	0.7	38.6	
Lease Area	PV	030	I	8/16/2024	5:50:50	652406.42	4462667.68	40.3006269	-73.2066982	39.0	0.6	38.4	Outside of watch circle.
Lease Area	PV	030	J	8/16/2024	5:51:51	652392.90	4462670.02	40.3006505	-73.2068566	39.0	0.6	38.4	Outside of watch circle.
Lease Area	PV	030	K	8/16/2024	5:53:12	652392.73	4462676.78	40.3007114	-73.2068570	39.0	0.6	38.4	Outside of watch circle.
Lease Area	PV	031	A	8/14/2024	15:36:27	654829.10	4462189.57	40.2958764	-73.1783207	39.6	0.6	39.0	
Lease Area	PV	031	B	8/14/2024	15:37:38	654827.05	4462189.73	40.2958782	-73.1783448	39.6	0.6	39.0	
Lease Area	PV	031	C	8/14/2024	15:38:56	654824.37	4462190.75	40.2958879	-73.1783760	39.6	0.6	39.0	
Lease Area	PV	031	D	8/14/2024	15:40:09	654817.12	4462192.19	40.2959022	-73.1784610	39.6	0.6	39.0	
Lease Area	PV	031	E	8/14/2024	15:41:14	654815.78	4462188.62	40.2958703	-73.1784776	39.6	0.6	39.0	
Lease Area	PV	031	F	8/14/2024	15:42:18	654821.00	4462195.91	40.2959350	-73.1784144	39.6	0.6	39.0	
Lease Area	PV	031	G	8/14/2024	15:43:37	654816.12	4462194.83	40.2959261	-73.1784721	39.6	0.6	39.0	
Lease Area	PV	031	H	8/14/2024	15:44:51	654813.97	4462190.63	40.2958887	-73.1784984	39.6	0.6	39.0	
Lease Area	PV	032	A	8/14/2024	15:00:57	657208.78	4462795.84	40.3008915	-73.1501868	40.8	0.5	40.4	
Lease Area	PV	032	E	8/14/2024	15:05:36	657200.56	4462791.52	40.3008541	-73.1502845	40.8	0.5	40.4	
Lease Area	PV	032	F	8/14/2024	15:06:45	657197.54	4462792.71	40.3008654	-73.1503198	40.8	0.5	40.4	
Lease Area	PV	032	I	8/16/2024	9:43:04	657212.46	4462804.05	40.3009647	-73.1501415	40.5	1.1	39.5	
Lease Area	PV	032	J	8/16/2024	9:44:14	657194.31	4462808.67	40.3010097	-73.1503538	40.5	1.1	39.5	
Lease Area	PV	032	K	8/16/2024	9:45:17	657186.76	4462797.92	40.3009143	-73.1504453	40.5	1.1	39.5	
Lease Area	PV	032	L	8/16/2024	9:46:45	657206.08	4462809.59	40.3010158	-73.1502152	40.5	1.1	39.5	
Lease Area	PV	032	M	8/16/2024	9:48:04	657200.52	4462801.81	40.3009468	-73.1502825	40.5	1.1	39.5	
Lease Area	PV	033	B	8/14/2024	14:33:14	658974.03	4462802.01	40.3006131	-73.1294247	41.8	0.4	41.4	
Lease Area	PV	033	E	8/14/2024	14:37:01	658966.74	4462792.21	40.3005262	-73.1295129	41.8	0.4	41.4	
Lease Area	PV	033	F	8/14/2024	14:38:11	658961.46	4462795.79	40.3005595	-73.1295741	41.8	0.4	41.4	
Lease Area	PV	033	I	8/16/2024	9:20:49	658959.07	4462790.99	40.3005167	-73.1296034	40.5	1.1	39.4	
Lease Area	PV	033	J	8/16/2024	9:22:27	658963.99	4462813.58	40.3007192	-73.1295399	40.5	1.1	39.4	
Lease Area	PV	033	K	8/16/2024	9:23:44	658951.83	4462799.67	40.3005963	-73.1296864	40.5	1.1	39.4	
Lease Area	PV	033	L	8/16/2024	9:25:02	658972.15	4462808.40	40.3006710	-73.1294452	40.5	1.1	39.4	
Lease Area	PV	033	M	8/16/2024	9:26:12	658954.74	4462808.53	40.3006755	-73.1296499	40.5	1.1	39.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	034	A	8/14/2024	12:45:34	662011.24	4462202.27	40.2946296	-73.0938576	42.1	0.3	41.8	
Lease Area	PV	034	B	8/14/2024	12:46:56	662009.31	4462195.01	40.2945646	-73.0938821	42.1	0.3	41.8	
Lease Area	PV	034	C	8/14/2024	12:48:08	661998.34	4462190.70	40.2945279	-73.0940122	42.1	0.3	41.8	
Lease Area	PV	034	H	8/14/2024	12:54:32	661990.15	4462194.64	40.2945650	-73.0941075	42.1	0.3	41.8	
Lease Area	PV	034	I	8/14/2024	13:55:33	662003.16	4462195.85	40.2945734	-73.0939542	42.1	0.3	41.8	
Lease Area	PV	034	J	8/14/2024	13:56:56	662005.05	4462208.35	40.2946856	-73.0939288	42.1	0.3	41.8	
Lease Area	PV	034	M	8/14/2024	14:00:51	661988.38	4462199.10	40.2946055	-73.0941272	42.1	0.3	41.8	
Lease Area	PV	034	N	8/14/2024	14:02:05	661993.66	4462189.57	40.2945187	-73.0940675	42.1	0.3	41.8	
Lease Area	PV	035	A	8/15/2024	12:55:42	635589.04	4461002.86	40.2885316	-73.4048567	33.5	0.3	33.2	
Lease Area	PV	035	B	8/15/2024	12:57:03	635590.73	4460991.71	40.2884309	-73.4048392	33.5	0.3	33.2	
Lease Area	PV	035	C	8/15/2024	12:58:23	635603.41	4460990.12	40.2884145	-73.4046904	33.5	0.3	33.2	
Lease Area	PV	035	D	8/15/2024	12:59:46	635608.74	4460997.14	40.2884769	-73.4046262	33.5	0.3	33.2	
Lease Area	PV	035	E	8/15/2024	13:01:05	635598.92	4461000.24	40.2885064	-73.4047410	33.5	0.3	33.2	
Lease Area	PV	035	F	8/15/2024	13:02:21	635592.69	4461010.97	40.2886040	-73.4048120	33.5	0.3	33.2	
Lease Area	PV	035	G	8/15/2024	13:03:41	635604.64	4461010.23	40.2885954	-73.4046716	33.5	0.3	33.2	
Lease Area	PV	035	H	8/15/2024	13:05:02	635598.44	4460993.28	40.2884438	-73.4047482	33.5	0.3	33.2	
Lease Area	PV	036	A	8/15/2024	13:42:03	637989.14	4460408.49	40.2827862	-73.3767593	34.4	0.3	34.2	
Lease Area	PV	036	B	8/15/2024	13:43:18	637988.99	4460398.85	40.2826994	-73.3767631	34.4	0.3	34.2	
Lease Area	PV	036	C	8/15/2024	13:44:33	637993.86	4460389.38	40.2826133	-73.3767079	34.4	0.3	34.2	
Lease Area	PV	036	D	8/15/2024	13:45:44	638003.80	4460391.73	40.2826328	-73.3765905	34.4	0.3	34.2	
Lease Area	PV	036	E	8/15/2024	13:47:00	637997.72	4460396.28	40.2826748	-73.3766610	34.4	0.3	34.2	
Lease Area	PV	036	F	8/15/2024	13:48:32	638012.12	4460398.14	40.2826892	-73.3764913	34.4	0.3	34.2	
Lease Area	PV	036	G	8/15/2024	13:49:42	638009.87	4460408.16	40.2827798	-73.3765156	34.4	0.3	34.2	
Lease Area	PV	036	I	8/15/2024	13:52:29	637999.55	4460412.42	40.2828199	-73.3766360	34.4	0.3	34.2	
Lease Area	PV	037	A	8/15/2024	14:17:36	640400.69	4460392.93	40.2822447	-73.3484054	36.6	0.2	36.3	
Lease Area	PV	037	C	8/15/2024	14:20:12	640402.88	4460397.66	40.2822869	-73.3483786	36.6	0.2	36.3	
Lease Area	PV	037	D	8/15/2024	14:21:34	640389.01	4460392.91	40.2822464	-73.3485428	36.6	0.2	36.3	
Lease Area	PV	037	E	8/15/2024	14:22:54	640391.05	4460401.29	40.2823216	-73.3485169	36.6	0.2	36.3	
Lease Area	PV	037	F	8/15/2024	14:24:02	640396.40	4460410.60	40.2824045	-73.3484520	36.6	0.2	36.3	
Lease Area	PV	037	G	8/15/2024	14:25:07	640405.01	4460406.62	40.2823672	-73.3483516	36.6	0.2	36.3	
Lease Area	PV	037	H	8/15/2024	14:26:21	640412.12	4460400.27	40.2823088	-73.3482694	36.6	0.3	36.3	
Lease Area	PV	038	A	8/15/2024	15:59:39	642795.10	4460399.57	40.2818990	-73.3202488	37.2	0.5	36.7	
Lease Area	PV	038	J	8/15/2024	17:44:40	642787.18	4460399.33	40.2818982	-73.3203420	37.2	0.9	36.3	
Lease Area	PV	038	L	8/15/2024	17:47:07	642795.79	4460395.79	40.2818649	-73.3202415	37.2	0.9	36.3	
Lease Area	PV	038	M	8/15/2024	17:48:21	642791.00	4460404.27	40.2819421	-73.3202960	37.2	0.9	36.3	
Lease Area	PV	038	N	8/15/2024	17:49:29	642789.49	4460406.66	40.2819639	-73.3203132	37.2	0.9	36.3	
Lease Area	PV	038	O	8/15/2024	17:50:34	642796.37	4460408.51	40.2819793	-73.3202319	37.2	0.9	36.3	
Lease Area	PV	038	P	8/15/2024	17:51:43	642804.98	4460406.07	40.2819559	-73.3201312	37.2	0.9	36.3	
Lease Area	PV	038	Q	8/15/2024	17:53:16	642809.52	4460404.27	40.2819389	-73.3200782	37.2	0.9	36.3	
Lease Area	PV	039	A	8/15/2024	19:42:04	645201.45	4460390.18	40.2814001	-73.2919560	36.9	1.3	35.6	
Lease Area	PV	039	B	8/15/2024	19:43:42	645192.99	4460394.01	40.2814361	-73.2920546	36.9	1.3	35.6	
Lease Area	PV	039	C	8/15/2024	19:45:01	645186.05	4460401.06	40.2815008	-73.2921346	36.9	1.3	35.6	
Lease Area	PV	039	D	8/15/2024	19:46:53	645210.88	4460395.35	40.2814451	-73.2918439	36.9	1.3	35.6	
Lease Area	PV	039	E	8/15/2024	19:48:14	645201.64	4460399.02	40.2814797	-73.2919517	36.9	1.3	35.6	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 3_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	039	F	8/15/2024	19:49:36	645191.55	4460408.19	40.2815641	-73.2920683	36.9	1.3	35.6	
Lease Area	PV	039	G	8/15/2024	19:50:53	645199.64	4460411.56	40.2815930	-73.2919724	36.9	1.3	35.6	
Lease Area	PV	039	H	8/15/2024	19:52:14	645210.30	4460402.48	40.2815094	-73.2918491	36.9	1.3	35.6	
Lease Area	PV	040	A	8/15/2024	22:51:43	647613.12	4460401.45	40.2810794	-73.2635965	38.1	1.1	37.0	
Lease Area	PV	040	B	8/15/2024	22:53:26	647607.16	4460393.81	40.2810117	-73.2636683	38.1	1.1	37.0	
Lease Area	PV	040	C	8/15/2024	22:54:48	647604.66	4460390.01	40.2809779	-73.2636986	38.1	1.1	37.0	
Lease Area	PV	040	D	8/15/2024	22:55:56	647597.63	4460397.47	40.2810463	-73.2637795	38.1	1.1	37.0	
Lease Area	PV	040	E	8/15/2024	22:57:27	647594.35	4460401.35	40.2810819	-73.2638172	38.1	1.1	37.0	
Lease Area	PV	040	F	8/15/2024	22:58:42	647606.04	4460402.29	40.2810883	-73.2636795	38.1	1.1	37.0	
Lease Area	PV	040	G	8/15/2024	22:59:51	647607.53	4460407.08	40.2811311	-73.2636609	38.1	1.1	37.0	
Lease Area	PV	040	H	8/15/2024	23:01:05	647601.84	4460409.17	40.2811510	-73.2637273	38.1	1.1	37.0	
Lease Area	PV	041	A	8/15/2024	23:24:07	650009.92	4460401.75	40.2806557	-73.2354149	37.5	1.0	36.5	
Lease Area	PV	041	B	8/15/2024	23:26:32	650004.51	4460390.96	40.2805595	-73.2354811	37.5	1.0	36.5	
Lease Area	PV	041	E	8/15/2024	23:30:53	650003.07	4460389.31	40.2805449	-73.2354984	37.5	0.9	36.6	
Lease Area	PV	041	F	8/15/2024	23:32:17	649997.52	4460397.61	40.2806206	-73.2355617	37.5	0.9	36.6	
Lease Area	PV	041	G	8/15/2024	23:34:24	649993.01	4460394.93	40.2805973	-73.2356153	37.5	0.9	36.6	
Lease Area	PV	041	H	8/15/2024	23:35:52	649993.43	4460403.58	40.2806751	-73.2356084	37.5	0.9	36.6	
Lease Area	PV	041	I	8/15/2024	23:37:09	649990.71	4460406.12	40.2806985	-73.2356398	37.5	0.9	36.6	
Lease Area	PV	041	J	8/15/2024	23:38:34	650006.38	4460403.34	40.2806706	-73.2354562	37.5	0.9	36.6	
Lease Area	PV	042	A	8/16/2024	5:19:03	652401.12	4460388.37	40.2801029	-73.2073031	39.0	0.5	38.5	
Lease Area	PV	042	B	8/16/2024	5:20:28	652396.01	4460391.66	40.2801334	-73.2073624	39.0	0.5	38.5	
Lease Area	PV	042	D	8/16/2024	5:23:23	652408.90	4460397.39	40.2801827	-73.2072094	39.0	0.5	38.5	
Lease Area	PV	042	E	8/16/2024	5:25:00	652394.10	4460398.53	40.2801957	-73.2073832	39.0	0.5	38.5	
Lease Area	PV	042	F	8/16/2024	5:25:59	652389.70	4460404.22	40.2802477	-73.2074336	39.0	0.5	38.5	
Lease Area	PV	042	G	8/16/2024	5:27:19	652399.81	4460406.60	40.2802673	-73.2073141	39.0	0.5	38.5	
Lease Area	PV	042	H	8/16/2024	5:28:16	652403.40	4460410.22	40.2802992	-73.2072710	39.0	0.5	38.5	
Lease Area	PV	042	I	8/16/2024	5:29:18	652405.62	4460401.82	40.2802232	-73.2072469	39.0	0.5	38.5	
Lease Area	PV	043	A	8/16/2024	6:20:12	654806.48	4460396.68	40.2797360	-73.1790202	39.6	0.7	38.9	
Lease Area	PV	043	B	8/16/2024	6:21:40	654803.05	4460387.98	40.2796582	-73.1790626	39.6	0.7	38.9	
Lease Area	PV	043	C	8/16/2024	6:23:09	654793.59	4460390.90	40.2796863	-73.1791731	39.6	0.7	38.9	
Lease Area	PV	043	D	8/16/2024	6:24:12	654787.86	4460399.14	40.2797616	-73.1792385	39.6	0.7	38.9	
Lease Area	PV	043	E	8/16/2024	6:25:22	654798.32	4460402.46	40.2797895	-73.1791147	39.6	0.7	38.9	
Lease Area	PV	043	F	8/16/2024	6:26:25	654813.19	4460403.64	40.2797974	-73.1789396	39.6	0.7	38.9	
Lease Area	PV	043	G	8/16/2024	6:27:50	654789.92	4460407.28	40.2798345	-73.1792123	39.6	0.7	38.9	
Lease Area	PV	043	H	8/16/2024	6:29:25	654806.14	4460408.55	40.2798429	-73.1790213	39.6	0.7	38.9	
