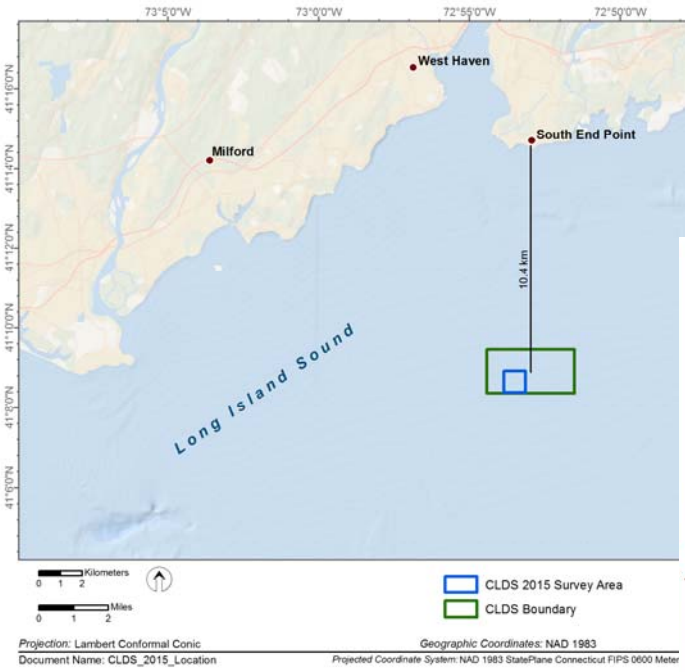
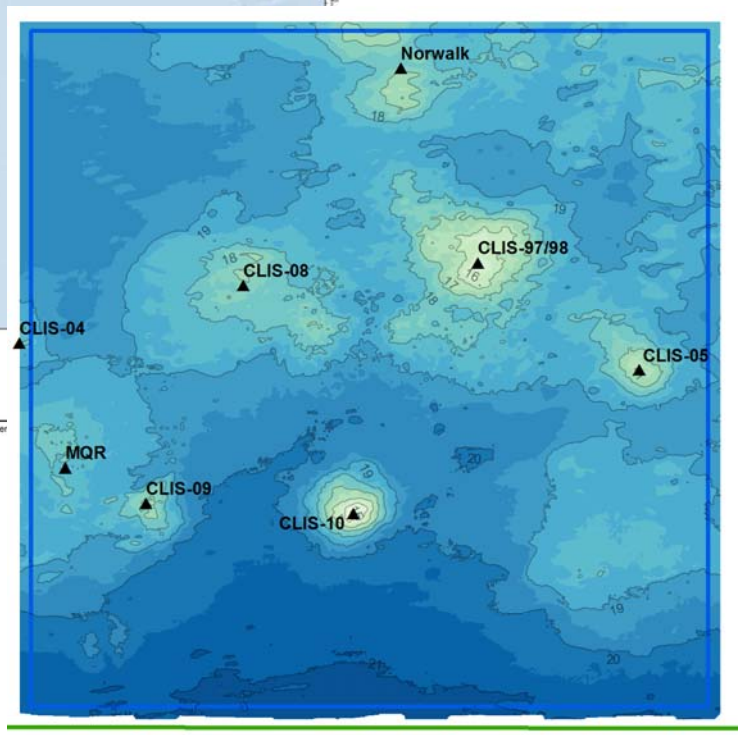
Data Summary Report for the Monitoring Survey at the Central Long Island Sound Disposal Site - October 2015

Disposal Area Monitoring System DAMOS





Data Summary Report
DR 2015-06
February 2017

D A M O S
DISPOSAL AREA MONITORING SYSTEM

US Army Corps of Engineers ®
New England District

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Note on units of this report: As a scientific data summary, information and data are presented in the metric system. However, given the prevalence of English units in the dredging industry of the United States, conversions to English units are provided for general information in Section 1. A table of common conversions can be found in Appendix A.

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13. ABSTRACT

A monitoring survey was conducted at the Central Long Island Sound Disposal Site (CLDS) in October 2015 as part of the U.S. Army Corps of Engineers (USACE) New England District (NAE) Disposal Area Monitoring System (DAMOS) Program. The 2015 CLDS acoustic monitoring survey was a sequential confirmatory DAMOS study designed to support tracking of dredged material placed at the site since the previous survey in August 2014 (Hopkins et al. 2017) and help inform site management for the current dredging season.

The Central Long Island Sound Disposal Site (CLDS), formally designated by the U.S. Environmental Protection Agency (USEPA) in 2005, is located approximately 10.4 km (5.6 nm) south of South End Point, East Haven, Connecticut (Figure 1-1). The current boundary of CLDS is a rectangle measuring 4.1 × 2.0 km [total area of 8.2 km^2; or 2.2 × 1.1 nm (total area of 2.4 nm^2)], centered at 41° 08.95' N and 72° 52.95' W (NAD 83) (Figure 1-1). This general location has been utilized for the disposal of sediments dredged from surrounding harbors for at least 60 years, with well-documented disposal locations since 1973 (ENSR 1998). Starting in 1979, the site has been regularly monitored by the DAMOS Program (ENSR 1998).

The primary objective of the 2015 acoustic survey was to characterize the seafloor topography and surface features over the active portion of CLDS.

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LIST OF ACRONYMS

ASCII	American Standard Code for Information Interchange
CCOM	Center for Coastal and Ocean Mapping
CI	Confidence interval
CLDS	Central Long Island Sound Disposal Site
CTD	Conductivity-temperature-depth
DAMOS	Disposal Area Monitoring System
DGPS	Differential global positioning system
GIS	Graphic information system
GPS	Global positioning system
MBES	Multibeam Echo Sounder
MLLW	Mean lower low water
NAE	New England District
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NTRIP	Network transport of RTCM data over IP
RTCM	Radio Technical Commission for Maritime Services
RTK	Real time kinematic GPS
SHP	Shapefile or geospatial data file
SOP	Standard Operating Procedures
TIF	Tagged image file
USACE	U.S. Army Corps of Engineers

1.0 INTRODUCTION

A monitoring survey was conducted at the Central Long Island Sound Disposal Site (CLDS) in October 2015 as part of the U.S. Army Corps of Engineers (USACE) New England District (NAE) Disposal Area Monitoring System (DAMOS) Program. DAMOS is a comprehensive monitoring and management program designed and conducted to address environmental concerns surrounding the placement of dredged material at aquatic disposal sites throughout the New England region. An overview of the DAMOS Program and CLDS is provided below.

1.1 Overview of the DAMOS Program

The DAMOS Program features a tiered management protocol designed to ensure that any potential adverse environmental impacts associated with dredged material disposal are promptly identified and addressed (Germano et al. 1994). For over 35 years, the DAMOS Program has collected and evaluated disposal site data throughout New England. Based on these data, patterns of physical, chemical, and biological responses of seafloor environments to dredged material disposal activity have been documented (Fredette and French 2004).

DAMOS monitoring surveys fall into two general categories: confirmatory studies and focused studies. The data collected and evaluated during these studies provide answers to strategic management questions in determining the next step in the disposal site management process to guide the management of disposal activities at existing sites, plan for use of future sites, and evaluate the long-term status of historic sites.

Confirmatory studies are designed to test hypotheses related to expected physical and ecological response patterns following placement of dredged material on the seafloor at established, active disposal sites. Two primary goals of DAMOS confirmatory monitoring surveys are to document the physical location and stability of dredged material placed into the aquatic environment and to evaluate the biological recovery of the benthic community following placement of dredged material. Several survey techniques are employed in order to characterize these responses to dredged material placement. Sequential acoustic monitoring surveys (including bathymetric, acoustic backscatter, and side-scan sonar data collection) are performed to characterize the height and spread of discrete dredged material deposits or mounds created at open water sites as well as the accumulation/consolidation of dredged material into confined aquatic disposal cells.

Sediment-profile (SPI) and plan-view (PV) imaging surveys are often performed in confirmatory studies to provide further physical characterization of the material and to support evaluation of seafloor (benthic) habitat conditions and recovery over time. Each type of data collection activity is conducted periodically at disposal sites and the conditions found after a defined period of disposal activity are compared with the long-term data set at specific sites to determine the next step in the disposal site management process (Germano et al. 1994).

Focused studies are periodically undertaken within the DAMOS Program to evaluate inactive or historical disposal sites and contribute to the development of dredged material placement and monitoring techniques. Focused DAMOS monitoring surveys may also feature additional types

of data collection activities as deemed appropriate to achieve specific survey objectives, such as subbottom profiling, towed video, sediment coring, or grab sampling.

The 2015 CLDS acoustic monitoring survey was a sequential confirmatory DAMOS study designed to support tracking of dredged material placed at the site since the previous survey in August 2014 (Hopkins et al. 2017) and help inform site management for the current dredging season.

1.2 Introduction to the Central Long Island Sound Disposal Site

The Central Long Island Sound Disposal Site (CLDS), formally designated by the U.S. Environmental Protection Agency (USEPA) in 2005, is located approximately 10.4 km (5.6 nm) south of South End Point, East Haven, Connecticut (Figure 1-1). The current boundary of CLDS is a rectangle measuring 4.1 × 2.0 km [total area of 8.2 km^2; or 2.2 × 1.1 nm (total area of 2.4 nm^2)], centered at 41° 08.95' N and 72° 52.95' W (NAD 83) (Figure 1-1). This general location has been utilized for the disposal of sediments dredged from surrounding harbors for at least 60 years, with well-documented disposal locations since 1973 (ENSR 1998). Starting in 1979, the site has been regularly monitored by the DAMOS Program (ENSR 1998).

1.3 Historical Dredged Material Activity

Dredged material disposal at CLDS has been monitored and documented since the early 1970s. The following list details the chronology of dredged material placement at CLDS:

1970s and 1980s:

- Directed placement of small to moderate volumes of sediment to form individual disposal mounds spaced relatively far apart within the site boundary (Figure 1-2).
- Mounds were monitored over time to assess stability, thickness of dredged material, and benthic recolonization status relative to previous monitoring results and in comparison to nearby reference areas.

1990s:

- Modified management strategy, whereby the dredged material is placed in a series of closely spaced or contiguous mounds with the eventual goal of creating circular or semicircular berms on the seafloor.
- Berms can aid in large-scale confined aquatic disposal operations and in placement of highly fluid dredged material or material judged to require additional management, potential for lateral spread of the material is reduced, and it can be covered with additional dredged material as part of long-term management of the site (Fredette 1994).
- 1993: first containment cell developed and used to confine New Haven material (NHAV93 mound complex).
- 1999: second containment cell completed

2000-2013:

- Continuation of placing dredged material in a series of closely spaced mounds per disposal season contributing to the formation of circular or semi-circular berms on the seafloor.

2013-2014

- Placement of Norwalk Harbor dredged material into a series of target cells referred to as the NHAV14-S management area; and material from New Haven Harbor and several private projects into a northern management area called NHAV14-N.

1.4 Previous Monitoring Events at CLDS

Previous monitoring activities at CLDS are included in Table 1-1.

1.5 Recent Dredged Material Disposal Activity

Since the August 2014 monitoring survey of the entire CLDS site, approximately 93,000 m^3 (121,700 yd^3; Table 1-2) of dredged material was placed at the site between October 2014 and May 2015 per USACE disposal logs (Figure 1-3; Appendix B).

1.6 2015 Survey Objectives

The primary objective of the 2015 acoustic survey was to characterize the seafloor topography and surface features over the active portion of CLDS.

Table 1-1.

Monitoring Surveys at CLDS since 2005

Date	Survey Type/Purpose	Survey Size	Additional Survey Elements	Publication	Reference
July 2005	Acoustic Monitoring	Entire Site 2500 × 4500 m	None	DAMOS Contribution 177	ENSR 2007
Sept/Oct 2009	Acoustic Monitoring	Active Portion of CLDS 1000 × 1500 m	SPI Stations: 40 on Disposal Mounds and 18 at Reference Areas	DAMOS Contribution 184	Valente et al. 2012
Sept/Oct 2011	Acoustic and Sediment-Profile Monitoring	Active Portion of CLDS 1000 × 1900 m FVP* Mound 1000 × 950	SPI Stations: 35 on Disposal Mounds, 15 at FVP*, and 18 at Reference Areas	DAMOS Contribution 192	AECOM 2013
Dec 2013	Acoustic Confirmatory	NHAV14-S and NHAV14-N Placement Areas	Sediment Grabs	Internal	-
Jan 2014	Acoustic Confirmatory	NHAV14-S and NHAV14-N Placement Areas	Sediment Grabs	Internal	-
Aug 2014	Acoustic and Sediment-Profile Monitoring	Entire Site 2500 × 4500 m	Sediment Grabs	DAMOS Contribution 197	Hopkins et al. 2017

*FVP= Field Verification Program mound

Table 1-2.

Disposal Activity at CLDS during the 2014/2015 Disposal Season (per scow logs provided by USACE, March 2016)

Project name	City/Town	State	Placement Dates	Load volume (m^3)	Load volume (yd^3)	Permit number
Between the Bridges Marina	Old Saybrook	CT	02/18/2015 - 04/30/2015	4,587	6,000	NAE-2006-126
Brewers Point Marina	Westbrook	CT	12/22/2014 - 02/02/2015	6,116	8,000	NAE-2011-2437
Clinton Yacht Haven	Clinton	CT	11/09/2014 - 04/29/2015	7,986	10,445	NAE-2008-2993
Guilford Harbor FNP	Guilford	CT	12/12/2014 - 03/14/2015	36,665	47,956	W912WJ-14-C-0029
Guilford Yacht Club	Guilford	CT	05/17/2015 - 05/25/2015	10,251	13,408	NAE-2007-1989
Gwenmor Marina	Mystic	CT	10/28/2014	191	250	NAE-2008-425
Hammock River Marina	Clinton	CT	05/19/2015 - 05/29/2015	3,058	4,000	NAE-2005-4021
Hammonasset Marina	Clinton	CT	11/05/2015-11/10/2015	459	600	NAE-2013-2551
Knutson Trust	Huntington	NY	11/17/2014 - 12/30/2014	7,263	9,500	NAE-2013-00847
New Haven Harbor	New Haven	CT	11/14/2014	153	200	1983C0007
S & S Marine Holdings	Old Saybrook	CT	12/14/2014 - 12/20/2014	1,049	1,372	NAE-2008-2185
Shennecossett Yacht Club	Groton	CT	11/12/2014 - 05/24/2015	6,881	9,000	NAE-2008-1468
St. Ann Boat Club	Norwalk	CT	10/30/2014	191	250	NAE-2012-904
USCG Academy	New London	CT	12/08/2014 - 01/04/2015	8,194	10,718	NAE-1994-340
			TOTAL	**93,044**	**121,699**	

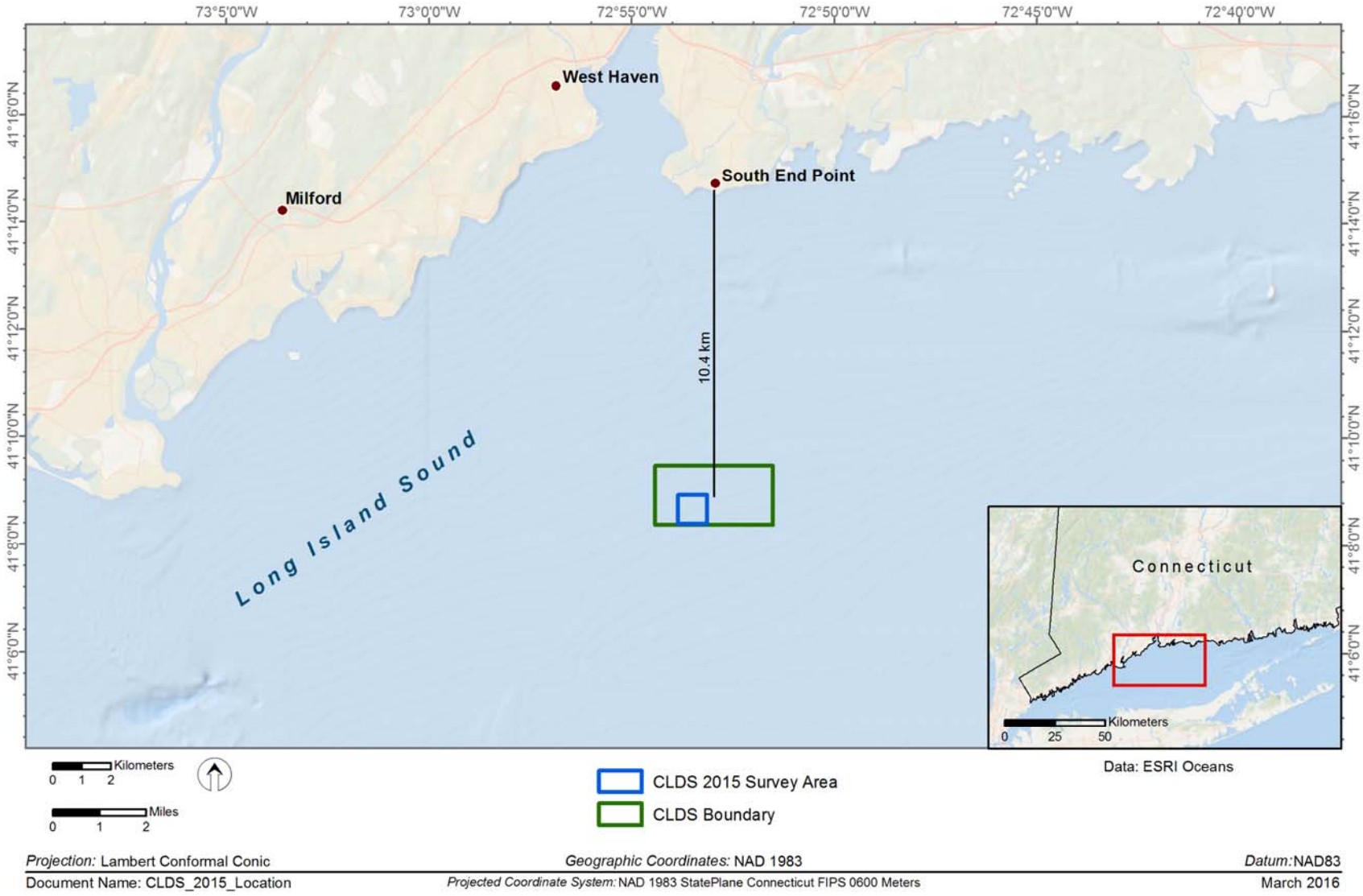

Figure 1-1. Location of the Central Long Island Sound Disposal Site (CLDS)