Lease Area	PV	044	A	8/16/2024	10:08:19	657192.41	4460390.61	40.2792363	-73.1509698	40.2	1.0	39.2	
Lease Area	PV	044	B	8/16/2024	10:10:09	657206.12	4460411.85	40.2794250	-73.1508034	40.2	1.0	39.2	
Lease Area	PV	044	C	8/16/2024	10:11:47	657211.33	4460398.74	40.2793059	-73.1507454	40.2	1.0	39.2	
Lease Area	PV	044	D	8/16/2024	10:13:02	657187.42	4460402.92	40.2793481	-73.1510255	40.2	1.0	39.2	
Lease Area	PV	044	F	8/16/2024	10:16:07	657209.04	4460405.30	40.2793654	-73.1507707	40.2	1.0	39.2	
Lease Area	PV	044	G	8/16/2024	10:17:16	657192.99	4460411.64	40.2794255	-73.1509579	40.2	1.0	39.2	
Lease Area	PV	044	H	8/16/2024	10:18:48	657188.74	4460396.46	40.2792897	-73.1510116	40.2	1.0	39.2	
Lease Area	PV	044	I	8/16/2024	10:20:05	657199.88	4460400.01	40.2793195	-73.1508797	40.2	1.0	39.2	
Lease Area	PV	045	A	8/16/2024	8:43:09	659589.15	4460392.93	40.2788033	-73.1227910	41.1	1.1	40.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	045	B	8/16/2024	8:45:11	659609.06	4460409.26	40.2789465	-73.1225529	41.1	1.1	40.1	
Lease Area	PV	045	C	8/16/2024	8:46:31	659590.95	4460405.78	40.2789187	-73.1227666	41.1	1.1	40.1	
Lease Area	PV	045	D	8/16/2024	8:48:09	659610.73	4460392.11	40.2787918	-73.1225375	41.1	1.1	40.1	
Lease Area	PV	045	E	8/16/2024	8:49:39	659599.98	4460411.77	40.2789709	-73.1226590	41.1	1.1	40.1	
Lease Area	PV	045	F	8/16/2024	8:50:52	659600.86	4460389.39	40.2787692	-73.1226542	41.1	1.1	40.1	
Lease Area	PV	045	G	8/16/2024	8:52:13	659610.75	4460400.38	40.2788663	-73.1225352	41.1	1.1	40.1	
Lease Area	PV	045	H	8/16/2024	8:53:42	659587.67	4460399.30	40.2788609	-73.1228068	41.1	1.1	40.1	
Lease Area	PV	046	A	8/15/2024	14:47:40	640396.39	4458601.79	40.2661151	-73.3488485	37.8	0.3	37.5	
Lease Area	PV	046	D	8/15/2024	14:51:30	640392.42	4458594.80	40.2660528	-73.3488967	37.8	0.3	37.5	
Lease Area	PV	046	E	8/15/2024	14:52:41	640397.31	4458590.83	40.2660162	-73.3488400	37.8	0.3	37.5	
Lease Area	PV	046	K	8/15/2024	17:14:43	640392.24	4458605.64	40.2661504	-73.3488964	37.8	0.8	37.0	
Lease Area	PV	046	L	8/15/2024	17:15:56	640399.47	4458607.86	40.2661692	-73.3488109	37.8	0.8	37.0	
Lease Area	PV	046	M	8/15/2024	17:17:12	640404.59	4458603.87	40.2661324	-73.3487516	37.8	0.8	37.0	
Lease Area	PV	046	N	8/15/2024	17:18:55	640403.91	4458599.00	40.2660887	-73.3487607	37.8	0.8	37.0	
Lease Area	PV	046	O	8/15/2024	17:20:13	640407.72	4458599.91	40.2660962	-73.3487157	37.8	0.8	37.0	
Lease Area	PV	047	A	8/15/2024	15:24:28	642786.41	4457995.39	40.2602497	-73.3208867	38.1	0.3	37.8	
Lease Area	PV	047	B	8/15/2024	15:26:29	642792.44	4457996.44	40.2602581	-73.3208156	38.1	0.3	37.8	
Lease Area	PV	047	C	8/15/2024	15:27:42	642800.82	4457989.72	40.2601962	-73.3207186	38.1	0.3	37.8	
Lease Area	PV	047	D	8/15/2024	15:29:05	642810.20	4457994.57	40.2602382	-73.3206072	38.1	0.4	37.8	
Lease Area	PV	047	E	8/15/2024	15:30:15	642805.18	4458003.13	40.2603162	-73.3206643	38.1	0.4	37.8	
Lease Area	PV	047	F	8/15/2024	15:31:25	642798.29	4458008.67	40.2603673	-73.3207441	38.1	0.4	37.8	
Lease Area	PV	047	G	8/15/2024	15:32:52	642791.45	4458002.40	40.2603120	-73.3208259	38.1	0.4	37.7	
Lease Area	PV	047	H	8/15/2024	15:34:00	642791.54	4458009.01	40.2603715	-73.3208233	38.1	0.4	37.7	
Lease Area	PV	048	A	8/15/2024	20:14:23	645210.09	4458004.85	40.2599179	-73.2923949	38.1	1.4	36.7	
Lease Area	PV	048	B	8/15/2024	20:16:21	645204.25	4458010.41	40.2599690	-73.2924623	38.1	1.4	36.7	
Lease Area	PV	048	C	8/15/2024	20:18:11	645212.75	4457996.91	40.2598459	-73.2923654	38.1	1.4	36.7	
Lease Area	PV	048	D	8/15/2024	20:19:44	645196.81	4458009.66	40.2599635	-73.2925499	38.1	1.4	36.7	
Lease Area	PV	048	E	8/15/2024	20:21:01	645190.07	4458002.91	40.2599039	-73.2926306	38.1	1.4	36.7	
Lease Area	PV	048	F	8/15/2024	20:22:23	645202.73	4457997.86	40.2598562	-73.2924830	38.1	1.4	36.7	
Lease Area	PV	048	G	8/15/2024	20:23:39	645188.50	4457994.80	40.2598311	-73.2926509	38.1	1.4	36.7	
Lease Area	PV	048	H	8/15/2024	20:25:40	645208.30	4457991.38	40.2597969	-73.2924190	38.1	1.4	36.7	
Lease Area	PV	049	A	8/15/2024	22:19:10	647611.90	4458001.41	40.2594667	-73.2641636	38.7	1.2	37.5	
Lease Area	PV	049	B	8/15/2024	22:21:08	647611.38	4457994.99	40.2594090	-73.2641712	38.7	1.2	37.5	
Lease Area	PV	049	C	8/15/2024	22:22:25	647606.44	4457994.92	40.2594093	-73.2642293	38.7	1.2	37.5	
Lease Area	PV	049	D	8/15/2024	22:23:39	647599.53	4457995.48	40.2594155	-73.2643104	38.7	1.2	37.5	
Lease Area	PV	049	E	8/15/2024	22:24:50	647604.44	4458005.19	40.2595021	-73.2642504	38.7	1.2	37.5	
Lease Area	PV	049	F	8/15/2024	22:26:12	647597.57	4458009.86	40.2595454	-73.2643301	38.7	1.2	37.5	
Lease Area	PV	049	G	8/15/2024	22:27:28	647605.05	4458003.32	40.2594851	-73.2642437	38.7	1.2	37.5	
Lease Area	PV	049	H	8/15/2024	22:29:00	647603.11	4457990.66	40.2593715	-73.2642694	38.7	1.2	37.5	
Lease Area	PV	050	A	8/16/2024	0:46:07	650009.82	4458000.94	40.2590362	-73.2359780	38.7	0.6	38.1	
Lease Area	PV	050	B	8/16/2024	0:48:15	650010.08	4457993.21	40.2589665	-73.2359768	38.7	0.6	38.1	
Lease Area	PV	050	C	8/16/2024	0:49:24	650003.13	4457992.62	40.2589624	-73.2360586	38.7	0.6	38.1	
Lease Area	PV	050	D	8/16/2024	0:50:27	649995.04	4457991.43	40.2589532	-73.2361540	38.7	0.6	38.1	
Lease Area	PV	050	E	8/16/2024	0:51:27	649990.22	4457997.68	40.2590103	-73.2362092	38.7	0.6	38.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	050	F	8/16/2024	0:52:45	649995.78	4458005.08	40.2590760	-73.2361421	38.7	0.6	38.1	
Lease Area	PV	050	G	8/16/2024	0:54:05	650008.25	4458004.03	40.2590643	-73.2359958	38.7	0.6	38.1	
Lease Area	PV	050	H	8/16/2024	0:55:19	650003.86	4458008.93	40.2591092	-73.2360462	38.7	0.6	38.1	
Lease Area	PV	051	A	8/16/2024	4:46:24	652405.40	4457987.52	40.2584825	-73.2078236	40.2	0.4	39.9	
Lease Area	PV	051	B	8/16/2024	4:48:18	652397.91	4457988.25	40.2584905	-73.2079115	40.2	0.4	39.9	
Lease Area	PV	051	C	8/16/2024	4:49:29	652394.46	4457990.63	40.2585125	-73.2079515	40.2	0.4	39.9	
Lease Area	PV	051	D	8/16/2024	4:51:03	652402.74	4457997.12	40.2585695	-73.2078526	40.2	0.4	39.9	
Lease Area	PV	051	E	8/16/2024	4:52:13	652405.26	4458003.66	40.2586279	-73.2078215	40.2	0.4	39.9	
Lease Area	PV	051	G	8/16/2024	4:54:51	652393.16	4457999.06	40.2585887	-73.2079648	40.2	0.4	39.8	
Lease Area	PV	051	H	8/16/2024	4:56:20	652391.68	4458003.70	40.2586307	-73.2079811	40.2	0.4	39.8	
Lease Area	PV	051	I	8/16/2024	4:57:32	652398.70	4458007.58	40.2586644	-73.2078976	40.2	0.4	39.8	
Lease Area	PV	052	A	8/16/2024	6:49:15	654793.16	4457991.19	40.2580774	-73.1797578	41.1	0.8	40.4	
Lease Area	PV	052	B	8/16/2024	6:51:11	654805.08	4457989.22	40.2580575	-73.1796181	41.1	0.8	40.4	
Lease Area	PV	052	C	8/16/2024	6:53:19	654788.48	4457998.21	40.2581415	-73.1798111	41.1	0.8	40.4	
Lease Area	PV	052	D	8/16/2024	6:55:20	654812.22	4457995.47	40.2581124	-73.1795327	41.1	0.8	40.3	
Lease Area	PV	052	E	8/16/2024	6:56:48	654810.66	4458003.24	40.2581827	-73.1795492	41.1	0.8	40.3	
Lease Area	PV	052	G	8/16/2024	7:00:05	654790.72	4458005.26	40.2582046	-73.1797830	41.1	0.8	40.3	
Lease Area	PV	052	H	8/16/2024	7:01:51	654808.55	4458008.99	40.2582348	-73.1795726	41.1	0.8	40.3	
Lease Area	PV	052	I	8/16/2024	7:02:52	654798.33	4458012.72	40.2582703	-73.1796918	41.1	0.8	40.3	
Lease Area	PV	053	A	8/16/2024	8:02:55	657190.04	4457994.55	40.2576610	-73.1515853	40.8	1.0	39.9	
Lease Area	PV	053	B	8/16/2024	8:04:49	657209.51	4458008.30	40.2577811	-73.1513531	40.8	1.0	39.9	
Lease Area	PV	053	D	8/16/2024	8:07:09	657193.86	4458011.76	40.2578152	-73.1515362	40.8	1.0	39.8	
Lease Area	PV	053	E	8/16/2024	8:08:37	657210.17	4457993.13	40.2576444	-73.1513491	40.8	1.0	39.8	
Lease Area	PV	053	F	8/16/2024	8:10:17	657188.41	4458001.81	40.2577266	-73.1516027	40.8	1.0	39.8	
Lease Area	PV	053	G	8/16/2024	8:11:44	657211.00	4458000.59	40.2577114	-73.1513375	40.8	1.0	39.8	
Lease Area	PV	053	H	8/16/2024	8:12:53	657199.05	4457988.02	40.2576005	-73.1514810	40.8	1.0	39.8	
Lease Area	PV	053	I	8/16/2024	8:14:37	657202.85	4458011.92	40.2578150	-73.1514305	40.8	1.0	39.8	
Lease Area	PV	054	A	8/15/2024	21:01:09	645209.45	4456202.70	40.2436889	-73.2928104	40.2	1.4	38.8	
Lease Area	PV	054	B	8/15/2024	21:03:13	645188.67	4456198.27	40.2436526	-73.2930556	40.2	1.4	38.8	
Lease Area	PV	054	C	8/15/2024	21:04:41	645206.02	4456189.34	40.2435692	-73.2928537	40.2	1.4	38.8	
Lease Area	PV	054	D	8/15/2024	21:06:06	645194.10	4456212.27	40.2437777	-73.2929886	40.2	1.4	38.8	
Lease Area	PV	054	E	8/15/2024	21:08:04	645194.31	4456190.08	40.2435779	-73.2929911	40.2	1.4	38.8	
Lease Area	PV	054	F	8/15/2024	21:09:24	645205.49	4456209.18	40.2437479	-73.2928554	40.2	1.4	38.9	
Lease Area	PV	054	G	8/15/2024	21:10:43	645201.77	4456199.22	40.2436589	-73.2929014	40.2	1.4	38.9	
Lease Area	PV	054	H	8/15/2024	21:12:05	645188.87	4456205.63	40.2437189	-73.2930515	40.2	1.4	38.9	
Lease Area	PV	055	A	8/15/2024	21:39:04	647603.38	4455601.59	40.2378572	-73.2648159	39.3	1.3	38.0	
Lease Area	PV	055	B	8/15/2024	21:40:47	647589.88	4455594.54	40.2377961	-73.2649762	39.3	1.3	38.0	
Lease Area	PV	055	C	8/15/2024	21:42:07	647609.92	4455606.73	40.2379023	-73.2647379	39.3	1.3	38.0	
Lease Area	PV	055	D	8/15/2024	21:43:24	647611.08	4455592.36	40.2377727	-73.2647275	39.3	1.3	38.0	
Lease Area	PV	055	E	8/15/2024	21:44:59	647591.18	4455609.58	40.2379313	-73.2649574	39.3	1.3	38.0	
Lease Area	PV	055	F	8/15/2024	21:46:41	647600.65	4455587.00	40.2377263	-73.2648513	39.3	1.3	38.0	
Lease Area	PV	055	G	8/15/2024	21:48:41	647603.71	4455611.86	40.2379496	-73.2648097	39.3	1.3	38.0	
Lease Area	PV	055	I	8/15/2024	21:51:48	647587.03	4455603.92	40.2378811	-73.2650075	39.3	1.3	38.0	
Lease Area	PV	056	B	8/16/2024	1:23:10	650007.82	4455598.53	40.2374025	-73.2365633	40.2	0.5	39.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Lease Area	PV	056	D	8/16/2024	1:25:15	650003.37	4455589.53	40.2373222	-73.2366177	40.2	0.5	39.8	
Lease Area	PV	056	E	8/16/2024	1:26:33	649999.77	4455593.03	40.2373544	-73.2366591	40.2	0.5	39.8	
Lease Area	PV	056	F	8/16/2024	1:27:44	650001.31	4455597.20	40.2373917	-73.2366401	40.2	0.5	39.8	
Lease Area	PV	056	G	8/16/2024	1:28:59	649993.93	4455590.15	40.2373295	-73.2367284	40.2	0.5	39.8	
Lease Area	PV	056	H	8/16/2024	1:30:13	649994.85	4455595.99	40.2373819	-73.2367163	40.2	0.5	39.8	
Lease Area	PV	056	I	8/16/2024	1:31:33	649994.47	4455607.85	40.2374888	-73.2367180	40.2	0.4	39.8	
Lease Area	PV	056	J	8/16/2024	1:32:44	650002.44	4455609.42	40.2375015	-73.2366239	40.2	0.4	39.8	
Lease Area	PV	057	A	8/16/2024	2:52:25	652407.79	4455594.77	40.2369354	-73.2083639	41.5	0.2	41.2	
Lease Area	PV	057	C	8/16/2024	2:55:07	652399.34	4455587.53	40.2368717	-73.2084649	41.5	0.2	41.2	
Lease Area	PV	057	D	8/16/2024	2:56:38	652394.57	4455594.61	40.2369363	-73.2085193	41.5	0.2	41.2	