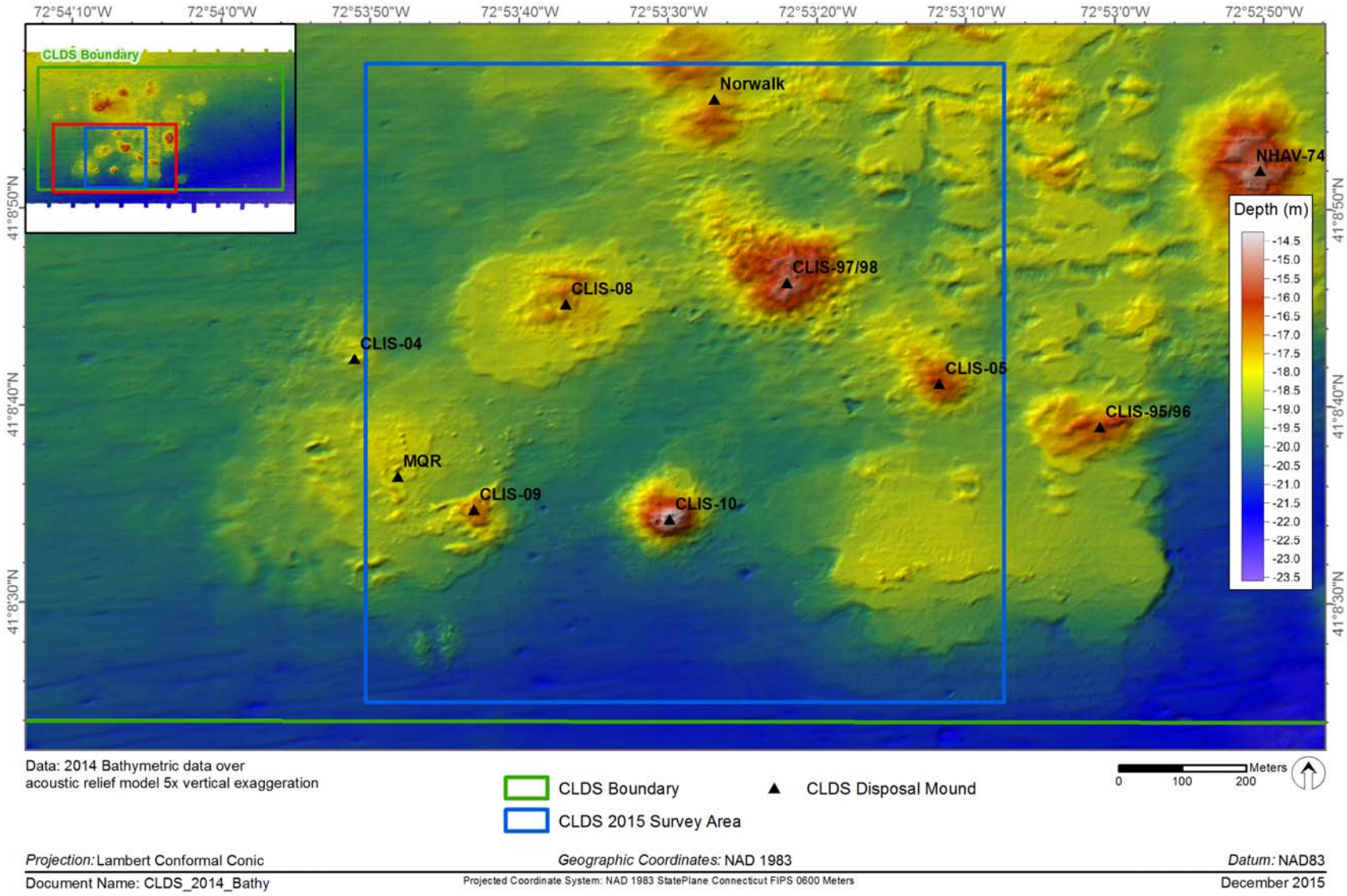

Figure 1-2. Bathymetric depth data over acoustic relief model of CLDS - August 2014

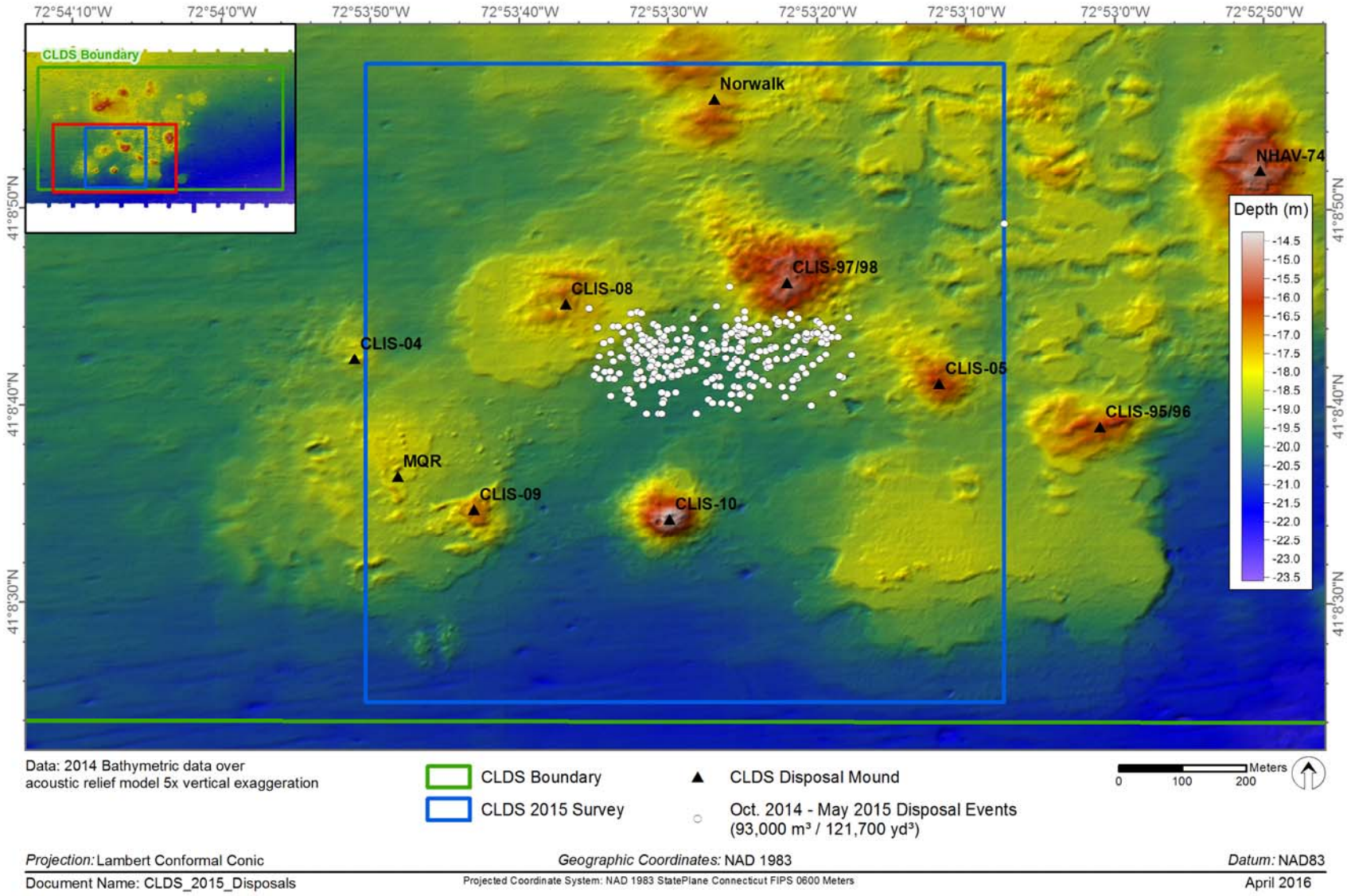

Figure 1-3. Location of reported disposal events at CLDS between October 2014 and May 2015

2.0 METHODS

The October 2015 survey at CLDS was conducted by a team of investigators from DAMOSVision (CoastalVision and CR Environmental) aboard the 55-foot R/V *Jamie Hanna*. The acoustic survey was conducted on 21 October 2015. An overview of the methods used to collect, process, and analyze the survey data is provided below. Detailed Standard Operating Procedures (SOPs) for data collection and processing are available in the Quality Assurance Project Plan for the DAMOS Program (Battelle 2015).

2.1 Navigation and On-Board Data Acquisition

Navigation for the acoustic survey was accomplished using a Hemisphere VS-330 Real-time kinematic Global Positioning System (RTK GPS) which received base station correction through the Keynet NTRIP broadcast. Horizontal position accuracy in fixed RTK mode was approximately 2 cm. A dual-antennae Hemisphere VS110 differential GPS (DGPS) was available if necessary as a backup. The GPS system was interfaced to a desktop computer running HYPACK MAX® hydrographic survey software. HYPACK MAX® continually recorded vessel position and GPS satellite quality and provided a steering display for the vessel captain to accurately maintain the position of the vessel along pre-established survey transects. Vessel motion and heading measurements were provided by an IxBlue Octans III fiber optic gyrocompass.

2.2 Acoustic Survey

The acoustic survey included bathymetric, backscatter, and side-scan sonar data collection. The bathymetric data provided measurements of water depth that, when processed, were used to map the seafloor topography. Backscatter and side-scan sonar data provided images that supported the characterization of surface sediment texture and roughness. Each of these acoustic data types is useful for assessing dredged material placement and surface sediment features.

2.2.1 Acoustic Survey Planning

The acoustic survey featured a high spatial resolution survey of the portion of CLDS active during the 2014-2015 disposal season. DAMOSVision hydrographers coordinated with USACE NAE scientists and reviewed alternative survey designs. For CLDS, a 1000 × 1000 m area was selected. Hydrographers obtained site coordinates, imported them to graphic information system (GIS) software, and created maps to aid planning. Base bathymetric data from previous DAMOS surveys were used to calculate the transect separation required to obtain full bottom coverage using an assumed beam angle limit of 90-degrees (45 degrees to port, 45 degrees to starboard). Transects spaced 30 m apart and cross-lines spaced 200 m apart were created to meet conservative beam angle constraints (Figure 2-1). The proposed survey area and design were then reviewed and approved by NAE scientists.

2.2.2 Acoustic Data Collection

The 2015 multibeam bathymetric survey of CLDS was conducted on 21 October 2015. Data layers generated by the survey included bathymetric, acoustic backscatter, and side-scan sonar

and were collected using an R2Sonic 2022 broadband multibeam echo sounder (MBES). This 200-400 kHz system forms up to 256 1-2° beams (frequency dependent) distributed equiangularly or equidistantly across a 10 - 160° swath. The MBES system was operated using a transmit frequency of 249 kHz to facilitate comparisons with previous DAMOS survey data while maximizing bathymetric resolution. The MBES transducer was mounted amidships to the port rail of the survey vessel using a high strength adjustable boom. The primary GPS antenna was mounted on the transducer boom. The transducer depth below the water surface (draft) and antenna height were checked and recorded at the beginning and end of data acquisition, and the draft was confirmed using the "bar check" method.