Lease Area	PV	057	E	8/16/2024	2:57:33	652390.38	4455598.03	40.2369679	-73.2085677	41.5	0.2	41.2	
Lease Area	PV	057	F	8/16/2024	2:58:42	652399.78	4455599.58	40.2369802	-73.2084569	41.5	0.2	41.2	
Lease Area	PV	057	G	8/16/2024	2:59:49	652406.55	4455604.16	40.2370202	-73.2083763	41.5	0.2	41.2	
Lease Area	PV	057	H	8/16/2024	3:01:08	652395.83	4455606.69	40.2370449	-73.2085016	41.5	0.2	41.2	
Lease Area	PV	057	I	8/16/2024	3:02:12	652403.11	4455606.36	40.2370406	-73.2084162	41.5	0.2	41.2	
Lease Area	PV	058	A	8/16/2024	4:07:23	654789.51	4455597.03	40.2365190	-73.1803782	42.7	0.3	42.4	
Lease Area	PV	058	B	8/16/2024	4:08:49	654797.53	4455594.11	40.2364912	-73.1802847	42.7	0.3	42.4	
Lease Area	PV	058	C	8/16/2024	4:09:40	654799.45	4455588.95	40.2364444	-73.1802634	42.7	0.3	42.4	
Lease Area	PV	058	D	8/16/2024	4:10:38	654807.22	4455592.76	40.2364773	-73.1801712	42.7	0.3	42.4	
Lease Area	PV	058	E	8/16/2024	4:11:48	654805.99	4455595.93	40.2365060	-73.1801849	42.7	0.3	42.4	
Lease Area	PV	058	F	8/16/2024	4:13:07	654802.90	4455598.04	40.2365256	-73.1802207	42.7	0.3	42.4	
Lease Area	PV	058	G	8/16/2024	4:14:20	654792.23	4455604.39	40.2365848	-73.1803445	42.7	0.3	42.4	
Lease Area	PV	058	H	8/16/2024	4:15:23	654798.57	4455605.56	40.2365941	-73.1802697	42.7	0.3	42.4	
Lease Area	PV	059	A	8/16/2024	1:52:31	650012.09	4453200.02	40.2158027	-73.2370733	41.1	0.4	40.8	
Lease Area	PV	059	B	8/16/2024	1:54:20	650003.95	4453195.38	40.2157624	-73.2371700	41.1	0.4	40.8	
Lease Area	PV	059	C	8/16/2024	1:55:11	650003.79	4453189.31	40.2157078	-73.2371733	41.1	0.4	40.8	
Lease Area	PV	059	D	8/16/2024	1:56:26	649996.91	4453190.11	40.2157162	-73.2372539	41.1	0.4	40.8	
Lease Area	PV	059	E	8/16/2024	1:57:27	649993.99	4453194.34	40.2157548	-73.2372872	41.1	0.4	40.8	
Lease Area	PV	059	F	8/16/2024	1:58:23	649991.38	4453200.83	40.2158137	-73.2373164	41.1	0.4	40.8	
Lease Area	PV	059	G	8/16/2024	1:59:36	649996.10	4453204.40	40.2158450	-73.2372601	41.1	0.4	40.8	
Lease Area	PV	059	H	8/16/2024	2:00:49	649996.89	4453210.37	40.2158986	-73.2372494	41.1	0.4	40.8	
Lease Area	PV	060	A	8/16/2024	2:21:03	652401.68	4453191.72	40.2152969	-73.2090059	41.5	0.3	41.2	
Lease Area	PV	060	B	8/16/2024	2:22:31	652406.73	4453192.99	40.2153075	-73.2089463	41.5	0.3	41.2	
Lease Area	PV	060	D	8/16/2024	2:24:56	652392.62	4453193.37	40.2153134	-73.2091120	41.5	0.3	41.2	
Lease Area	PV	060	E	8/16/2024	2:26:14	652390.27	4453204.34	40.2154127	-73.2091370	41.5	0.3	41.2	
Lease Area	PV	060	F	8/16/2024	2:27:29	652394.15	4453199.20	40.2153657	-73.2090926	41.5	0.3	41.2	
Lease Area	PV	060	G	8/16/2024	2:28:54	652392.63	4453208.36	40.2154484	-73.2091083	41.5	0.3	41.2	
Lease Area	PV	060	H	8/16/2024	2:29:47	652401.73	4453206.23	40.2154276	-73.2090019	41.5	0.3	41.2	
Lease Area	PV	060	I	8/16/2024	2:30:50	652409.29	4453200.11	40.2153711	-73.2089145	41.5	0.3	41.2	
Reference Area	PV	061	A	8/16/2024	19:52:45	669438.43	4496810.25	40.6047541	-72.9972902	25.0	1.2	23.8	
Reference Area	PV	061	C	8/16/2024	19:55:43	669433.04	4496797.59	40.6046412	-72.9973572	25.0	1.2	23.8	
Reference Area	PV	061	D	8/16/2024	19:56:59	669450.67	4496803.05	40.6046867	-72.9971475	25.0	1.2	23.8	
Reference Area	PV	061	E	8/16/2024	19:58:48	669434.47	4496790.74	40.6045792	-72.9973422	25.0	1.2	23.8	
Reference Area	PV	061	F	8/16/2024	19:59:59	669432.22	4496803.43	40.6046939	-72.9973654	25.0	1.2	23.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	061	G	8/16/2024	20:01:38	669447.14	4496808.22	40.6047340	-72.9971878	25.0	1.2	23.8	
Reference Area	PV	061	H	8/16/2024	20:03:02	669451.42	4496795.10	40.6046150	-72.9971408	25.0	1.3	23.7	
Reference Area	PV	061	I	8/16/2024	20:04:21	669442.88	4496798.25	40.6046451	-72.9972408	25.0	1.3	23.7	
Reference Area	PV	062	A	8/16/2024	20:32:24	672322.83	4496811.07	40.6041654	-72.9632175	24.7	1.3	23.3	
Reference Area	PV	062	B	8/16/2024	20:33:53	672315.71	4496792.62	40.6040008	-72.9633067	24.7	1.4	23.3	
Reference Area	PV	062	C	8/16/2024	20:35:09	672331.91	4496801.30	40.6040756	-72.9631130	24.7	1.4	23.3	
Reference Area	PV	062	D	8/16/2024	20:37:16	672310.84	4496801.59	40.6040826	-72.9633618	24.7	1.4	23.3	
Reference Area	PV	062	E	8/16/2024	20:38:44	672329.05	4496806.59	40.6041238	-72.9631453	24.7	1.4	23.3	
Reference Area	PV	062	F	8/16/2024	20:40:11	672316.22	4496808.35	40.6041423	-72.9632964	24.7	1.4	23.3	
Reference Area	PV	062	G	8/16/2024	20:41:20	672331.81	4496793.30	40.6040036	-72.9631163	24.7	1.4	23.3	
Reference Area	PV	062	H	8/16/2024	20:43:08	672308.91	4496795.45	40.6040277	-72.9633862	24.7	1.4	23.3	
Reference Area	PV	063	A	8/22/2024	4:25:31	675198.03	4496790.78	40.6033786	-72.9292605	28.3	1.0	27.4	
Reference Area	PV	063	B	8/22/2024	4:26:54	675205.08	4496793.12	40.6033982	-72.9291765	28.3	0.9	27.4	
Reference Area	PV	063	C	8/22/2024	4:28:31	675202.54	4496796.48	40.6034290	-72.9292056	28.3	0.9	27.4	
Reference Area	PV	063	D	8/22/2024	4:29:51	675194.04	4496801.32	40.6034743	-72.9293047	28.3	0.9	27.4	
Reference Area	PV	063	F	8/22/2024	4:32:48	675191.57	4496797.54	40.6034408	-72.9293349	28.3	0.9	27.4	
Reference Area	PV	063	G	8/22/2024	4:34:18	675187.75	4496805.35	40.6035120	-72.9293778	28.3	0.9	27.5	
Reference Area	PV	063	H	8/22/2024	4:35:59	675196.15	4496808.40	40.6035376	-72.9292778	28.3	0.9	27.5	
Reference Area	PV	063	I	8/22/2024	4:37:18	675200.89	4496807.14	40.6035253	-72.9292221	28.3	0.9	27.5	
Reference Area	PV	064	A	8/21/2024	17:23:07	678075.16	4496806.75	40.6029078	-72.8952716	31.1	0.5	30.6	
Reference Area	PV	064	B	8/21/2024	17:24:24	678089.25	4496804.74	40.6028867	-72.8951057	31.1	0.5	30.6	
Reference Area	PV	064	C	8/21/2024	17:25:52	678071.95	4496801.70	40.6028631	-72.8953109	31.1	0.4	30.7	
Reference Area	PV	064	D	8/21/2024	17:27:28	678076.18	4496796.05	40.6028113	-72.8952625	31.1	0.4	30.7	
Reference Area	PV	064	E	8/21/2024	17:28:43	678086.37	4496791.08	40.6027644	-72.8951436	31.1	0.4	30.7	
Reference Area	PV	064	G	8/21/2024	17:31:15	678086.32	4496802.58	40.6028679	-72.8951409	31.1	0.4	30.7	
Reference Area	PV	064	H	8/21/2024	17:32:24	678085.40	4496811.20	40.6029457	-72.8951494	31.1	0.4	30.7	
Reference Area	PV	064	I	8/21/2024	17:33:41	678079.33	4496810.61	40.6029417	-72.8952212	31.1	0.4	30.7	
Reference Area	PV	065	A	8/21/2024	16:02:47	680961.84	4496789.85	40.6021291	-72.8611802	33.2	1.0	32.3	
Reference Area	PV	065	B	8/21/2024	16:04:00	680968.69	4496793.67	40.6021620	-72.8610982	33.2	1.0	32.3	
Reference Area	PV	065	C	8/21/2024	16:05:24	680972.94	4496802.88	40.6022440	-72.8610454	33.2	1.0	32.3	
Reference Area	PV	065	D	8/21/2024	16:06:44	680966.53	4496797.89	40.6022004	-72.8611225	33.2	0.9	32.3	
Reference Area	PV	065	F	8/21/2024	16:09:17	680955.52	4496799.27	40.6022153	-72.8612522	33.2	0.9	32.3	
Reference Area	PV	065	G	8/21/2024	16:10:51	680950.95	4496803.35	40.6022530	-72.8613050	33.2	0.9	32.3	
Reference Area	PV	065	H	8/21/2024	16:11:57	680956.51	4496810.91	40.6023199	-72.8612371	33.2	0.9	32.3	
Reference Area	PV	065	I	8/21/2024	16:13:12	680968.59	4496804.22	40.6022570	-72.8610964	33.2	0.9	32.3	
Reference Area	PV	066	A	8/22/2024	17:47:02	683837.11	4496792.64	40.6015201	-72.8272191	34.7	0.7	34.1	
Reference Area	PV	066	B	8/22/2024	17:48:34	683833.43	4496790.17	40.6014987	-72.8272633	34.7	0.6	34.1	
Reference Area	PV	066	C	8/22/2024	17:49:43	683832.25	4496796.56	40.6015564	-72.8272754	34.7	0.6	34.1	
Reference Area	PV	066	D	8/22/2024	17:50:56	683831.32	4496806.34	40.6016447	-72.8272835	34.7	0.6	34.1	
Reference Area	PV	066	E	8/22/2024	17:52:04	683833.28	4496812.38	40.6016986	-72.8272586	34.7	0.6	34.1	
Reference Area	PV	066	F	8/22/2024	17:53:12	683839.45	4496806.24	40.6016420	-72.8271875	34.7	0.6	34.1	
Reference Area	PV	066	G	8/22/2024	17:54:23	683840.38	4496809.27	40.6016691	-72.8271757	34.7	0.6	34.1	
Reference Area	PV	066	H	8/22/2024	17:55:28	683839.97	4496804.19	40.6016234	-72.8271820	34.7	0.6	34.1	
Reference Area	PV	067	A	8/22/2024	17:09:13	686720.85	4496796.26	40.6009066	-72.7931588	33.5	0.9	32.6	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	067	B	8/22/2024	17:10:25	686716.19	4496792.49	40.6008738	-72.7932150	33.5	0.9	32.6	
Reference Area	PV	067	C	8/22/2024	17:11:34	686720.89	4496788.23	40.6008343	-72.7931607	33.5	0.9	32.7	
Reference Area	PV	067	D	8/22/2024	17:13:19	686709.97	4496793.11	40.6008807	-72.7932883	33.5	0.9	32.7	
Reference Area	PV	067	E	8/22/2024	17:14:29	686711.35	4496803.89	40.6009775	-72.7932688	33.5	0.9	32.7	
Reference Area	PV	067	F	8/22/2024	17:16:07	686709.05	4496792.15	40.6008723	-72.7932994	33.5	0.9	32.7	
Reference Area	PV	067	G	8/22/2024	17:18:54	686724.92	4496790.05	40.6008498	-72.7931126	33.5	0.8	32.7	
Reference Area	PV	067	H	8/22/2024	17:20:01	686711.87	4496801.78	40.6009584	-72.7932632	33.5	0.8	32.7	
Reference Area	PV	068	A	8/22/2024	16:32:58	689598.58	4496794.99	40.6002405	-72.7591720	35.7	1.1	34.5	
Reference Area	PV	068	B	8/22/2024	16:34:16	689601.67	4496796.26	40.6002513	-72.7591352	35.7	1.1	34.5	
Reference Area	PV	068	C	8/22/2024	16:35:29	689605.05	4496792.44	40.6002161	-72.7590964	35.7	1.1	34.6	
Reference Area	PV	068	D	8/22/2024	16:36:47	689596.58	4496792.91	40.6002223	-72.7591963	35.7	1.1	34.6	
Reference Area	PV	068	E	8/22/2024	16:38:05	689596.19	4496800.78	40.6002932	-72.7591985	35.7	1.1	34.6	
Reference Area	PV	068	F	8/22/2024	16:39:19	689592.36	4496794.94	40.6002415	-72.7592455	35.7	1.1	34.6	
Reference Area	PV	068	G	8/22/2024	16:40:31	689590.91	4496808.69	40.6003656	-72.7592585	35.7	1.1	34.6	
Reference Area	PV	068	H	8/22/2024	16:41:55	689608.34	4496802.90	40.6003095	-72.7590544	35.7	1.1	34.6	
Reference Area	PV	069	A	8/22/2024	15:49:42	692483.06	4496792.09	40.5995482	-72.7251072	36.9	1.4	35.5	
Reference Area	PV	069	B	8/22/2024	15:51:11	692477.86	4496793.01	40.5995577	-72.7251683	36.9	1.4	35.5	
Reference Area	PV	069	C	8/22/2024	15:52:21	692479.14	4496801.95	40.5996379	-72.7251505	36.9	1.4	35.5	
Reference Area	PV	069	E	8/22/2024	15:54:40	692483.90	4496794.58	40.5995704	-72.7250965	36.9	1.3	35.5	
Reference Area	PV	069	F	8/22/2024	15:55:57	692482.99	4496809.32	40.5997033	-72.7251027	36.9	1.3	35.5	
Reference Area	PV	069	G	8/22/2024	15:57:12	692480.55	4496806.81	40.5996813	-72.7251323	36.9	1.3	35.6	
Reference Area	PV	069	H	8/22/2024	15:58:25	692474.41	4496802.43	40.5996433	-72.7252062	36.9	1.3	35.6	
Reference Area	PV	069	I	8/22/2024	15:59:46	692478.17	4496811.06	40.5997201	-72.7251591	36.9	1.3	35.6	
Reference Area	PV	070	A	8/22/2024	14:25:39	695369.72	4496803.01	40.5989697	-72.6910135	37.5	1.6	35.9	
Reference Area	PV	070	B	8/22/2024	14:26:54	695367.60	4496806.45	40.5990012	-72.6910374	37.5	1.6	35.9	
Reference Area	PV	070	C	8/22/2024	14:28:06	695372.75	4496796.21	40.5989078	-72.6909798	37.5	1.6	35.9	
Reference Area	PV	070	D	8/22/2024	14:29:21	695364.95	4496793.11	40.5988817	-72.6910729	37.5	1.6	35.9	
Reference Area	PV	070	F	8/22/2024	14:31:41	695350.90	4496805.08	40.5989928	-72.6912351	37.5	1.6	35.9	
Reference Area	PV	070	J	8/22/2024	21:04:12	695353.18	4496789.42	40.5988513	-72.6912130	38.7	0.0	38.7	
Reference Area	PV	070	K	8/22/2024	21:05:23	695355.14	4496808.90	40.5990262	-72.6911838	38.7	0.0	38.7	
Reference Area	PV	070	L	8/22/2024	21:06:39	695351.85	4496798.52	40.5989335	-72.6912259	38.7	0.0	38.7	
Reference Area	PV	071	A	8/16/2024	19:06:44	669439.43	4495188.28	40.5901507	-72.9977143	27.1	1.0	26.1	
Reference Area	PV	071	B	8/16/2024	19:08:04	669434.15	4495209.72	40.5903448	-72.9977709	27.1	1.0	26.1	
Reference Area	PV	071	C	8/16/2024	19:10:07	669452.14	4495200.76	40.5902605	-72.9975608	27.1	1.0	26.1	
Reference Area	PV	071	D	8/16/2024	19:11:42	669430.58	4495199.33	40.5902520	-72.9978158	27.1	1.0	26.1	
Reference Area	PV	071	E	8/16/2024	19:12:56	669448.91	4495194.58	40.5902055	-72.9976006	27.1	1.1	26.1	
Reference Area	PV	071	F	8/16/2024	19:14:24	669430.74	4495205.19	40.5903047	-72.9978123	27.1	1.1	26.1	
Reference Area	PV	071	G	8/16/2024	19:15:50	669433.15	4495191.97	40.5901852	-72.9977874	27.1	1.1	26.1	
Reference Area	PV	071	H	8/16/2024	19:17:29	669447.28	4495209.01	40.5903357	-72.9976160	27.1	1.1	26.1	
Reference Area	PV	072	A	8/16/2024	20:59:35	672323.30	4495211.92	40.5897679	-72.9636491	26.5	1.4	25.1	
Reference Area	PV	072	B	8/16/2024	21:01:11	672316.10	4495189.19	40.5895648	-72.9637403	26.5	1.4	25.1	
Reference Area	PV	072	C	8/16/2024	21:02:27	672330.30	4495200.70	40.5896654	-72.9635694	26.5	1.4	25.1	
Reference Area	PV	072	D	8/16/2024	21:03:39	672308.22	4495201.19	40.5896744	-72.9638301	26.5	1.4	25.1	
Reference Area	PV	072	E	8/16/2024	21:05:04	672325.88	4495193.60	40.5896024	-72.9636236	26.5	1.4	25.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	072	F	8/16/2024	21:06:18	672309.10	4495208.21	40.5897375	-72.9638178	26.5	1.4	25.1	
Reference Area	PV	072	G	8/16/2024	21:07:48	672330.22	4495206.94	40.5897216	-72.9635687	26.5	1.4	25.1	
Reference Area	PV	072	H	8/16/2024	21:09:50	672312.80	4495192.96	40.5895994	-72.9637782	26.5	1.4	25.1	
Reference Area	PV	073	A	8/22/2024	3:47:11	675208.62	4495193.29	40.5889942	-72.9295793	27.7	1.2	26.5	
Reference Area	PV	073	B	8/22/2024	3:48:47	675203.33	4495189.96	40.5889653	-72.9296427	27.7	1.2	26.5	
Reference Area	PV	073	C	8/22/2024	3:50:13	675196.78	4495190.48	40.5889714	-72.9297199	27.7	1.2	26.5	
Reference Area	PV	073	D	8/22/2024	3:51:32	675189.47	4495195.96	40.5890223	-72.9298047	27.7	1.2	26.6	
Reference Area	PV	073	E	8/22/2024	3:53:12	675193.95	4495204.39	40.5890972	-72.9297494	27.7	1.2	26.6	
Reference Area	PV	073	F	8/22/2024	3:54:33	675198.15	4495209.93	40.5891462	-72.9296983	27.7	1.2	26.6	
Reference Area	PV	073	G	8/22/2024	3:55:50	675199.83	4495205.14	40.5891027	-72.9296798	27.7	1.2	26.6	
Reference Area	PV	073	H	8/22/2024	3:57:11	675198.47	4495198.71	40.5890451	-72.9296976	27.7	1.1	26.6	
Reference Area	PV	074	A	8/21/2024	17:51:18	678088.99	4495194.88	40.5883936	-72.8955635	31.1	0.3	30.8	
Reference Area	PV	074	B	8/21/2024	17:52:38	678086.30	4495191.10	40.5883601	-72.8955963	31.1	0.3	30.8	
Reference Area	PV	074	C	8/21/2024	17:53:57	678082.99	4495193.29	40.5883805	-72.8956348	31.1	0.3	30.8	
Reference Area	PV	074	D	8/21/2024	17:55:29	678078.85	4495199.58	40.5884381	-72.8956819	31.1	0.3	30.8	
Reference Area	PV	074	E	8/21/2024	17:56:40	678079.77	4495195.07	40.5883973	-72.8956723	31.1	0.3	30.8	
Reference Area	PV	074	F	8/21/2024	17:57:57	678076.12	4495192.83	40.5883779	-72.8957160	31.1	0.3	30.8	
Reference Area	PV	074	G	8/21/2024	17:59:11	678075.42	4495206.80	40.5885038	-72.8957203	31.1	0.3	30.8	
Reference Area	PV	074	H	8/21/2024	18:00:28	678079.03	4495211.35	40.5885440	-72.8956764	31.1	0.3	30.8	
Reference Area	PV	075	A	8/21/2024	15:37:56	680966.60	4495192.58	40.5877485	-72.8615824	30.8	1.1	29.7	
Reference Area	PV	075	B	8/21/2024	15:39:03	680962.12	4495188.89	40.5877163	-72.8616364	30.8	1.1	29.7	
Reference Area	PV	075	C	8/21/2024	15:40:23	680955.44	4495193.94	40.5877632	-72.8617138	30.8	1.1	29.7	
Reference Area	PV	075	D	8/21/2024	15:41:30	680955.06	4495195.56	40.5877778	-72.8617178	30.8	1.1	29.7	
Reference Area	PV	075	E	8/21/2024	15:42:42	680950.71	4495201.39	40.5878313	-72.8617675	30.8	1.1	29.7	
Reference Area	PV	075	F	8/21/2024	15:43:54	680953.24	4495206.31	40.5878750	-72.8617362	30.8	1.1	29.7	
Reference Area	PV	075	G	8/21/2024	15:45:59	680959.39	4495210.82	40.5879143	-72.8616623	30.8	1.1	29.7	
Reference Area	PV	075	H	8/21/2024	15:47:15	680966.16	4495202.85	40.5878410	-72.8615846	30.8	1.1	29.7	
Reference Area	PV	076	A	8/22/2024	11:36:28	683829.37	4495199.97	40.5871840	-72.8277748	36.6	0.9	35.7	
Reference Area	PV	076	B	8/22/2024	11:38:42	683850.58	4495199.80	40.5871777	-72.8275244	36.6	0.9	35.7	
Reference Area	PV	076	C	8/22/2024	11:40:02	683840.08	4495213.63	40.5873046	-72.8276444	36.6	0.9	35.7	
Reference Area	PV	076	D	8/22/2024	11:41:44	683840.04	4495187.98	40.5870737	-72.8276523	36.6	0.9	35.7	
Reference Area	PV	076	E	8/22/2024	11:43:18	683849.99	4495207.45	40.5872467	-72.8275292	36.6	0.9	35.7	
Reference Area	PV	076	F	8/22/2024	11:44:46	683830.54	4495208.58	40.5872612	-72.8277585	36.6	0.9	35.7	
Reference Area	PV	076	G	8/22/2024	11:46:11	683831.83	4495189.80	40.5870919	-72.8277487	36.6	0.9	35.7	
Reference Area	PV	076	H	8/22/2024	11:47:31	683849.93	4495193.17	40.5871182	-72.8275340	36.6	0.9	35.6	
Reference Area	PV	077	A	8/22/2024	12:06:43	686714.50	4495211.25	40.5866395	-72.7937031	38.1	1.1	37.0	
Reference Area	PV	077	B	8/22/2024	12:08:50	686727.73	4495190.17	40.5864468	-72.7935531	38.1	1.1	37.0	
Reference Area	PV	077	C	8/22/2024	12:10:24	686709.95	4495199.38	40.5865337	-72.7937603	38.1	1.1	37.0	
Reference Area	PV	077	D	8/22/2024	12:11:35	686732.18	4495203.83	40.5865687	-72.7934965	38.1	1.1	37.0	
Reference Area	PV	077	E	8/22/2024	12:13:16	686715.59	4495190.53	40.5864528	-72.7936964	38.1	1.1	37.0	
Reference Area	PV	077	F	8/22/2024	12:14:40	686726.35	4495211.93	40.5866430	-72.7935630	38.1	1.1	37.0	
Reference Area	PV	077	G	8/22/2024	12:16:03	686710.62	4495206.69	40.5865994	-72.7937503	38.1	1.1	37.0	
Reference Area	PV	077	H	8/22/2024	12:17:20	686731.88	4495195.94	40.5864978	-72.7935024	38.1	1.1	37.0	
Reference Area	PV	078	C	8/22/2024	12:40:23	689600.18	4495186.28	40.5857586	-72.7596368	39.0	1.3	37.8	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	078	D	8/22/2024	12:41:50	689597.99	4495213.40	40.5860032	-72.7596545	39.0	1.3	37.8	
Reference Area	PV	078	F	8/22/2024	12:45:27	689594.51	4495210.01	40.5859735	-72.7596966	39.0	1.3	37.7	
Reference Area	PV	078	G	8/22/2024	12:47:02	689593.87	4495192.13	40.5858127	-72.7597095	39.0	1.3	37.7	
Reference Area	PV	078	J	8/22/2024	20:09:47	689604.60	4495194.76	40.5858339	-72.7595820	38.7	0.0	38.7	
Reference Area	PV	078	K	8/22/2024	20:11:02	689593.15	4495204.67	40.5859258	-72.7597143	38.7	0.0	38.7	
Reference Area	PV	078	L	8/22/2024	20:12:13	689596.17	4495194.29	40.5858316	-72.7596817	38.7	0.0	38.7	
Reference Area	PV	078	M	8/22/2024	20:13:22	689606.25	4495203.46	40.5859119	-72.7595599	38.7	0.0	38.7	
Reference Area	PV	079	A	8/22/2024	13:09:44	692480.88	4495188.59	40.5851144	-72.7256223	37.8	1.4	36.4	
Reference Area	PV	079	B	8/22/2024	13:11:35	692479.99	4495212.15	40.5853267	-72.7256256	37.8	1.4	36.4	
Reference Area	PV	079	C	8/22/2024	13:13:17	692468.13	4495199.91	40.5852192	-72.7257694	37.8	1.4	36.4	
Reference Area	PV	079	E	8/22/2024	13:16:15	692472.74	4495194.07	40.5851656	-72.7257167	37.8	1.4	36.4	
Reference Area	PV	079	F	8/22/2024	13:17:23	692489.71	4495209.60	40.5853014	-72.7255116	37.8	1.4	36.4	
Reference Area	PV	079	G	8/22/2024	13:18:44	692471.93	4495209.00	40.5853002	-72.7257218	37.8	1.4	36.4	
Reference Area	PV	079	H	8/22/2024	13:20:05	692491.60	4495191.87	40.5851414	-72.7254947	37.8	1.4	36.4	
Reference Area	PV	079	I	8/22/2024	13:21:11	692480.13	4495199.49	40.5852127	-72.7256278	37.8	1.4	36.4	
Reference Area	PV	080	B	8/20/2024	22:52:34	695368.38	4495204.28	40.5845790	-72.6915245	39.6	1.2	38.5	
Reference Area	PV	080	D	8/20/2024	22:54:59	695363.35	4495207.42	40.5846084	-72.6915829	39.6	1.2	38.5	
Reference Area	PV	080	E	8/20/2024	22:56:11	695355.98	4495208.87	40.5846232	-72.6916695	39.6	1.2	38.5	
Reference Area	PV	080	G	8/20/2024	22:58:55	695354.56	4495195.05	40.5844991	-72.6916905	39.6	1.2	38.4	
Reference Area	PV	080	J	8/22/2024	20:46:13	695348.31	4495195.24	40.5845023	-72.6917643	38.7	0.0	38.7	
Reference Area	PV	080	K	8/22/2024	20:47:27	695363.87	4495211.63	40.5846462	-72.6915755	38.7	0.0	38.7	
Reference Area	PV	080	L	8/22/2024	20:48:45	695362.31	4495187.82	40.5844322	-72.6916013	38.7	0.0	38.7	
Reference Area	PV	080	M	8/22/2024	20:49:54	695350.54	4495206.31	40.5846015	-72.6917345	38.7	0.0	38.7	
Reference Area	PV	081	A	8/16/2024	18:41:15	669436.32	4493611.69	40.5759567	-72.9981744	25.9	0.9	25.0	
Reference Area	PV	081	B	8/16/2024	18:43:00	669443.78	4493589.30	40.5757536	-72.9980923	25.9	0.9	25.0	
Reference Area	PV	081	C	8/16/2024	18:44:18	669428.98	4493602.33	40.5758739	-72.9982636	25.9	0.9	25.0	
Reference Area	PV	081	D	8/16/2024	18:45:33	669451.56	4493599.36	40.5758426	-72.9979977	25.9	0.9	25.0	
Reference Area	PV	081	E	8/16/2024	18:46:53	669432.27	4493592.06	40.5757808	-72.9982275	25.9	0.9	25.0	
Reference Area	PV	081	F	8/16/2024	18:48:33	669447.77	4493606.03	40.5759034	-72.9980407	25.9	0.9	25.0	
Reference Area	PV	081	G	8/16/2024	18:49:49	669433.56	4493607.20	40.5759168	-72.9982082	25.9	0.9	25.0	
Reference Area	PV	081	H	8/16/2024	18:51:11	669449.49	4493593.87	40.5757936	-72.9980237	25.9	1.0	25.0	
Reference Area	PV	082	A	8/16/2024	21:24:49	672321.28	4493612.96	40.5753726	-72.9641096	24.4	1.5	22.9	
Reference Area	PV	082	B	8/16/2024	21:26:49	672322.06	4493588.63	40.5751534	-72.9641070	24.4	1.5	22.9	
Reference Area	PV	082	C	8/16/2024	21:28:01	672309.63	4493601.14	40.5752686	-72.9642504	24.4	1.5	22.9	
Reference Area	PV	082	D	8/16/2024	21:29:37	672332.36	4493602.03	40.5752719	-72.9639818	24.4	1.5	22.9	
Reference Area	PV	082	E	8/16/2024	21:30:54	672312.52	4493608.62	40.5753353	-72.9642142	24.4	1.5	22.9	
Reference Area	PV	082	F	8/16/2024	21:32:14	672329.52	4493596.32	40.5752211	-72.9640169	24.4	1.5	22.9	
Reference Area	PV	082	G	8/16/2024	21:33:34	672314.56	4493589.56	40.5751633	-72.9641953	24.4	1.5	22.9	
Reference Area	PV	082	H	8/16/2024	21:34:56	672329.55	4493608.92	40.5753345	-72.9640131	24.4	1.5	22.9	
Reference Area	PV	083	A	8/22/2024	3:07:41	675197.37	4493594.92	40.5746065	-72.9301559	28.0	1.4	26.6	
Reference Area	PV	083	B	8/22/2024	3:09:14	675205.61	4493596.23	40.5746165	-72.9300583	28.0	1.4	26.6	