An IxBlue Octans III motion reference unit (MRU) was interfaced to the MBES topside processor and to the acquisition computer. Precise linear offsets between the MRU and MBES were recorded and applied during acquisition. Depth and backscatter data were synchronized using pulse-per-second timing and transmitted to the HYPACK MAX® acquisition computer via Ethernet communications. Several patch tests were conducted during the survey to allow computation of angular offsets between the MBES system components.

The system was calibrated for local water mass speed of sound by performing sound velocity profile (SVP) casts at frequent intervals throughout the survey day using an AML, Inc. Minos-X profiling instrument.

2.2.3 Bathymetric Data Processing

Bathymetric data were processed using HYPACK HYSWEEP® software. Processing components are described below and included:

- Adjustment of data for tidal elevation fluctuations
- Correction of ray bending (refraction) due to density variation in the water column
- Removal of spurious points associated with water column interference or system errors
- Development of a grid surface representing depth solutions
- Statistical estimation of sounding solution uncertainty
- Generation of data visualization products

Tidal adjustments were accomplished using RTK GPS. Water surface elevations derived using RTK were adjusted to Mean Lower Low Water (MLLW) elevations using NOAA's VDATUM Model. Processed RTK tide data were successfully ground-truthed against a data series acquired at NOAA's New Haven Tide Station (#8465705).

Correction of sounding depth and position (range and azimuth) for refraction due to water column stratification was conducted using a series of seven sound-velocity profiles acquired by the survey team. Data artifacts associated with refraction remain in the bathymetric surface model at a relatively fine scale (generally less than 5 to 10 cm) relative to the survey depth.

Data acquired in the disposal site portion of the survey area were filtered to accept only beams falling within an angular limit of 55° to minimize refraction artifacts. Spurious sounding solutions were rejected based on the careful examination of data on a sweep-specific basis.

As indicated earlier, the R2Sonics 2022 MBES system was operated at 249 kHz. At this frequency the system has a published beam width of 1.75°. Assuming an average depth of 19 m and a beam angle of 45°, the average diameter of the beam footprint was calculated at approximately 1.2 × 0.8 m (1.0 m^2). Data were reduced to a cell (grid) size of 1.0 × 1.0 m, acknowledging the system's fine range resolution while accommodating beam position uncertainty. This data reduction was accomplished by calculating and exporting the average elevation for each cell in accordance with USACE recommendations (USACE 2013).

Statistical analysis of data as summarized on Table 2-1 showed negligible tide bias and vertical uncertainty substantially lower than values recommended by USACE (2013) or NOAA (2015). Note that the most stringent National Ocean Service (NOS) standard for this project depth (Special Order 1A) would call for a 95th percentile confidence interval (95% CI) of 0.30 m at the maximum site depth (21.5 m) and 0.29 m at the average site depth (19.2 m).

Reduced data were exported in ASCII text format with fields for Easting, Northing, and MLLW Elevation (meters). All data were projected to the Connecticut State Plane (FIPS 0600), NAD83 (metric). A variety of data visualizations were generated using a combination of ESRI ArcMap (V.10.1) and Golden Software Surfer (V.13). Visualizations and data products included:

- ASCII data files of all processed soundings including MLLW depths and elevations
- Contours of seabed elevation (20-cm, 50-cm and 1.0-m intervals) in a geospatial data file (SHP) format suitable for plotting using GIS and computer-aided design software
- 3-dimensional surface maps of the seabed created using 5× vertical exaggeration and artificial illumination to highlight fine-scale features not visible on contour layers delivered in grid and tagged image file (TIF) formats, and
- An acoustic relief map of the survey area created using 5× vertical exaggeration, delivered in georeferenced TIF format.

2.2.4 Backscatter Data Processing

Backscatter data were extracted from cleaned MBES TruePix formatted files then used to provide an estimation of surface sediment texture based on seabed surface roughness. Mosaics of backscatter data were created using HYPACK®'s implementation of GeoCoder software developed by scientists at the University of New Hampshire's NOAA Center for Coastal and Ocean Mapping (UNH/NOAA CCOM). A seamless mosaic of unfiltered backscatter data was developed and exported in grayscale TIF format. Backscatter data were also exported in ASCII format with fields for Easting, Northing, and backscatter (dB). A Gaussian filter was applied to backscatter data to minimize nadir artifacts and the filtered data were used to develop backscatter values on a 0.5-m grid. The grid was exported as an ESRI binary GRD format to facilitate comparison with other data layers.

2.2.5 Side-Scan Sonar Data Processing

Side-scan sonar data were processed using Chesapeake Technology, Inc. Sonar Wiz to generate a database of images that maximized both textural information and structural detail.

Three mosaics of side-scan data were created using SonarWiz to facilitate detailed inspection of sonar imagery using a pixel resolution of 0.1-m. Mosaic versions included raw swath data, data with an Empirical Gain Normalization curve developed to normalize across-track signal attenuation, and a version that utilized an automatic gain adjustment algorithm.

2.2.6 Acoustic Data Analysis

The processed bathymetric grids were converted to rasters, and bathymetric contour lines and acoustic relief models were generated and displayed using GIS. The backscatter mosaics and filtered backscatter grid were combined with acoustic relief models in GIS to facilitate visualization of relationships between acoustic datasets. This is done by rendering images and color-coded grids with sufficient transparency to allow three-dimensional acoustic relief model to be visible underneath.

Table 2-1.

Accuracy and Uncertainty Analysis of Bathymetric Data

		Results (m)		
Survey Date(s)	**Quality Control Metric**	**Mean**	**95% Uncertainty**	**Range**
10/21/2015	Cross-Line Swath Comparisons	-0.01	0.09	
	Within Cell Uncertainty	0.04	0.08	0.00 - 0.71
	Beam Angle Uncertainty (0 - 55°)	-0.01	0.07	0.07 - 0.08

Notes:
1. The mean of cross-line nadir and full swath comparisons are indicators of tide bias.
2. 95% uncertainty values were calculated using the sums of mean differences and standard deviations expressed at the 2-sigma level.
3. Within cell uncertainty values include biases and random errors.
4. Beam angle uncertainty was assessed by comparing cross-line data (55-degree swath limit) with a reference surface created using mainstay transect data.
5. Swath and cell based comparisons were conducted using 1 m x 1 m cell averages. These analyses do not exclude sounding variability associated with terrain slopes

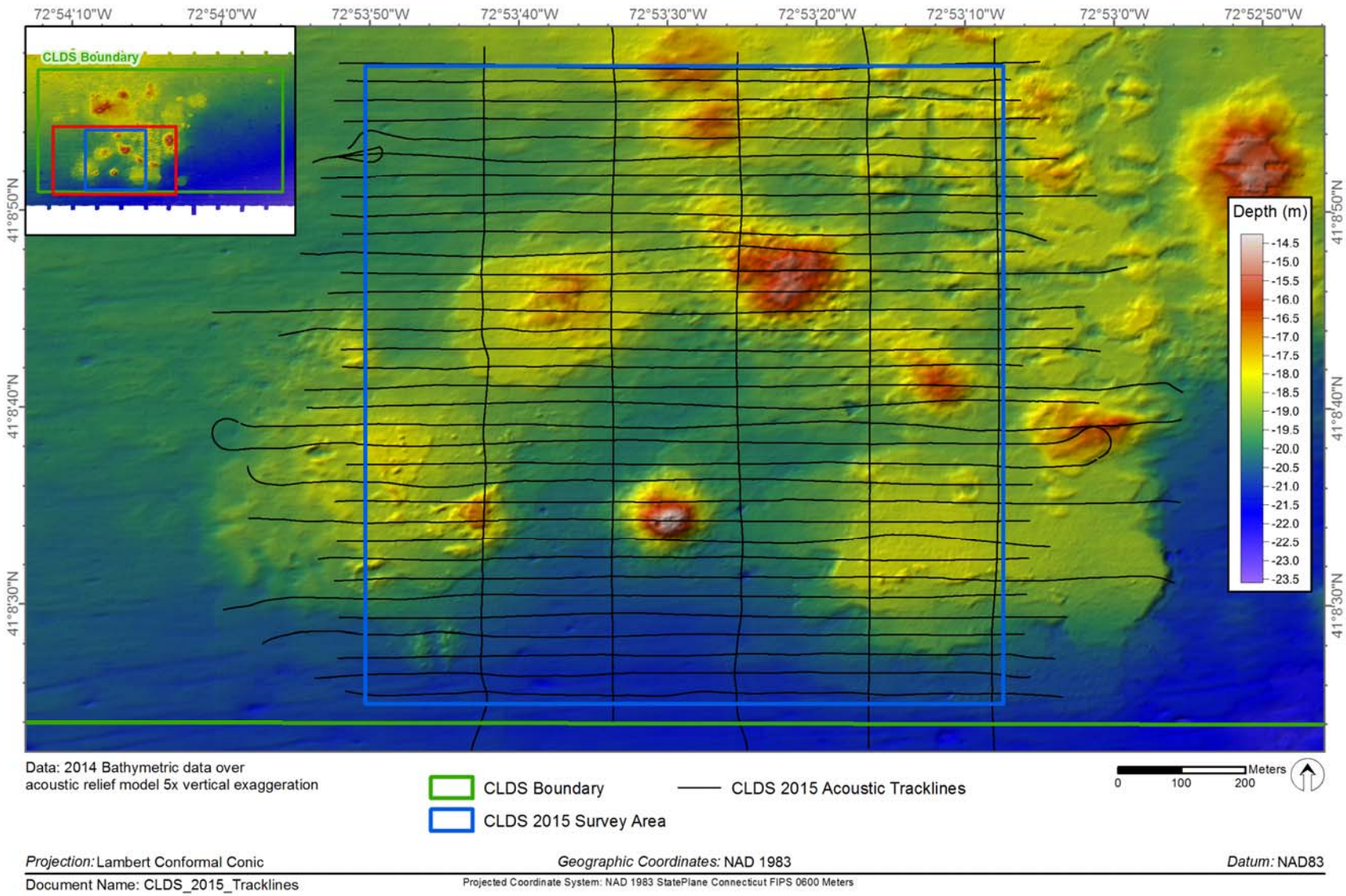

Figure 2-1. CLDS acoustic survey area and tracklines

3.0 RESULTS

3.1 Acoustic Survey

The results of the acoustic survey included bathymetry, backscatter mosaics, and side-scan sonar mosaics that were used to assess the seafloor topography and surface sediment characteristics of the southwestern section of CLDS. Analysis of each type of acoustic data led to insights regarding the topography and surface sediment in the study area.