Reference Area	PV	083	C	8/22/2024	3:10:44	675193.27	4493595.73	40.5746146	-72.9302041	28.0	1.4	26.6	
Reference Area	PV	083	D	8/22/2024	3:12:01	675195.29	4493600.37	40.5746560	-72.9301790	28.0	1.4	26.6	
Reference Area	PV	083	F	8/22/2024	3:15:00	675196.53	4493606.38	40.5747098	-72.9301627	28.0	1.4	26.7	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	083	G	8/22/2024	3:16:35	675202.62	4493608.51	40.5747277	-72.9300902	28.0	1.4	26.7	
Reference Area	PV	083	H	8/22/2024	3:18:02	675199.16	4493588.86	40.5745515	-72.9301365	28.0	1.4	26.7	
Reference Area	PV	083	I	8/22/2024	3:19:25	675201.35	4493589.80	40.5745595	-72.9301104	28.0	1.4	26.7	
Reference Area	PV	084	A	8/21/2024	18:33:46	678079.32	4493589.46	40.5739424	-72.8961307	32.6	0.1	32.5	
Reference Area	PV	084	B	8/21/2024	18:35:47	678075.11	4493611.53	40.5741419	-72.8961742	32.6	0.1	32.5	
Reference Area	PV	084	C	8/21/2024	21:45:02	678073.15	4493593.15	40.5739769	-72.8962025	32.6	0.4	32.2	
Reference Area	PV	084	D	8/21/2024	21:46:19	678070.31	4493607.78	40.5741092	-72.8962319	32.6	0.4	32.2	
Reference Area	PV	084	E	8/21/2024	21:49:00	678087.12	4493593.79	40.5739797	-72.8960374	32.6	0.4	32.2	
Reference Area	PV	084	F	8/21/2024	21:50:27	678072.24	4493599.31	40.5740326	-72.8962115	32.6	0.4	32.2	
Reference Area	PV	084	H	8/21/2024	21:54:54	678080.38	4493604.02	40.5740732	-72.8961141	32.6	0.4	32.2	
Reference Area	PV	084	J	8/22/2024	23:37:05	678084.76	4493598.32	40.5740209	-72.8960640	32.9	0.7	32.2	
Reference Area	PV	085	A	8/21/2024	15:13:10	680970.03	4493593.72	40.5733538	-72.8620004	33.8	1.3	32.6	
Reference Area	PV	085	C	8/21/2024	15:16:05	680959.17	4493591.96	40.5733404	-72.8621291	33.8	1.3	32.6	
Reference Area	PV	085	D	8/21/2024	15:17:52	680950.81	4493597.70	40.5733939	-72.8622262	33.8	1.2	32.6	
Reference Area	PV	085	E	8/21/2024	15:19:26	680952.10	4493610.41	40.5735080	-72.8622073	33.8	1.2	32.6	
Reference Area	PV	085	F	8/21/2024	15:20:40	680953.89	4493601.14	40.5734242	-72.8621888	33.8	1.2	32.6	
Reference Area	PV	085	G	8/21/2024	15:21:50	680952.08	4493605.16	40.5734607	-72.8622091	33.8	1.2	32.6	
Reference Area	PV	085	H	8/21/2024	15:23:04	680963.12	4493609.20	40.5734947	-72.8620776	33.8	1.2	32.6	
Reference Area	PV	085	I	8/21/2024	15:24:33	680970.73	4493601.04	40.5734196	-72.8619900	33.8	1.2	32.6	
Reference Area	PV	086	B	8/21/2024	11:05:15	683841.66	4493613.12	40.5728958	-72.8280920	37.8	0.9	36.9	
Reference Area	PV	086	D	8/21/2024	11:07:56	683850.89	4493601.09	40.5727854	-72.8279865	37.8	1.0	36.8	
Reference Area	PV	086	G	8/21/2024	11:11:38	683850.91	4493607.30	40.5728413	-72.8279845	37.8	1.0	36.8	
Reference Area	PV	086	H	8/21/2024	11:13:13	683829.90	4493592.49	40.5727127	-72.8282368	37.8	1.0	36.8	
Reference Area	PV	086	J	8/22/2024	19:07:41	683846.10	4493605.54	40.5728265	-72.8280418	36.9	0.2	36.7	
Reference Area	PV	086	K	8/22/2024	19:08:47	683834.90	4493596.32	40.5727460	-72.8281767	36.9	0.2	36.7	
Reference Area	PV	086	L	8/22/2024	19:10:00	683836.17	4493604.20	40.5728167	-72.8281594	36.9	0.2	36.7	
Reference Area	PV	086	M	8/22/2024	19:11:13	683844.05	4493592.20	40.5727069	-72.8280699	36.9	0.2	36.7	
Reference Area	PV	087	C	8/21/2024	10:07:02	686730.41	4493600.17	40.5721327	-72.7939919	37.5	0.6	36.9	
Reference Area	PV	087	D	8/21/2024	10:08:52	686709.87	4493598.74	40.5721244	-72.7942348	37.5	0.6	36.9	
Reference Area	PV	087	E	8/21/2024	10:10:24	686729.48	4493607.67	40.5722004	-72.7940007	37.5	0.6	36.9	
Reference Area	PV	087	F	8/21/2024	10:11:44	686711.01	4493591.19	40.5720562	-72.7942236	37.5	0.6	36.9	
Reference Area	PV	087	G	8/21/2024	10:12:56	686710.26	4493608.10	40.5722086	-72.7942275	37.5	0.6	36.9	
Reference Area	PV	087	I	8/21/2024	10:15:29	686720.93	4493602.29	40.5721539	-72.7941032	37.5	0.6	36.9	
Reference Area	PV	087	J	8/22/2024	19:31:13	686722.93	4493593.91	40.5720780	-72.7940821	37.2	0.1	37.1	
Reference Area	PV	087	K	8/22/2024	19:32:33	686720.95	4493606.09	40.5721881	-72.7941019	37.2	0.1	37.1	
Reference Area	PV	088	A	8/21/2024	9:31:42	689600.95	4493587.70	40.5713680	-72.7601079	40.8	0.3	40.5	
Reference Area	PV	088	B	8/21/2024	9:33:14	689600.07	4493611.81	40.5715853	-72.7601111	40.8	0.3	40.5	
Reference Area	PV	088	C	8/21/2024	9:34:10	689611.78	4493601.21	40.5714871	-72.7599760	40.8	0.3	40.5	
Reference Area	PV	088	D	8/21/2024	9:35:30	689588.59	4493603.29	40.5715112	-72.7602492	40.8	0.4	40.5	
Reference Area	PV	088	H	8/21/2024	9:41:14	689592.96	4493610.98	40.5715794	-72.7601953	40.8	0.4	40.5	
Reference Area	PV	088	J	8/22/2024	19:52:26	689602.30	4493594.62	40.5714300	-72.7600899	40.2	0.0	40.2	
Reference Area	PV	088	K	8/22/2024	19:53:33	689598.01	4493606.99	40.5715423	-72.7601369	40.2	0.0	40.2	
Reference Area	PV	088	M	8/22/2024	19:55:42	689605.99	4493602.29	40.5714982	-72.7600441	40.2	0.0	40.2	
Reference Area	PV	089	A	8/21/2024	8:51:50	692480.49	4493612.66	40.5709283	-72.7261075	40.2	0.1	40.1	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	089	B	8/21/2024	8:53:52	692478.52	4493588.69	40.5707130	-72.7261381	40.2	0.1	40.1	
Reference Area	PV	089	C	8/21/2024	8:55:05	692468.40	4493599.44	40.5708121	-72.7262543	40.2	0.1	40.1	
Reference Area	PV	089	E	8/21/2024	8:58:23	692472.47	4493592.16	40.5707456	-72.7262084	40.2	0.1	40.1	
Reference Area	PV	089	F	8/21/2024	9:00:20	692491.07	4493609.17	40.5708944	-72.7259837	40.2	0.1	40.1	
Reference Area	PV	089	G	8/21/2024	9:01:56	692472.41	4493606.53	40.5708750	-72.7262048	40.2	0.2	40.1	
Reference Area	PV	089	H	8/21/2024	9:03:01	692491.56	4493591.31	40.5707335	-72.7259834	40.2	0.2	40.1	
Reference Area	PV	089	I	8/21/2024	9:04:06	692478.84	4493600.07	40.5708153	-72.7261308	40.2	0.2	40.1	
Reference Area	PV	090	A	8/20/2024	22:24:44	695361.15	4493593.19	40.5700783	-72.6921085	40.2	1.0	39.3	
Reference Area	PV	090	B	8/20/2024	22:26:17	695363.87	4493596.71	40.5701094	-72.6920753	40.2	1.0	39.2	
Reference Area	PV	090	C	8/20/2024	22:27:35	695372.15	4493598.28	40.5701215	-72.6919771	40.2	1.0	39.2	
Reference Area	PV	090	D	8/20/2024	22:28:58	695367.37	4493605.92	40.5701914	-72.6920312	40.2	1.0	39.2	
Reference Area	PV	090	E	8/20/2024	22:30:04	695357.66	4493608.22	40.5702144	-72.6921451	40.2	1.0	39.2	
Reference Area	PV	090	F	8/20/2024	22:31:39	695356.76	4493598.57	40.5701278	-72.6921587	40.2	1.0	39.2	
Reference Area	PV	090	G	8/20/2024	22:32:54	695354.25	4493607.53	40.5702090	-72.6921856	40.2	1.0	39.2	
Reference Area	PV	090	H	8/20/2024	22:34:13	695349.07	4493600.75	40.5701492	-72.6922488	40.2	1.0	39.2	
Reference Area	PV	091	J	8/22/2024	6:48:40	669440.68	4492012.72	40.5615596	-72.9985520	29.0	0.1	28.9	
Reference Area	PV	091	K	8/22/2024	6:49:52	669441.08	4492004.79	40.5614882	-72.9985494	29.0	0.1	28.9	
Reference Area	PV	091	L	8/22/2024	6:51:16	669431.17	4491992.89	40.5613830	-72.9986696	29.0	0.1	28.9	
Reference Area	PV	091	N	8/22/2024	6:54:32	669446.25	4492008.59	40.5615213	-72.9984874	29.0	0.0	28.9	
Reference Area	PV	091	O	8/22/2024	6:55:46	669449.36	4491998.46	40.5614295	-72.9984534	29.0	0.0	28.9	
Reference Area	PV	091	P	8/22/2024	6:57:03	669449.42	4492005.46	40.5614925	-72.9984508	29.0	0.0	28.9	
Reference Area	PV	091	R	8/22/2024	6:59:46	669442.14	4491992.27	40.5613752	-72.9985402	29.0	0.0	28.9	
Reference Area	PV	091	S	8/22/2024	7:01:02	669440.93	4492003.56	40.5614771	-72.9985515	29.0	0.0	28.9	
Reference Area	PV	092	D	8/16/2024	21:54:09	672332.16	4491997.80	40.5608287	-72.9644220	28.0	1.5	26.6	
Reference Area	PV	092	E	8/16/2024	21:55:34	672312.82	4491990.41	40.5607662	-72.9646523	28.0	1.5	26.6	
Reference Area	PV	092	F	8/16/2024	21:56:51	672329.36	4492004.91	40.5608933	-72.9644531	28.0	1.5	26.6	
Reference Area	PV	092	H	8/16/2024	21:59:15	672329.72	4491994.88	40.5608029	-72.9644516	28.0	1.5	26.6	
Reference Area	PV	092	J	8/22/2024	6:16:49	672323.80	4492007.82	40.5609206	-72.9645179	28.0	0.2	27.8	
Reference Area	PV	092	K	8/22/2024	6:18:08	672317.94	4491994.50	40.5608019	-72.9645907	28.0	0.2	27.8	
Reference Area	PV	092	N	8/22/2024	6:22:26	672321.35	4492004.73	40.5608933	-72.9645477	28.0	0.2	27.9	
Reference Area	PV	092	O	8/22/2024	6:23:42	672320.83	4491997.39	40.5608273	-72.9645558	28.0	0.2	27.9	
Reference Area	PV	093	J	8/22/2024	2:26:45	675202.04	4491993.46	40.5601875	-72.9305451	34.4	1.6	32.9	
Reference Area	PV	093	K	8/22/2024	2:28:17	675198.48	4491992.81	40.5601824	-72.9305873	34.4	1.6	32.9	
Reference Area	PV	093	M	8/22/2024	2:30:55	675191.74	4492005.27	40.5602960	-72.9306634	34.4	1.6	32.9	
Reference Area	PV	093	O	8/22/2024	2:33:57	675198.01	4492002.45	40.5602693	-72.9305902	34.4	1.5	32.9	
Reference Area	PV	093	P	8/22/2024	2:35:21	675192.61	4491997.38	40.5602248	-72.9306554	34.4	1.5	32.9	
Reference Area	PV	093	Q	8/22/2024	2:36:41	675203.56	4491993.79	40.5601901	-72.9305271	34.4	1.5	32.9	
Reference Area	PV	093	S	8/22/2024	5:44:01	675197.32	4491993.15	40.5601857	-72.9306009	33.2	0.4	32.8	
Reference Area	PV	093	V	8/22/2024	5:47:40	675194.41	4492002.16	40.5602674	-72.9306328	33.2	0.4	32.8	
Reference Area	PV	094	A	8/21/2024	22:26:59	678078.21	4491990.04	40.5595433	-72.8965949	35.1	0.6	34.4	
Reference Area	PV	094	B	8/21/2024	22:28:34	678074.76	4491989.57	40.5595398	-72.8966357	35.1	0.7	34.4	
Reference Area	PV	094	C	8/21/2024	22:30:08	678074.42	4491994.62	40.5595853	-72.8966383	35.1	0.7	34.4	
Reference Area	PV	094	D	8/21/2024	22:31:29	678081.08	4491998.45	40.5596184	-72.8965586	35.1	0.7	34.4	
Reference Area	PV	094	E	8/21/2024	22:32:37	678072.60	4491999.60	40.5596306	-72.8966584	35.1	0.7	34.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	094	F	8/21/2024	22:33:49	678078.37	4492005.28	40.5596804	-72.8965887	35.1	0.7	34.4	
Reference Area	PV	094	G	8/21/2024	22:34:58	678075.23	4492003.46	40.5596647	-72.8966263	35.1	0.7	34.4	
Reference Area	PV	094	H	8/21/2024	22:36:21	678088.19	4491991.24	40.5595519	-72.8964767	35.1	0.7	34.4	
Reference Area	PV	095	C	8/21/2024	14:51:16	680957.61	4491992.51	40.5589414	-72.8626059	36.0	1.4	34.6	
Reference Area	PV	095	E	8/21/2024	14:53:45	680952.35	4492005.80	40.5590622	-72.8626642	36.0	1.4	34.6	
Reference Area	PV	095	F	8/21/2024	14:55:00	680961.38	4492010.87	40.5591059	-72.8625561	36.0	1.4	34.6	
Reference Area	PV	095	G	8/21/2024	14:56:16	680963.26	4492003.20	40.5590364	-72.8625361	36.0	1.4	34.6	
Reference Area	PV	095	I	8/21/2024	14:58:57	680967.75	4491997.23	40.5589817	-72.8624848	36.0	1.3	34.6	
Reference Area	PV	095	J	8/22/2024	10:56:29	680947.87	4492002.20	40.5590308	-72.8627181	37.2	0.6	36.6	
Reference Area	PV	095	K	8/22/2024	10:57:58	680962.37	4491987.85	40.5588984	-72.8625510	37.2	0.6	36.6	
Reference Area	PV	095	N	8/22/2024	11:02:14	680953.40	4491991.85	40.5589364	-72.8626558	37.2	0.6	36.6	
Reference Area	PV	096	A	8/21/2024	11:29:11	683839.92	4491990.89	40.5582921	-72.8285848	37.8	1.1	36.7	