3.1.1 Bathymetry

The bathymetry of CLDS as surveyed in 2015 revealed a gradually sloping surface between shallower areas to the north and deeper areas to the south with several distinct mounds and areas with increased elevation throughout (Figure 3-1). Within the survey area, there were seven disposal mounds with peaks ranging from approximately 2 to 6 m above the ambient seafloor. With the exception of the Norwalk disposal mound to the north, disposal mounds CLIS-97/98, CLIS-05, CLIS-10, CLIS-09, MQR, and CLIS-08 were arranged in a roughly circular pattern. There were broad elevated plateaus in the northeast and southeast of the survey area as well as elevation increases southeast of CLIS-08 and south of CLIS-97/98. The overall site bathymetry contained water depths ranging from approximately 14 m over the pinnacle of the CLIS-10 disposal mound to 22.5 m in the south of the survey area.

Multibeam bathymetric data rendered as an acoustic relief model (hill-shading) provided a more detailed representation of the site topography (Figure 3-2). Patterns consistent with the placement of dredged material were observed southeast of CLIS-08 and southwest of CLIS-97/98. The surface of this area had a rough texture with small circular pits. An acoustic relief model with depth colors (Figure 3-3) showed areas southeast of CLIS-08 and southwest of CLIS-97/98 with increased elevations abutting the mounds. These areas of increased elevation nearly bridged the gap to connect the two mounds.

3.1.2 Acoustic Backscatter and Side-Scan Sonar

Acoustic backscatter data provided an estimate of surface sediment texture (hard, soft, rough, and smooth). A mosaic of unfiltered backscatter data for the CLDS survey area (Figure 3-4) revealed acoustic returns that were indicative of both soft sediments (darker gray; weaker return) and hard sediments (lighter gray; stronger return) throughout the survey area. Acoustic returns associated with the mounds and the areas southeast of CLIS-08 and southwest of CLIS-97/98 were indicative of harder, rough surfaces (lighter gray). To a lesser extent, harder surfaces were also revealed around the plateau area to the southeast. Throughout the northeast, northwest, and south-central region, returns were weaker indicating softer surfaces. A distinct narrow line with a strong return begins in the northeast of the survey area and terminates near CLIS-08. Lines with similar characteristics have been seen consistently at CLDS and are interpreted as dredged material released from barges after disposal.

Filtered backscatter, which presents a quantitative assessment of surface characteristics independent of slope effects, more clearly showed strong acoustic returns associated with the

mounds and the areas southeast of CLIS-08 and southwest of CLIS-97/98 (Figure 3-5). Two distinct narrow lines with strong returns began in the northeast of the survey area and terminated near CLIS-08 and CLIS-97/98. Areas to the northeast, northwest, and south-central region had weak returns indicating softer surfaces.

Side-scan sonar results are more responsive to changes in slope than backscatter and can be processed with higher resolution. Large blocks of consolidated material could be seen near the disposal mounds and areas adjacent to CLIS-08, CLIS-05 and CLIS-97/98, confirming the presence of cohesive dredged material (Figure 3-6). Two lighter colored narrow lines could be seen beginning in the northeast and terminating as narrow trails near CLIS-08 (more distinctive) and CLIS-97/98 (less distinctive).

3.2 Comparison with Previous Bathymetry

An acoustic survey was conducted in September 2014 (Figure 1-2) over the entire site. Subtraction of the bottom depths in the 2014 survey from the 2015 depths captured changes in bathymetry since the 2014 survey (Figure 3-7). The most significant difference was the accumulation of sediment southeast of CLIS-08 and southwest of CLIS-97/98. In these areas, the elevation generally increased 1.0 to 2.0 m. The elevation surrounding CLIS-10 decreased by 0.2 m likely due to the consolidation of dredged material. A large area in the southeast of the survey (edge of the Norwalk management area) decreased in elevation by 0.2 to 0.4 m also likely due to consolidation of recent dredged material placement. There was very little change to the other disposal mounds and throughout the rest of the survey area.