Reference Area	PV	096	B	8/21/2024	11:31:49	683839.23	4492011.80	40.5584805	-72.8285868	37.8	1.1	36.7	
Reference Area	PV	096	C	8/21/2024	11:33:13	683829.05	4491997.80	40.5583568	-72.8287111	37.8	1.1	36.7	
Reference Area	PV	096	E	8/21/2024	11:35:41	683832.07	4492006.92	40.5584382	-72.8286728	37.8	1.1	36.7	
Reference Area	PV	096	G	8/21/2024	11:38:16	683833.25	4491990.21	40.5582875	-72.8286637	37.8	1.1	36.7	
Reference Area	PV	096	H	8/21/2024	11:39:57	683850.64	4492007.34	40.5584378	-72.8284535	37.8	1.2	36.6	
Reference Area	PV	096	J	8/22/2024	22:41:23	683847.01	4492007.38	40.5584390	-72.8284963	38.1	0.4	37.7	
Reference Area	PV	096	L	8/22/2024	22:43:50	683848.16	4491995.72	40.5583338	-72.8284861	38.1	0.4	37.7	
Reference Area	PV	097	A	8/21/2024	7:06:36	686708.54	4492001.25	40.5577438	-72.7947228	38.7	-0.1	38.8	
Reference Area	PV	097	B	8/21/2024	7:08:34	686732.85	4491999.86	40.5577258	-72.7944363	38.7	-0.1	38.8	
Reference Area	PV	097	C	8/21/2024	7:09:45	686719.64	4491988.08	40.5576227	-72.7945957	38.7	-0.1	38.8	
Reference Area	PV	097	D	8/21/2024	7:11:15	686720.42	4492013.52	40.5578515	-72.7945790	38.7	-0.1	38.8	
Reference Area	PV	097	E	8/21/2024	7:12:53	686711.01	4491991.54	40.5576558	-72.7946965	38.7	-0.1	38.8	
Reference Area	PV	097	F	8/21/2024	7:14:40	686728.44	4492008.06	40.5578006	-72.7944859	38.7	-0.1	38.8	
Reference Area	PV	097	G	8/21/2024	7:16:10	686729.25	4491993.60	40.5576702	-72.7944806	38.7	-0.1	38.8	
Reference Area	PV	097	H	8/21/2024	7:17:45	686712.44	4492009.61	40.5578181	-72.7946743	38.7	-0.1	38.8	
Reference Area	PV	098	A	8/21/2024	7:43:10	689600.72	4492012.33	40.5571865	-72.7605836	41.1	-0.1	41.3	
Reference Area	PV	098	B	8/21/2024	7:44:42	689599.15	4491988.80	40.5569751	-72.7606092	41.1	-0.1	41.3	
Reference Area	PV	098	C	8/21/2024	7:45:54	689611.60	4492001.68	40.5570882	-72.7604584	41.1	-0.1	41.3	
Reference Area	PV	098	D	8/21/2024	7:47:14	689586.56	4491999.76	40.5570766	-72.7607545	41.1	-0.1	41.3	
Reference Area	PV	098	E	8/21/2024	7:49:08	689609.37	4491994.28	40.5570221	-72.7604869	41.1	-0.1	41.3	
Reference Area	PV	098	G	8/21/2024	7:52:02	689592.34	4491989.60	40.5569838	-72.7606893	41.1	-0.1	41.3	
Reference Area	PV	098	H	8/21/2024	7:54:07	689609.86	4492007.48	40.5571408	-72.7604772	41.1	-0.1	41.3	
Reference Area	PV	098	I	8/21/2024	7:55:18	689598.41	4491999.46	40.5570712	-72.7606147	41.1	-0.1	41.3	
Reference Area	PV	099	A	8/21/2024	8:21:39	692489.20	4492004.51	40.5564500	-72.7264948	41.1	0.0	41.2	
Reference Area	PV	099	B	8/21/2024	8:23:31	692470.21	4491994.64	40.5563655	-72.7267219	41.1	0.0	41.2	
Reference Area	PV	099	C	8/21/2024	8:24:58	692474.20	4492012.13	40.5565221	-72.7266695	41.1	0.0	41.2	
Reference Area	PV	099	D	8/21/2024	8:26:34	692487.65	4491990.94	40.5563282	-72.7265172	41.1	0.0	41.2	
Reference Area	PV	099	E	8/21/2024	8:28:04	692468.16	4492004.05	40.5564507	-72.7267433	41.1	0.0	41.2	
Reference Area	PV	099	F	8/21/2024	8:29:37	692486.17	4492011.79	40.5565162	-72.7265284	41.1	0.0	41.1	
Reference Area	PV	099	G	8/21/2024	8:31:05	692479.37	4491989.24	40.5563148	-72.7266155	41.1	0.0	41.1	
Reference Area	PV	099	H	8/21/2024	8:32:22	692492.71	4491999.41	40.5564033	-72.7264549	41.1	0.0	41.1	
Reference Area	PV	100	A	8/20/2024	21:58:20	695350.27	4492000.30	40.5557423	-72.6927296	40.8	0.8	40.0	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	100	B	8/20/2024	22:00:08	695371.81	4492000.33	40.5557375	-72.6924754	40.8	0.8	40.0	
Reference Area	PV	100	D	8/20/2024	22:02:29	695360.31	4491989.52	40.5556429	-72.6926145	40.8	0.8	40.0	
Reference Area	PV	100	E	8/20/2024	22:04:00	695351.56	4492008.64	40.5558171	-72.6927118	40.8	0.8	40.0	
Reference Area	PV	100	F	8/20/2024	22:05:11	695370.76	4491994.17	40.5556823	-72.6924897	40.8	0.9	40.0	
Reference Area	PV	100	G	8/20/2024	22:06:32	695371.93	4492007.03	40.5557978	-72.6924719	40.8	0.9	40.0	
Reference Area	PV	100	H	8/20/2024	22:08:16	695352.85	4491990.85	40.5556567	-72.6927021	40.8	0.9	40.0	
Reference Area	PV	100	I	8/20/2024	22:09:36	695360.92	4492000.97	40.5557458	-72.6926037	40.8	0.9	40.0	
Reference Area	PV	101	A	8/16/2024	17:33:35	669430.90	4490396.62	40.5470112	-72.9991008	29.6	0.6	29.0	
Reference Area	PV	101	B	8/16/2024	17:34:57	669447.00	4490398.54	40.5470252	-72.9989103	29.6	0.6	29.0	
Reference Area	PV	101	C	8/16/2024	17:36:18	669441.64	4490392.48	40.5469717	-72.9989752	29.6	0.6	29.0	
Reference Area	PV	101	D	8/16/2024	17:37:30	669433.56	4490388.97	40.5469418	-72.9990715	29.6	0.6	29.0	
Reference Area	PV	101	E	8/16/2024	17:38:51	669433.43	4490398.24	40.5470253	-72.9990705	29.6	0.6	29.0	
Reference Area	PV	101	F	8/16/2024	17:40:09	669438.94	4490408.50	40.5471165	-72.9990027	29.6	0.6	29.0	
Reference Area	PV	101	G	8/16/2024	17:41:20	669443.83	4490402.39	40.5470605	-72.9989467	29.6	0.6	29.0	
Reference Area	PV	101	H	8/16/2024	17:42:37	669434.22	4490405.89	40.5470940	-72.9990591	29.6	0.6	28.9	
Reference Area	PV	102	J	8/22/2024	8:47:51	672329.89	4490403.18	40.5464724	-72.9648837	29.6	-0.1	29.7	
Reference Area	PV	102	K	8/22/2024	8:49:28	672309.07	4490396.89	40.5464201	-72.9651311	29.6	-0.1	29.7	
Reference Area	PV	102	L	8/22/2024	8:50:50	672330.50	4490396.60	40.5464130	-72.9648783	29.6	-0.1	29.7	
Reference Area	PV	102	M	8/22/2024	8:52:14	672309.68	4490409.33	40.5465320	-72.9651205	29.6	-0.1	29.7	
Reference Area	PV	102	N	8/22/2024	8:53:37	672324.04	4490394.14	40.5463922	-72.9649552	29.6	-0.1	29.6	
Reference Area	PV	102	O	8/22/2024	8:55:23	672318.02	4490413.21	40.5465652	-72.9650210	29.6	-0.1	29.6	
Reference Area	PV	102	P	8/22/2024	8:56:36	672321.71	4490388.37	40.5463408	-72.9649842	29.6	-0.1	29.6	
Reference Area	PV	102	Q	8/22/2024	8:57:57	672317.98	4490396.47	40.5464145	-72.9650261	29.6	-0.1	29.6	
Reference Area	PV	103	J	8/22/2024	1:41:27	675201.45	4490392.94	40.5457780	-72.9309959	32.6	1.6	31.0	
Reference Area	PV	103	K	8/22/2024	1:42:46	675198.70	4490389.26	40.5457455	-72.9310293	32.6	1.6	31.0	
Reference Area	PV	103	L	8/22/2024	1:44:07	675198.31	4490394.79	40.5457954	-72.9310324	32.6	1.6	31.0	
Reference Area	PV	103	M	8/22/2024	1:45:20	675195.51	4490397.06	40.5458164	-72.9310648	32.6	1.6	31.0	
Reference Area	PV	103	N	8/22/2024	1:46:33	675194.34	4490401.35	40.5458553	-72.9310774	32.6	1.6	31.0	
Reference Area	PV	103	O	8/22/2024	1:48:54	675198.71	4490408.09	40.5459150	-72.9310240	32.6	1.6	31.0	
Reference Area	PV	103	P	8/22/2024	1:50:37	675191.82	4490404.07	40.5458803	-72.9311064	32.6	1.6	31.0	
Reference Area	PV	103	R	8/22/2024	1:53:19	675211.82	4490397.06	40.5458129	-72.9308723	32.6	1.6	31.0	
Reference Area	PV	104	A	8/21/2024	23:04:43	678087.14	4490394.31	40.5451752	-72.8969392	36.0	0.9	35.1	
Reference Area	PV	104	B	8/21/2024	23:06:09	678081.21	4490393.07	40.5451653	-72.8970095	36.0	0.9	35.1	
Reference Area	PV	104	C	8/21/2024	23:07:24	678075.92	4490388.53	40.5451256	-72.8970732	36.0	0.9	35.1	
Reference Area	PV	104	D	8/21/2024	23:08:44	678074.96	4490401.24	40.5452402	-72.8970810	36.0	0.9	35.0	
Reference Area	PV	104	E	8/21/2024	23:10:12	678079.28	4490391.19	40.5451488	-72.8970328	36.0	0.9	35.0	
Reference Area	PV	104	F	8/21/2024	23:12:18	678071.91	4490394.78	40.5451827	-72.8971188	36.0	0.9	35.0	
Reference Area	PV	104	H	8/21/2024	23:14:42	678077.47	4490404.79	40.5452717	-72.8970503	36.0	1.0	35.0	
Reference Area	PV	104	I	8/21/2024	23:16:04	678086.85	4490402.55	40.5452495	-72.8969403	36.0	1.0	35.0	
Reference Area	PV	105	A	8/21/2024	14:24:22	680970.37	4490401.79	40.5446179	-72.8629108	35.1	1.5	33.6	
Reference Area	PV	105	B	8/21/2024	14:25:34	680967.16	4490392.14	40.5445318	-72.8629514	35.1	1.5	33.6	
Reference Area	PV	105	E	8/21/2024	14:29:11	680960.48	4490399.40	40.5445986	-72.8630282	35.1	1.5	33.6	
Reference Area	PV	105	I	8/21/2024	14:34:12	680964.08	4490406.95	40.5446658	-72.8629836	35.1	1.4	33.6	
Reference Area	PV	105	J	8/22/2024	10:03:20	680948.86	4490397.42	40.5445833	-72.8631659	36.3	0.2	36.0	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	105	K	8/22/2024	10:04:31	680953.30	4490411.47	40.5447088	-72.8631095	36.3	0.3	36.0	
Reference Area	PV	105	L	8/22/2024	10:05:47	680959.30	4490387.70	40.5444935	-72.8630455	36.3	0.3	36.0	
Reference Area	PV	105	M	8/22/2024	10:07:10	680969.79	4490395.98	40.5445658	-72.8629193	36.3	0.3	36.0	
Reference Area	PV	106	A	8/21/2024	12:10:57	683840.59	4490412.67	40.5440841	-72.8290360	40.2	1.3	38.9	
Reference Area	PV	106	B	8/21/2024	12:12:33	683839.61	4490387.69	40.5438595	-72.8290548	40.2	1.3	38.9	
Reference Area	PV	106	C	8/21/2024	12:13:49	683827.59	4490400.16	40.5439744	-72.8291930	40.2	1.3	38.9	
Reference Area	PV	106	D	8/21/2024	12:15:17	683851.69	4490402.34	40.5439887	-72.8289080	40.2	1.3	38.9	
Reference Area	PV	106	E	8/21/2024	12:16:28	683831.00	4490410.18	40.5440638	-72.8291499	40.2	1.3	38.9	
Reference Area	PV	106	G	8/21/2024	12:19:07	683831.19	4490393.02	40.5439093	-72.8291526	40.2	1.4	38.9	
Reference Area	PV	106	H	8/21/2024	12:20:36	683850.14	4490407.52	40.5440356	-72.8289248	40.2	1.4	38.9	
Reference Area	PV	106	I	8/21/2024	12:21:47	683841.33	4490397.99	40.5439518	-72.8290315	40.2	1.4	38.9	
Reference Area	PV	107	A	8/21/2024	3:48:25	686724.81	4490395.72	40.5432867	-72.7950051	37.8	0.9	36.9	
Reference Area	PV	107	B	8/21/2024	3:49:44	686724.83	4490389.00	40.5432262	-72.7950069	37.8	0.9	36.9	
Reference Area	PV	107	C	8/21/2024	3:50:58	686716.09	4490390.48	40.5432415	-72.7951096	37.8	0.9	36.9	
Reference Area	PV	107	D	8/21/2024	3:52:15	686718.64	4490397.76	40.5433064	-72.7950774	37.8	0.9	36.9	
Reference Area	PV	107	E	8/21/2024	3:53:30	686729.20	4490402.02	40.5433424	-72.7949515	37.8	0.9	36.9	
Reference Area	PV	107	F	8/21/2024	3:54:50	686718.82	4490407.63	40.5433953	-72.7950723	37.8	0.9	36.9	
Reference Area	PV	107	H	8/21/2024	3:57:40	686709.57	4490393.90	40.5432737	-72.7951855	37.8	0.8	37.0	
Reference Area	PV	107	I	8/21/2024	3:58:55	686715.87	4490408.66	40.5434052	-72.7951068	37.8	0.8	37.0	
Reference Area	PV	108	A	8/21/2024	4:23:43	689601.39	4490393.22	40.5426111	-72.7610614	39.3	0.7	38.7	
Reference Area	PV	108	B	8/21/2024	4:25:24	689604.70	4490397.76	40.5426512	-72.7610210	39.3	0.7	38.7	
Reference Area	PV	108	C	8/21/2024	4:26:40	689593.78	4490388.41	40.5425695	-72.7611526	39.3	0.6	38.7	
Reference Area	PV	108	D	8/21/2024	4:27:55	689594.96	4490393.87	40.5426184	-72.7611371	39.3	0.6	38.7	
Reference Area	PV	108	E	8/21/2024	4:29:13	689593.68	4490400.58	40.5426791	-72.7611502	39.3	0.6	38.7	
Reference Area	PV	108	G	8/21/2024	4:31:50	689594.99	4490408.88	40.5427535	-72.7611322	39.3	0.6	38.7	
Reference Area	PV	108	H	8/21/2024	4:33:25	689599.71	4490403.12	40.5427006	-72.7610783	39.3	0.6	38.7	
Reference Area	PV	108	I	8/21/2024	4:34:42	689603.34	4490414.93	40.5428061	-72.7610319	39.3	0.6	38.7	Outside of watch circle.
Reference Area	PV	109	A	8/21/2024	4:56:53	692486.11	4490392.05	40.5419356	-72.7270223	41.1	0.4	40.7	
Reference Area	PV	109	B	8/21/2024	4:59:14	692472.62	4490394.86	40.5419640	-72.7271807	41.1	0.4	40.7	
Reference Area	PV	109	C	8/21/2024	5:12:16	692474.31	4490398.48	40.5419962	-72.7271596	41.1	0.3	40.8	
Reference Area	PV	109	D	8/21/2024	5:13:29	692476.24	4490405.95	40.5420630	-72.7271346	41.1	0.3	40.8	
Reference Area	PV	109	E	8/21/2024	5:14:44	692478.42	4490409.93	40.5420983	-72.7271076	41.1	0.3	40.8	
Reference Area	PV	109	F	8/21/2024	5:16:07	692485.22	4490403.79	40.5420415	-72.7270293	41.1	0.3	40.8	
Reference Area	PV	109	G	8/21/2024	5:17:26	692483.28	4490399.24	40.5420010	-72.7270536	41.1	0.3	40.8	
Reference Area	PV	109	H	8/21/2024	5:18:44	692468.52	4490401.15	40.5420216	-72.7272271	41.1	0.3	40.8	
Reference Area	PV	110	B	8/20/2024	21:31:26	695361.80	4490411.26	40.5414357	-72.6930847	42.4	0.6	41.7	
Reference Area	PV	110	C	8/20/2024	21:32:40	695348.09	4490402.86	40.5413633	-72.6932491	42.4	0.6	41.7	
Reference Area	PV	110	D	8/20/2024	21:34:02	695371.59	4490399.08	40.5413237	-72.6929729	42.4	0.6	41.7	
Reference Area	PV	110	E	8/20/2024	21:35:28	695353.26	4490409.17	40.5414189	-72.6931861	42.4	0.7	41.7	
Reference Area	PV	110	F	8/20/2024	21:36:42	695370.37	4490394.30	40.5412810	-72.6929888	42.4	0.7	41.7	
Reference Area	PV	110	G	8/20/2024	21:38:07	695351.04	4490393.80	40.5412810	-72.6932171	42.4	0.7	41.7	
Reference Area	PV	110	H	8/20/2024	21:39:38	695369.87	4490405.80	40.5413846	-72.6929912	42.4	0.7	41.7	
Reference Area	PV	110	I	8/20/2024	21:40:47	695357.95	4490398.02	40.5413174	-72.6931342	42.4	0.7	41.7	
Reference Area	PV	111	G	8/16/2024	17:14:07	669440.90	4488798.41	40.5326197	-72.9994111	32.9	0.5	32.4	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 _W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	111	K	8/22/2024	7:28:25	669440.21	4488788.02	40.5325263	-72.9994220	32.3	-0.1	32.4	
Reference Area	PV	111	L	8/22/2024	7:29:53	669428.87	4488807.78	40.5327066	-72.9995505	32.3	-0.1	32.4	
Reference Area	PV	111	M	8/22/2024	7:31:22	669436.23	4488812.17	40.5327446	-72.9994625	32.3	-0.1	32.4	
Reference Area	PV	111	N	8/22/2024	7:34:37	669445.12	4488792.24	40.5325633	-72.9993629	32.3	-0.1	32.4	
Reference Area	PV	111	O	8/22/2024	7:36:12	669444.68	4488806.02	40.5326875	-72.9993644	32.3	-0.1	32.4	
Reference Area	PV	111	Q	8/22/2024	7:39:15	669433.87	4488795.24	40.5325926	-72.9994949	32.3	-0.1	32.4	
Reference Area	PV	111	R	8/22/2024	7:40:46	669429.37	4488805.19	40.5326831	-72.9995453	32.3	-0.1	32.4	
Reference Area	PV	112	J	8/22/2024	8:07:09	672321.39	4488788.62	40.5319379	-72.9654240	34.7	-0.1	34.9	
Reference Area	PV	112	K	8/22/2024	8:08:20	672306.93	4488803.17	40.5320719	-72.9655906	34.7	-0.1	34.9	
Reference Area	PV	112	L	8/22/2024	8:10:31	672327.05	4488792.76	40.5319740	-72.9653561	34.7	-0.1	34.9	
Reference Area	PV	112	M	8/22/2024	8:11:51	672324.98	4488800.95	40.5320481	-72.9653783	34.7	-0.1	34.9	
Reference Area	PV	112	N	8/22/2024	8:13:31	672322.04	4488812.82	40.5321556	-72.9654097	34.7	-0.1	34.9	
Reference Area	PV	112	O	8/22/2024	8:15:14	672320.20	4488804.88	40.5320845	-72.9654336	34.7	-0.1	34.9	
Reference Area	PV	112	R	8/22/2024	8:20:14	672317.52	4488786.90	40.5319232	-72.9654701	34.7	-0.1	34.9	
Reference Area	PV	112	S	8/22/2024	8:21:30	672308.57	4488793.86	40.5319877	-72.9655738	34.7	-0.1	34.9	
Reference Area	PV	113	J	8/22/2024	0:53:12	675209.17	4488796.99	40.5314079	-72.9313470	35.1	1.5	33.6	
Reference Area	PV	113	K	8/22/2024	0:54:25	675203.57	4488799.70	40.5314335	-72.9314123	35.1	1.5	33.6	
Reference Area	PV	113	L	8/22/2024	0:55:40	675201.48	4488792.38	40.5313681	-72.9314390	35.1	1.5	33.6	
Reference Area	PV	113	M	8/22/2024	0:56:57	675201.73	4488796.26	40.5314029	-72.9314349	35.1	1.5	33.6	
Reference Area	PV	113	N	8/22/2024	0:58:11	675197.47	4488793.18	40.5313761	-72.9314861	35.1	1.5	33.6	
Reference Area	PV	113	P	8/22/2024	1:00:57	675193.91	4488795.19	40.5313950	-72.9315275	35.1	1.5	33.6	
Reference Area	PV	113	Q	8/22/2024	1:02:15	675198.40	4488803.72	40.5314708	-72.9314722	35.1	1.5	33.6	
Reference Area	PV	113	R	8/22/2024	1:03:29	675205.36	4488804.19	40.5314736	-72.9313899	35.1	1.5	33.6	
Reference Area	PV	114	A	8/21/2024	23:43:20	678088.65	4488800.97	40.5308303	-72.8973701	36.6	1.1	35.4	
Reference Area	PV	114	B	8/21/2024	23:44:57	678086.40	4488806.92	40.5308843	-72.8973949	36.6	1.1	35.4	
Reference Area	PV	114	C	8/21/2024	23:46:12	678079.62	4488803.72	40.5308570	-72.8974758	36.6	1.2	35.4	
Reference Area	PV	114	D	8/21/2024	23:47:32	678078.69	4488794.49	40.5307741	-72.8974894	36.6	1.2	35.4	
Reference Area	PV	114	E	8/21/2024	23:49:25	678085.33	4488795.40	40.5307808	-72.8974108	36.6	1.2	35.4	
Reference Area	PV	114	F	8/21/2024	23:51:53	678081.48	4488800.03	40.5308233	-72.8974549	36.6	1.2	35.4	
Reference Area	PV	114	G	8/21/2024	23:53:03	678074.96	4488799.71	40.5308218	-72.8975319	36.6	1.2	35.4	
Reference Area	PV	114	H	8/21/2024	23:54:37	678073.79	4488789.65	40.5307315	-72.8975486	36.6	1.2	35.4	
Reference Area	PV	115	A	8/21/2024	13:13:57	680959.14	4488811.88	40.5303069	-72.8634983	37.2	1.5	35.7	
Reference Area	PV	115	B	8/21/2024	13:15:39	680960.05	4488788.69	40.5300980	-72.8634942	37.2	1.5	35.7	
Reference Area	PV	115	C	8/21/2024	13:17:03	680949.46	4488799.04	40.5301934	-72.8636162	37.2	1.5	35.7	
Reference Area	PV	115	D	8/21/2024	13:18:33	680971.12	4488801.70	40.5302127	-72.8633598	37.2	1.5	35.7	
Reference Area	PV	115	E	8/21/2024	13:19:53	680952.52	4488806.61	40.5302609	-72.8635779	37.2	1.5	35.7	
Reference Area	PV	115	F	8/21/2024	13:21:04	680970.89	4488793.38	40.5301378	-72.8633649	37.2	1.5	35.7	
Reference Area	PV	115	G	8/21/2024	13:22:11	680953.63	4488792.45	40.5301332	-72.8635688	37.2	1.5	35.7	
Reference Area	PV	115	H	8/21/2024	13:23:44	680969.83	4488807.14	40.5302619	-72.8633735	37.2	1.5	35.6	
Reference Area	PV	116	A	8/21/2024	12:35:45	683841.63	4488813.25	40.5296851	-72.8294886	38.7	1.4	37.3	
Reference Area	PV	116	B	8/21/2024	12:37:57	683840.41	4488788.63	40.5294638	-72.8295102	38.7	1.4	37.3	
Reference Area	PV	116	C	8/21/2024	12:39:21	683829.25	4488801.29	40.5295802	-72.8296382	38.7	1.4	37.3	
Reference Area	PV	116	D	8/21/2024	12:40:44	683851.03	4488802.33	40.5295847	-72.8293809	38.7	1.4	37.3	
Reference Area	PV	116	E	8/21/2024	12:42:01	683832.98	4488810.10	40.5296587	-72.8295916	38.7	1.4	37.3	

Area	Sample Type	Station ID	Replicate	Date	Sampling Time (EST)	X_NAD83_UTM1 8N_m	Y_NAD83_UTM1 8N_m	Latitude_NAD83 _N	Longitude_NAD83 3_W	Depth (m)	Tide Height (m)	Tide Corrected Depth (m)	Comments
Reference Area	PV	116	F	8/21/2024	12:43:29	683849.51	4488793.55	40.5295060	-72.8294014	38.7	1.5	37.3	
Reference Area	PV	116	G	8/21/2024	12:44:39	683830.62	4488791.68	40.5294934	-72.8296248	38.7	1.5	37.3	
Reference Area	PV	116	H	8/21/2024	12:51:02	683848.76	4488807.81	40.5296346	-72.8294061	38.7	1.5	37.2	
Reference Area	PV	117	A	8/21/2024	3:22:04	686731.08	4488798.53	40.5289069	-72.7954027	41.5	1.1	40.4	
Reference Area	PV	117	B	8/21/2024	3:23:09	686724.16	4488791.47	40.5288449	-72.7954865	41.5	1.1	40.4	
Reference Area	PV	117	C	8/21/2024	3:24:27	686716.29	4488792.24	40.5288536	-72.7955791	41.5	1.1	40.4	
Reference Area	PV	117	D	8/21/2024	3:25:45	686722.97	4488797.29	40.5288976	-72.7954988	41.5	1.1	40.4	
Reference Area	PV	117	E	8/21/2024	3:27:03	686711.32	4488789.71	40.5288320	-72.7956385	41.5	1.1	40.4	
Reference Area	PV	117	G	8/21/2024	3:29:33	686713.79	4488804.69	40.5289663	-72.7956049	41.5	1.0	40.4	
Reference Area	PV	117	H	8/21/2024	3:30:50	686718.61	4488809.11	40.5290050	-72.7955467	41.5	1.0	40.4	
Reference Area	PV	117	I	8/21/2024	3:32:08	686728.85	4488800.82	40.5289280	-72.7954284	41.5	1.0	40.4	
Reference Area	PV	118	A	8/21/2024	2:52:00	689608.51	4488792.72	40.5282016	-72.7614572	41.1	1.3	39.9	
Reference Area	PV	118	G	8/21/2024	2:58:14	689596.15	4488808.80	40.5283492	-72.7615982	41.1	1.2	39.9	
Reference Area	PV	118	H	8/21/2024	2:59:15	689607.97	4488803.93	40.5283027	-72.7614602	41.1	1.2	39.9	
Reference Area	PV	118	I	8/21/2024	3:00:42	689596.43	4488806.51	40.5283285	-72.7615956	41.1	1.2	39.9	
Reference Area	PV	118	J	8/21/2024	6:32:35	689590.35	4488798.11	40.5282543	-72.7616698	41.1	-0.1	41.2	
Reference Area	PV	118	K	8/21/2024	6:33:51	689604.74	4488811.85	40.5283747	-72.7614959	41.1	-0.1	41.2	
Reference Area	PV	118	L	8/21/2024	6:35:18	689611.65	4488798.58	40.5282537	-72.7614184	41.1	-0.1	41.2	
Reference Area	PV	118	M	8/21/2024	6:37:01	689588.18	4488808.43	40.5283477	-72.7616923	41.1	-0.1	41.2	
Reference Area	PV	119	A	8/21/2024	2:13:58	692490.60	4488799.12	40.5275952	-72.7274541	42.7	1.5	41.2	
Reference Area	PV	119	D	8/21/2024	2:17:20	692477.36	4488806.31	40.5276630	-72.7276082	42.7	1.5	41.2	
Reference Area	PV	119	E	8/21/2024	2:18:34	692485.18	4488809.03	40.5276857	-72.7275151	42.7	1.5	41.2	
Reference Area	PV	119	F	8/21/2024	2:19:42	692479.31	4488788.87	40.5275056	-72.7275905	42.7	1.5	41.2	
Reference Area	PV	119	G	8/21/2024	2:20:57	692475.86	4488791.50	40.5275300	-72.7276304	42.7	1.5	41.2	
Reference Area	PV	119	J	8/21/2024	5:35:59	692472.15	4488807.49	40.5276748	-72.7276693	42.7	0.2	42.5	
Reference Area	PV	119	K	8/21/2024	5:37:15	692473.21	4488804.83	40.5276506	-72.7276576	42.7	0.2	42.5	
Reference Area	PV	119	L	8/21/2024	5:38:33	692470.95	4488799.99	40.5276076	-72.7276857	42.7	0.2	42.5	
Reference Area	PV	120	A	8/20/2024	20:57:40	695352.75	4488790.79	40.5268509	-72.6936920	44.8	0.4	44.4	
Reference Area	PV	120	B	8/20/2024	21:00:01	695367.13	4488808.41	40.5270061	-72.6935169	44.8	0.4	44.4	
Reference Area	PV	120	C	8/20/2024	21:01:20	695352.15	4488804.81	40.5269772	-72.6936947	44.8	0.4	44.4	
Reference Area	PV	120	D	8/20/2024	21:02:55	695370.10	4488795.35	40.5268878	-72.6934859	44.8	0.4	44.4	
Reference Area	PV	120	E	8/20/2024	21:04:46	695357.72	4488811.88	40.5270396	-72.6936268	44.8	0.5	44.3	
Reference Area	PV	120	F	8/20/2024	21:06:23	695366.00	4488790.07	40.5268413	-72.6935359	44.8	0.5	44.3	
Reference Area	PV	120	G	8/20/2024	21:07:37	695349.72	4488797.01	40.5269076	-72.6937258	44.8	0.5	44.3	
Reference Area	PV	120	H	8/20/2024	21:09:31	695371.99	4488801.43	40.5269421	-72.6934617	44.8	0.5	44.3	

Appendix B – Plan View Image Analysis Results by Station