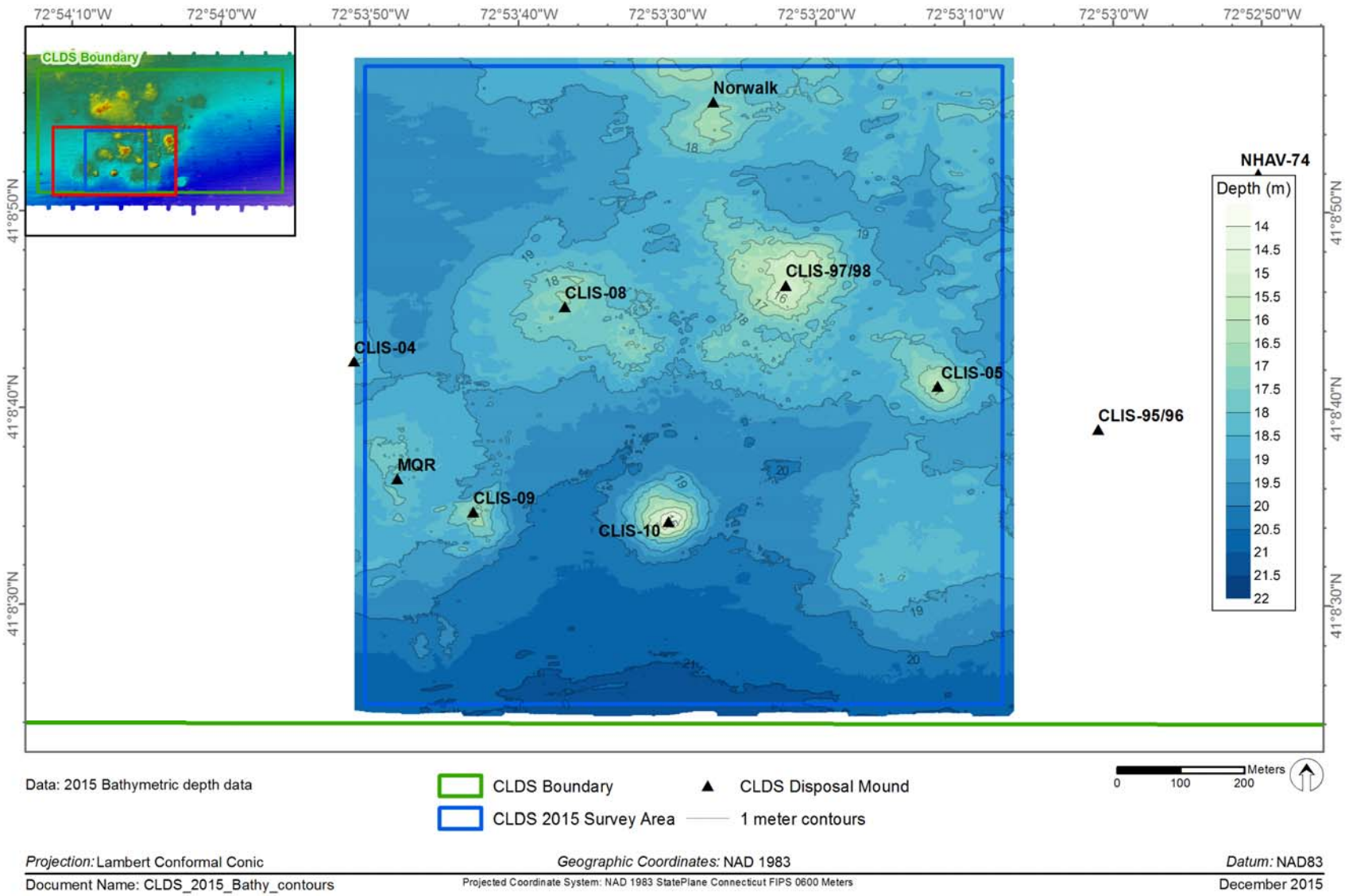

Figure 3-1. Bathymetric contour map of CLDS – October 2015

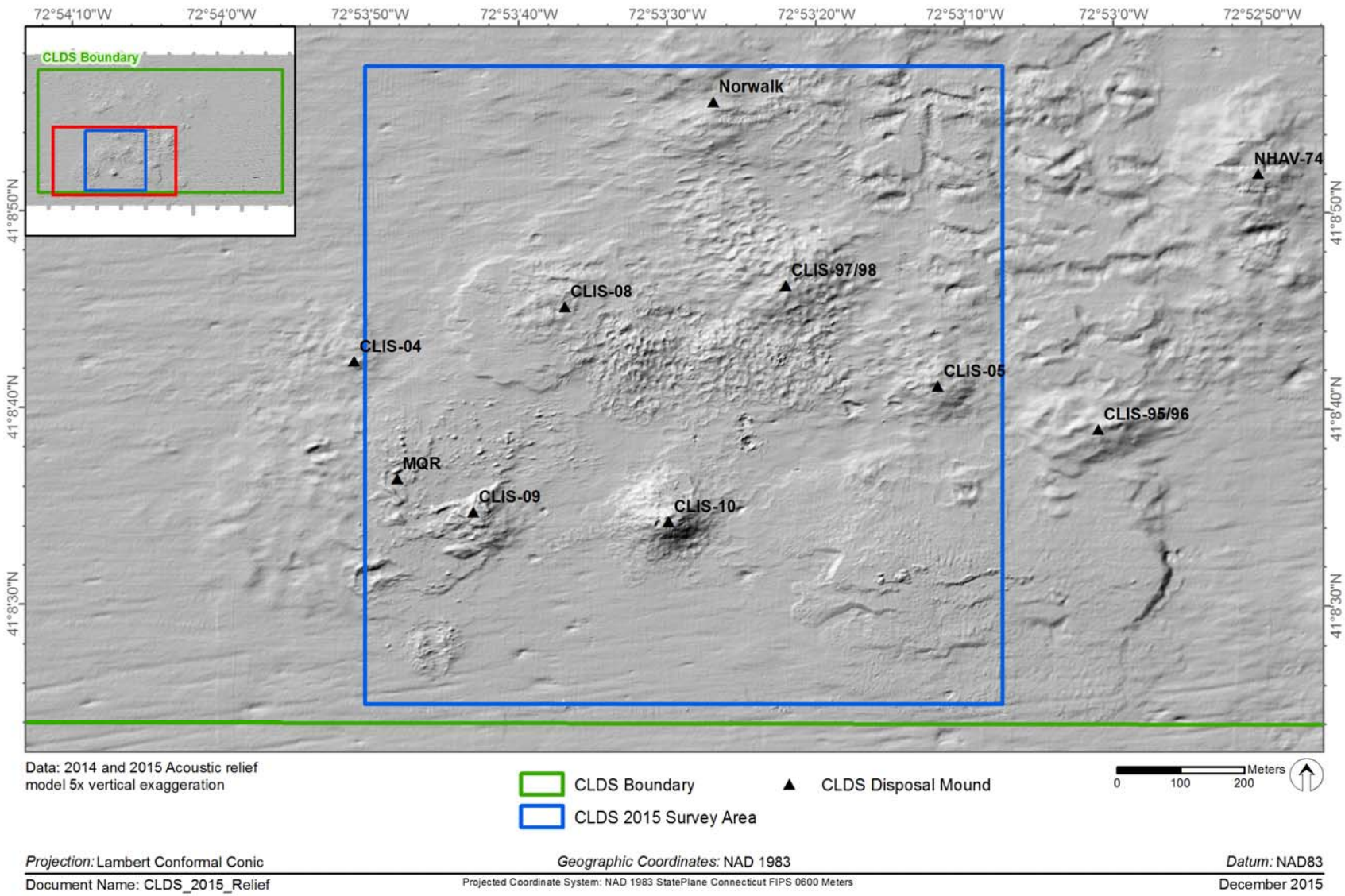

Figure 3-2. Acoustic relief map (hill-shaded grayscale) of CLDS – October 2015

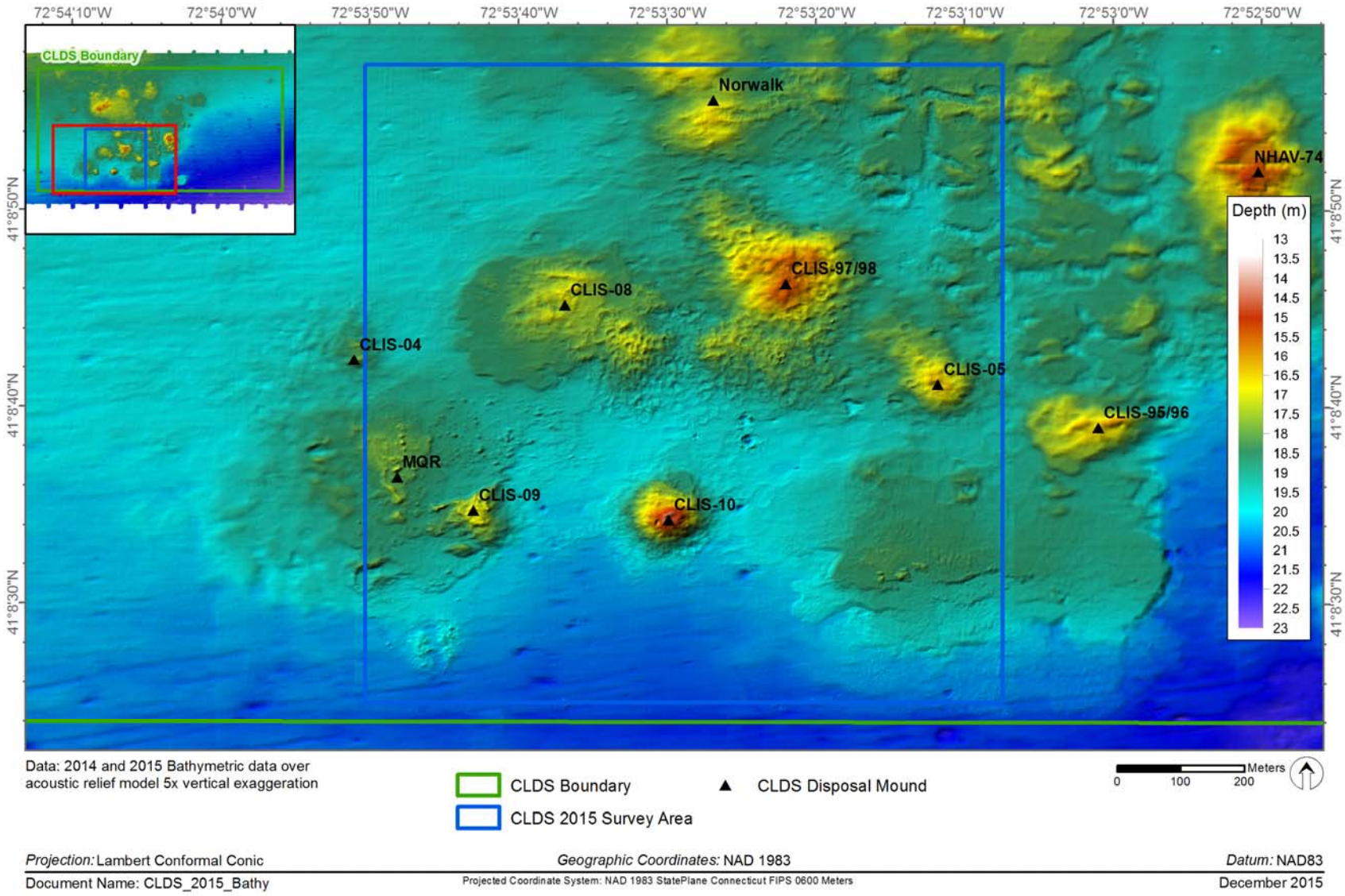

Figure 3-3. Bathymetric depth data over acoustic relief model of CLDS – October 2015

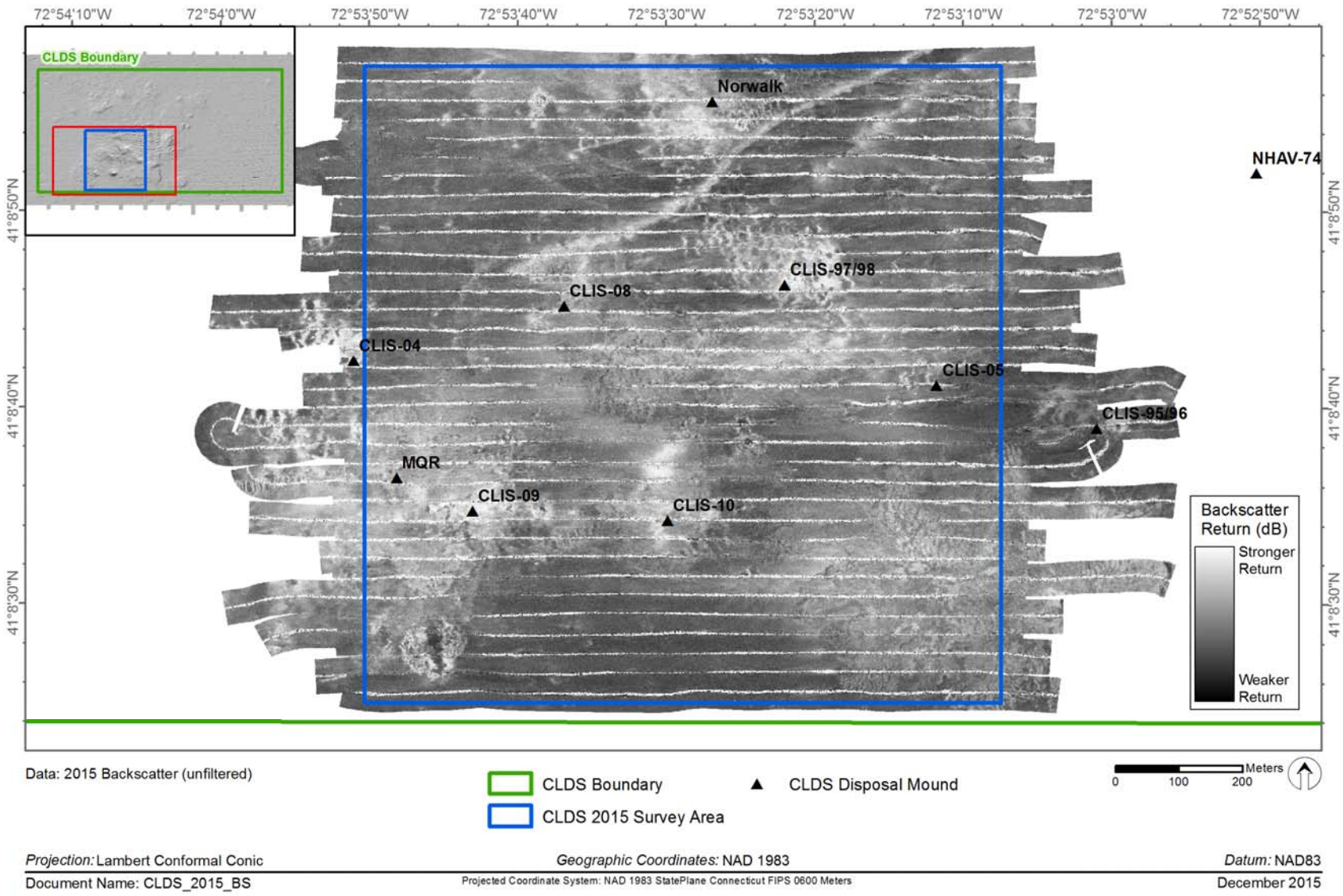

Figure 3-4. Mosaic of unfiltered backscatter data of CLDS – October 2015

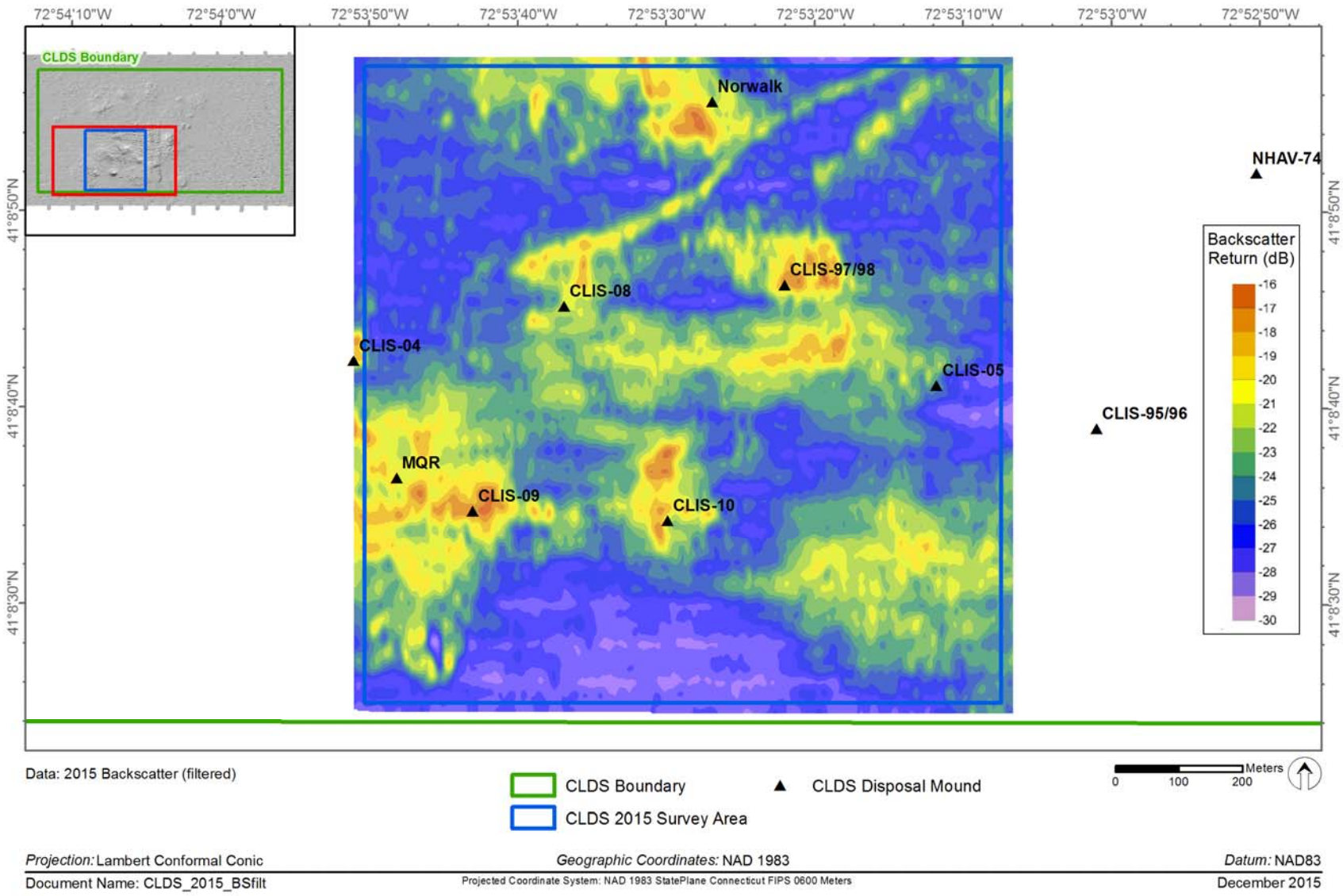

Figure 3-5. Filtered backscatter over acoustic relief model of CLDS – October 2015