Area	StationID	PV Replicate (n)	Mean Tide Corrected Depth (m)	Number of Sea Scallops (n)	Sea Scallop Shell Height (mm)	Fauna Present
Lease Area	001	8	26.1	1	11.5	Crab, Hermit Crab, Northern Sea Robin, Sand Dollar, Sea Scallop, Snail
Lease Area	002	8	24.5	0	N/A	Astarte Clam, Cancer Crab, Crab, Hermit Crab, Northern Sea Robin, Sand Dollar, Sea Star, Snail
Lease Area	003	8	27.1	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Lease Area	004	8	28.6	0	N/A	Hermit Crab, Sand Dollar, Snail
Lease Area	005	8	25.6	0	N/A	Hermit Crab, Sand Dollar
Lease Area	006	8	26.8	0	N/A	Hermit Crab, Sand Dollar
Lease Area	007	8	28.2	0	N/A	Cancer Crab, Hermit Crab, Sand Dollar
Lease Area	008	8	30.4	0	N/A	Cancer Crab, Cerianthid, Clam, Hermit Crab, Sand Dollar
Lease Area	009	8	31.7	0	N/A	Barnacles, Cancer Crab, Cerianthid, Crab, Mussels, Sea Star, Skate, Snail
Lease Area	010	8	29.6	0	N/A	Crab, Hermit Crab, Sand Dollar
Lease Area	011	8	31.3	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar, Sea Star, Silver Hake
Lease Area	012	8	30.2	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Lease Area	013	8	31.0	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar
Lease Area	014	8	31.0	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail, Unidentified Fish
Lease Area	015	8	31.6	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar
Lease Area	016	8	32.9	0	N/A	Crab, Hermit Crab, Sand Dollar
Lease Area	017	8	34.1	0	N/A	Cancer Crab, Crab, Sand Dollar
Lease Area	018	8	33.7	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar
Lease Area	019	8	35.0	0	N/A	Astarte Clam, Cancer Crab, Cerianthid, Crab, Flounder, Hermit Crab, Sand Dollar, Sea Star, Silver Hake
Lease Area	020	8	35.0	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar, Skate
Lease Area	021	8	34.9	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Lease Area	022	8	31.8	0	N/A	Cancer Crab, Crab, Hermit Crab, Hydroids, Sand Dollar
Lease Area	023	8	31.7	0	N/A	Crab, Sand Dollar
Lease Area	024	8	31.9	0	N/A	Cancer Crab, Crab, Flounder, Hermit Crab, Sand Dollar, Snail
Lease Area	025	8	31.8	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar
Lease Area	026	8	34.3	0	N/A	Cancer Crab, Crab, Flounder, Hermit Crab, Sand Dollar
Lease Area	027	8	34.2	0	N/A	Crab, Flounder, Hermit Crab, Nudibranch, Sand Dollar, Sea Star
Lease Area	028	8	36.0	1	16.3	Clam, Crab, Hermit Crab, Nudibranch, Sand Dollar, Sea Scallop, Sea Star, Shrimp, Snail
Lease Area	029	8	37.1	0	N/A	Cancer Crab, Common Whelk, Crab, Flounder, Hermit Crab, Sand Dollar, Unidentified Hake
Lease Area	030	8	38.5	0	N/A	Anemone, Barnacles, Crab, Crepidula, Flounder, Hermit Crab, Sand Dollar
Lease Area	031	8	39.0	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar, Sea Star
Lease Area	032	8	39.8	0	N/A	Astarte Clam, Cancer Crab, Crab, Flounder, Hermit Crab, Sand Dollar, Silver Hake
Lease Area	033	8	40.2	0	N/A	Crab, Hermit Crab, Sand Dollar, Shrimp
Lease Area	034	8	41.8	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar, Snail
Lease Area	035	8	33.2	0	N/A	Crab, Hermit Crab, Sand Dollar
Lease Area	036	8	34.2	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Lease Area	037	7	36.3	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar
Lease Area	038	8	36.3	0	N/A	Crab, Hermit Crab, Sand Dollar
Lease Area	039	8	35.6	0	N/A	Cancer Crab, Crab, Hermit Crab, Nudibranch, Sand Dollar, Snail, Sponge
Lease Area	040	8	37.0	0	N/A	Crab, Flounder, Hermit Crab, Nudibranch, Sand Dollar, Snail
Lease Area	041	8	36.6	0	N/A	Barnacles, Cancer Crab, Crab, Crepidula, Hermit Crab, Sand Dollar
Lease Area	042	8	38.5	0	N/A	Cancer Crab, Cerianthid, Crab, Hermit Crab, Sand Dollar, Shrimp
Lease Area	043	8	38.9	0	N/A	Crab, Hermit Crab, Sand Dollar, Shrimp
Lease Area	044	8	39.2	0	N/A	Crab, Hermit Crab, Sand Dollar, Silver Hake
Lease Area	045	8	40.1	0	N/A	Astarte Clam, Cancer Crab, Cerianthid, Crab, Flounder, Hermit Crab, Sand Dollar, Shrimp, Snail
Lease Area	046	8	37.2	0	N/A	Crab, Flounder, Hermit Crab, Sand Dollar, Snail
Lease Area	047	8	37.8	0	N/A	Cancer Crab, Crab, Nudibranch, Sand Dollar, Snail
Lease Area	048	8	36.7	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar
Lease Area	049	8	37.5	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar
Lease Area	050	8	38.1	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Lease Area	051	8	39.9	0	N/A	Bivalve, Cerianthid, Crab, Hermit Crab, Moon Snail, Nudibranch, Sand Dollar, Snail
Lease Area	052	8	40.3	0	N/A	Crab, Hermit Crab, Sand Dollar

Area	StationID	PV Replicate (n)	Mean Tide Corrected Depth (m)	Number of Sea Scallops (n)	Sea Scallop Shell Height (mm)	Fauna Present
Lease Area	053	8	39.8	0	N/A	Barnacles, Crab, Hermit Crab, Sand Dollar, Shrimp
Lease Area	054	8	38.8	0	N/A	Barnacles, Crab, Flounder, Hermit Crab, Nudibranch, Sand Dollar
Lease Area	055	8	38.0	0	N/A	Cancer Crab, Crab, Hermit Crab, Sand Dollar, Shrimp, Snail
Lease Area	056	8	39.8	1	6.6	Crab, Hermit Crab, Nudibranch, Sand Dollar, Sea Scallop, Shrimp
Lease Area	057	8	41.2	0	N/A	Cerianthid, Crab, Flounder, Hermit Crab, Sand Dollar, Shrimp
Lease Area	058	8	42.4	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar, Shrimp, Snail
Lease Area	059	8	40.8	0	N/A	Cerianthid, Conger Eel, Crab, Hermit Crab, Nudibranch, Sand Dollar, Snail
Lease Area	060	8	41.2	0	N/A	Crab, Flounder, Hermit Crab, Sand Dollar
Reference Area	061	8	23.8	0	N/A	Barnacles, Hermit Crab, Sand Dollar, Sea Star, Snail
Reference Area	062	8	23.3	0	N/A	Hermit Crab, Moon Snail, Sand Dollar, Snail
Reference Area	063	8	27.4	0	N/A	Northern Sea Robin, Sand Dollar, Snail
Reference Area	064	8	30.7	0	N/A	Moon Snail, Sand Dollar, Snail
Reference Area	065	8	32.3	0	N/A	Hermit Crab, Sand Dollar, Snail
Reference Area	066	8	34.1	0	N/A	Cancer Crab, Crab, Little/Winter Skate, Sand Dollar
Reference Area	067	8	32.7	0	N/A	Hermit Crab, Sand Dollar, Snail
Reference Area	068	8	34.6	0	N/A	Crab, Hermit Crab, Sand Dollar
Reference Area	069	8	35.5	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	070	8	37.0	0	N/A	Crab, Hermit Crab, Hydroids, Sand Dollar, Snail, Unidentified Fish
Reference Area	071	8	26.1	0	N/A	Crepidula, Hermit Crab, Sand Dollar, Sea Star, Snail
Reference Area	072	8	25.1	0	N/A	Astarte Clam, Hermit Crab, Sand Dollar
Reference Area	073	8	26.6	0	N/A	Flounder, Moon Snail, Sand Dollar, Snail
Reference Area	074	8	30.8	0	N/A	Sand Dollar
Reference Area	075	8	29.7	0	N/A	Sand Dollar, Snail, Unidentified Sea Robin
Reference Area	076	8	35.7	0	N/A	Astarte Clam, Bivalve, Cancer Crab, Crab, Nudibranch, Sand Dollar, Snail
Reference Area	077	8	37.0	0	N/A	Bivalve, Crab, Little/Winter Skate, Sand Dollar, Snail
Reference Area	078	8	38.2	0	N/A	Crab, Sand Dollar
Reference Area	079	8	36.4	0	N/A	Crab, Hermit Crab, Sand Dollar
Reference Area	080	8	38.6	0	N/A	Cancer Crab, Hermit Crab, Sand Dollar, Sea Star, Snail
Reference Area	081	8	25.0	0	N/A	Astarte Clam, Hermit Crab, Moon Snail, Sand Dollar, Snail
Reference Area	082	8	22.9	0	N/A	Astarte Clam, Hermit Crab, Sand Dollar, Snail
Reference Area	083	8	26.6	0	N/A	Astarte Clam, Cerianthid, Hermit Crab, Sand Dollar, Snail
Reference Area	084	8	32.3	0	N/A	Barnacles, Cancer Crab, Hermit Crab, Sand Dollar, Snail, Unidentified Fish
Reference Area	085	8	32.6	0	N/A	Hermit Crab, Little/Winter Skate, Sand Dollar, Sea Star
Reference Area	086	8	36.8	0	N/A	Cancer Crab, Hermit Crab, Sand Dollar
Reference Area	087	8	37.0	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	088	8	40.4	2	20.32, 5.82	Crab, Flounder, Hermit Crab, Sand Dollar, Sea Scallop, Snail
Reference Area	089	8	40.1	3	42.04, 40.33, 7.84	Crab, Sand Dollar, Sea Scallop, Sea Star
Reference Area	090	8	39.2	0	N/A	Cancer Crab, Cerianthid, Sand Dollar, Sea Star, Snail
Reference Area	091	8	28.9	0	N/A	Cancer Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	092	8	27.2	0	N/A	Hermit Crab, Sand Dollar, Snail
Reference Area	093	8	32.9	0	N/A	Hermit Crab, Longfin Squid, Sand Dollar
Reference Area	094	8	34.4	0	N/A	Cerianthid, Sand Dollar, Snail
Reference Area	095	8	35.4	0	N/A	Cancer Crab, Hermit Crab, Sand Dollar
Reference Area	096	8	36.9	0	N/A	Cerianthid, Crab, Sand Dollar, Snail
Reference Area	097	8	38.8	0	N/A	Cerianthid, Crab, Hermit Crab, Little/Winter Skate, Sand Dollar, Snail
Reference Area	098	8	41.3	0	N/A	Cancer Crab, Crab, Flounder, Sand Dollar, Snail
Reference Area	099	8	41.2	0	N/A	Cerianthid, Sand Dollar, Sea Star
Reference Area	100	8	40.0	0	N/A	Bivalve, Hermit Crab, Sand Dollar, Sea Star, Snail, Unidentified Fish
Reference Area	101	8	29.0	0	N/A	Astarte Clam, Hermit Crab, Sand Dollar
Reference Area	102	8	29.7	0	N/A	Astarte Clam, Hermit Crab, Sand Dollar, Snail
Reference Area	103	8	31.0	0	N/A	Astarte Clam, Hermit Crab, Sand Dollar, Snail
Reference Area	104	8	35.0	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar, Sea Star

Area	StationID	PV Replicate (n)	Mean Tide Corrected Depth (m)	Number of Sea Scallops (n)	Sea Scallop Shell Height (mm)	Fauna Present
Reference Area	105	8	34.8	0	N/A	Cancer Crab, Crab, Flounder, Hermit Crab, Sand Dollar
Reference Area	106	8	38.9	0	N/A	Crab, Flounder, Hermit Crab, Sand Dollar, Snail
Reference Area	107	8	36.9	0	N/A	Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	108	8	38.7	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	109	8	40.8	5	8.95, 11.4, 9.67, 9.16, 7.51	Crab, Flounder, Hermit Crab, Sand Dollar, Sea Scallop, Shrimp
Reference Area	110	8	41.7	0	N/A	Flounder, Sand Dollar, Unidentified Fish
Reference Area	111	8	32.4	0	N/A	Astarte Clam, Cancer Crab, Northern Sea Robin, Sand Dollar, Snail
Reference Area	112	8	34.9	0	N/A	Hermit Crab, Sand Dollar, Skate, Snail
Reference Area	113	8	33.6	0	N/A	Cerianthid, Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	114	8	35.4	0	N/A	Cancer Crab, Cerianthid, Crab, Hermit Crab, Little/Winter Skate, Sand Dollar, Snail
Reference Area	115	8	35.7	0	N/A	Cancer Crab, Sand Dollar, Snail
Reference Area	116	8	37.3	0	N/A	Bivalve, Cerianthid, Crab, Hermit Crab, Sand Dollar, Snail
Reference Area	117	8	40.4	0	N/A	Cancer Crab, Crab, Flounder, Sand Dollar, Snail
Reference Area	118	8	40.6	0	N/A	Cancer Crab, Cerianthid, Crab, Flounder, Hermit Crab, Nudibranch, Sand Dollar
Reference Area	119	8	41.7	0	N/A	Crab, Flounder, Hermit Crab, Sand Dollar, Sea Star
Reference Area	120	8	44.4	0	N/A	Cancer Crab, Hermit Crab, Nudibranch, Sand Dollar, Sea Star