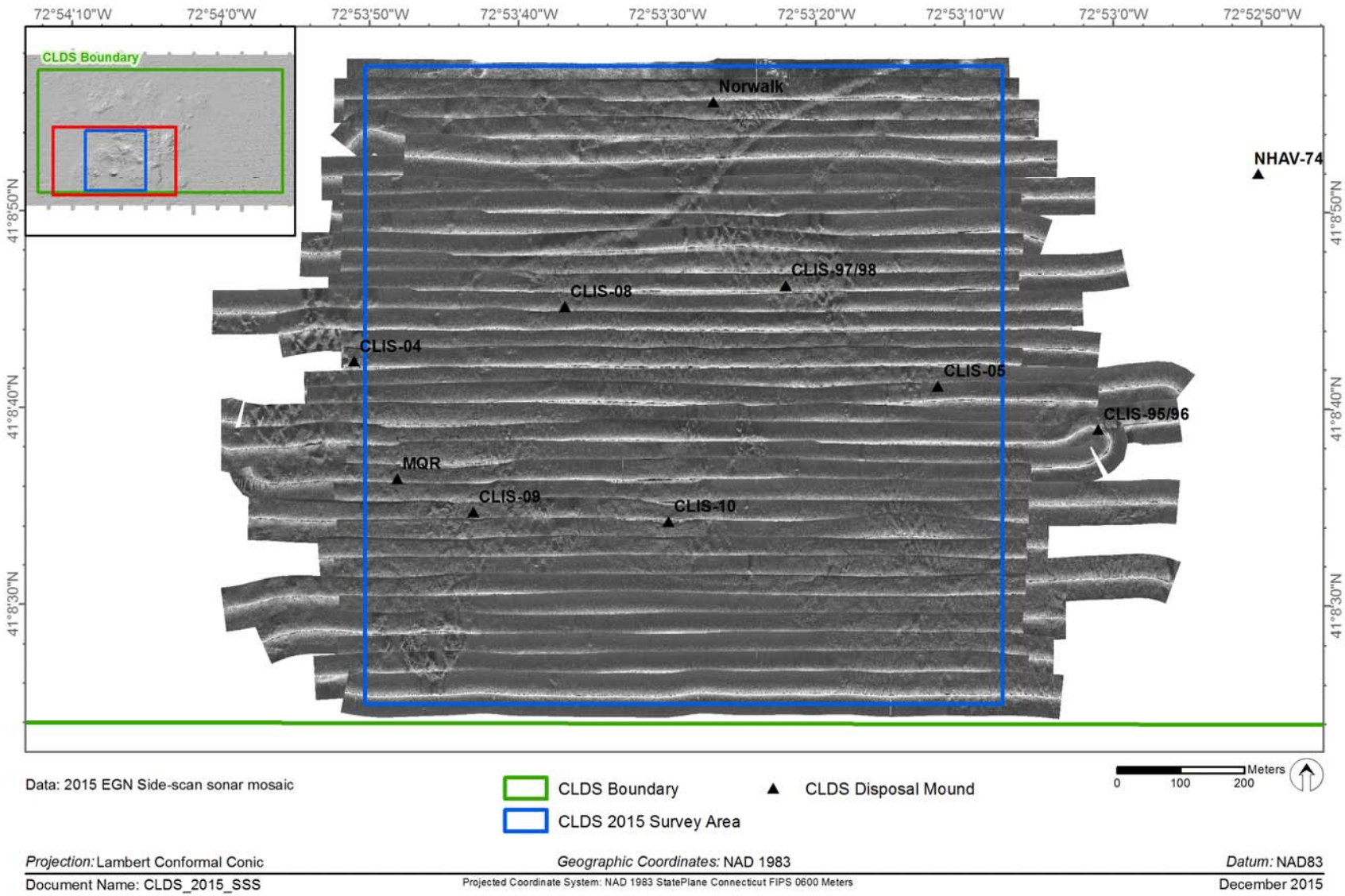

Figure 3-6. Side-scan mosaic of CLDS – October 2015

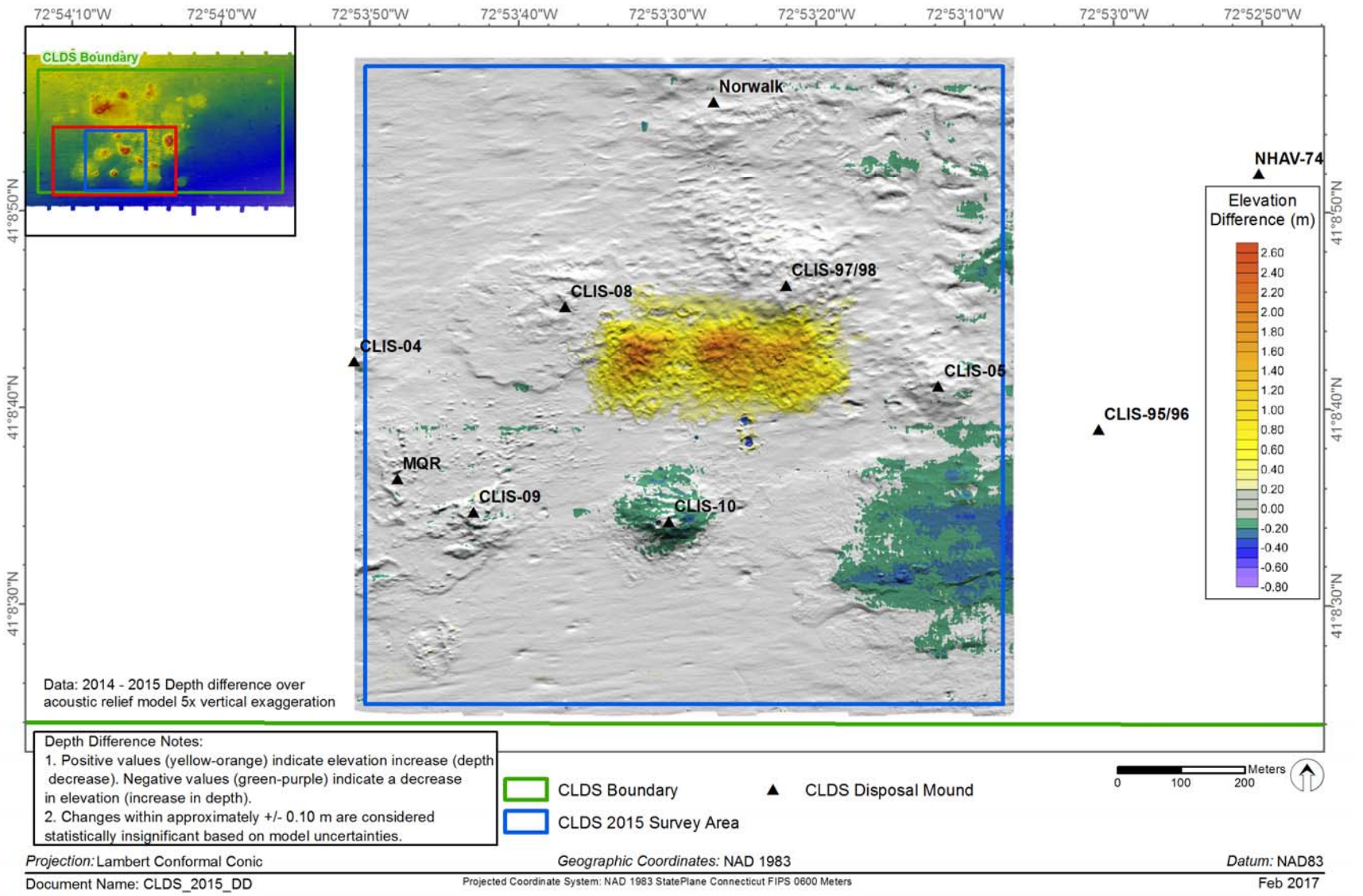

Figure 3-7. CLDS depth difference: 2015 vs. 2014

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5.0 DATA TRANSMITTAL

Data transmittal to support this data summary report will be provided as a separate deliverable for inclusion in a Technical Support Notebook. The data submittal will include:

- Scope of Work
- Raw and processed acoustic survey data
- Survey field logs
- Report figures and associated files, including an ArcGIS geo-database
- Electronic copies of all final report products

APPENDIX A

TABLE OF COMMON CONVERSIONS

Metric Unit Conversion to English Unit		English Unit Conversion to Metric Unit	
1 meter 1 m	3.2808 ft	1 foot 1 ft	0.3048 m
1 square meter 1 m^2	10.7639 ft^2	1 square foot 1 ft^2	0.0929 m^2
1 kilometer 1 km	0.6214 mi	1 mile 1 mi	1.6093 km
1 cubic meter 1 m^3	1.3080 yd^3	1 cubic yard 1 yd^3	0.7646 m^3
1 centimeter 1 cm	0.3937 in	1 inch 1 in	2.54 cm

APPENDIX B

CLDS DISPOSAL LOG DATA FROM OCTOBER 2014 TO MAY 2015

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	18-Feb-15	143	187	41.145748	-72.889367	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	03-Mar-15	143	187	41.145633	-72.889592	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	04-Mar-15	143	187	41.145552	-72.889840	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	06-Mar-15	143	187	41.145638	-72.889453	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	09-Mar-15	143	187	41.145333	-72.888700	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	10-Mar-15	143	187	41.145688	-72.889228	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	11-Mar-15	143	187	41.145652	-72.888877	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	13-Mar-15	143	187	41.145023	-72.888955	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	14-Mar-15	143	187	41.145177	-72.888702	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	17-Mar-15	143	187	41.145613	-72.888820	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	20-Mar-15	143	187	41.145402	-72.888693	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	22-Mar-15	143	187	41.145450	-72.889092	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	23-Mar-15	143	187	41.145467	-72.889020	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	24-Mar-15	143	187	41.145225	-72.889113	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	26-Mar-15	143	187	41.145503	-72.888907	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	27-Mar-15	143	187	41.145435	-72.888998	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	28-Mar-15	143	187	41.144712	-72.889528	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	29-Mar-15	143	187	41.145378	-72.889082	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	01-Apr-15	143	187	41.145417	-72.889068	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	02-Apr-15	143	187	41.145463	-72.889063	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	06-Apr-15	143	187	41.145427	-72.889240	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	11-Apr-15	143	187	41.145552	-72.888592	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	12-Apr-15	143	187	41.145345	-72.888793	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	13-Apr-15	143	187	41.145363	-72.889298	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	14-Apr-15	143	187	41.145197	-72.889095	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	15-Apr-15	143	187	41.145473	-72.888938	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	22-Apr-15	143	187	41.145272	-72.890320	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	25-Apr-15	143	187	41.145277	-72.889732	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	26-Apr-15	143	187	41.145550	-72.888742	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	28-Apr-15	143	187	41.145248	-72.889732	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	29-Apr-15	143	187	41.145282	-72.889647	NAE-2006-126
CLDS 14/15 1C	Between the Bridges Marina 2015	Old Saybrook	CT	30-Apr-15	155	203	41.145477	-72.888890	NAE-2006-126
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	22-Dec-14	322	421	41.145037	-72.891398	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	27-Dec-14	322	421	41.145537	-72.890202	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	28-Dec-14	322	421	41.145478	-72.889828	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	29-Dec-14	322	421	41.145443	-72.890565	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	30-Dec-14	322	421	41.144997	-72.891705	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	31-Dec-14	322	421	41.145510	-72.890080	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	11-Jan-15	322	421	41.145517	-72.890130	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	13-Jan-15	322	421	41.145350	-72.890272	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	14-Jan-15	322	421	41.144727	-72.890767	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	15-Jan-15	322	421	41.145042	-72.889825	NAE-2011-2437

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	18-Jan-15	322	421	41.145575	-72.889975	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	21-Jan-15	322	421	41.145387	-72.889955	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	21-Jan-15	322	421	41.145433	-72.890347	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	22-Jan-15	322	421	41.145460	-72.890303	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	23-Jan-15	322	421	41.145523	-72.890343	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	30-Jan-15	322	421	41.145552	-72.890227	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	04-Feb-15	322	421	41.145525	-72.890403	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	07-Feb-15	323	422	41.145177	-72.890932	NAE-2011-2437
CLDS 14/15 1B	Brewers Point Marina	Westbrook	CT	12-Feb-15	322	421	41.145528	-72.890110	NAE-2011-2437
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	09-Nov-14	333	435	41.145380	-72.891720	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	10-Nov-14	333	435	41.145350	-72.892420	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	25-Mar-15	333	435	41.145180	-72.892120	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	25-Mar-15	333	435	41.145370	-72.892370	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	26-Mar-15	333	435	41.145070	-72.891950	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	28-Mar-15	333	435	41.144820	-72.892230	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	28-Mar-15	333	435	41.144820	-72.892650	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	29-Mar-15	333	435	41.145450	-72.892150	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	01-Apr-15	333	435	41.145480	-72.892500	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	02-Apr-15	333	435	41.144900	-72.892230	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	06-Apr-15	333	435	41.145130	-72.892530	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	07-Apr-15	333	435	41.144900	-72.892560	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	11-Apr-15	333	435	41.145130	-72.892300	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	11-Apr-15	333	435	41.145220	-72.892100	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	12-Apr-15	333	435	41.145250	-72.892370	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	13-Apr-15	333	435	41.145220	-72.891900	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	13-Apr-15	333	435	41.145000	-72.891980	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	16-Apr-15	333	435	41.145100	-72.892230	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	16-Apr-15	333	435	41.145280	-72.892220	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	17-Apr-15	333	435	41.145370	-72.892130	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	27-Apr-15	333	435	41.144930	-72.892170	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	27-Apr-15	333	435	41.145180	-72.892070	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	29-Apr-15	333	435	41.145180	-72.892050	NAE-2008-2993
CLDS 14/15 1A	Clinton Yacht Haven	Clinton	CT	29-Apr-15	336	440	41.145230	-72.892150	NAE-2008-2993
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Dec-14	266	348	41.145820	-72.893130	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	13-Dec-14	266	348	41.145600	-72.891920	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Dec-14	266	348	41.145570	-72.892670	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	15-Dec-14	266	348	41.145580	-72.892230	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	15-Dec-14	266	348	41.144670	-72.892450	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	15-Dec-14	266	348	41.145750	-72.892350	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	16-Dec-14	266	348	41.144520	-72.891730	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	16-Dec-14	266	348	41.144820	-72.892930	W912WJ-14-C-0029

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	16-Dec-14	266	348	41.145070	-72.892670	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Dec-14	266	348	41.145380	-72.892050	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Dec-14	266	348	41.144730	-72.892120	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Dec-14	266	348	41.145180	-72.892720	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Dec-14	266	348	41.145400	-72.891770	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	19-Dec-14	266	348	41.145020	-72.891480	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	20-Dec-14	266	348	41.144850	-72.891930	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Dec-14	266	348	41.145370	-72.892720	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	22-Dec-14	266	348	41.144920	-72.892830	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	23-Dec-14	266	348	41.145100	-72.891980	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	24-Dec-14	266	348	41.144730	-72.889780	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	28-Dec-14	266	348	41.145420	-72.892080	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	29-Dec-14	266	348	41.145770	-72.892220	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	29-Dec-14	266	348	41.145530	-72.892200	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	30-Dec-14	266	348	41.145300	-72.891780	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	30-Dec-14	266	348	41.144480	-72.891750	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	30-Dec-14	266	348	41.145280	-72.891970	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	31-Dec-14	266	348	41.145530	-72.891320	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	31-Dec-14	266	348	41.144530	-72.892400	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	31-Dec-14	266	348	41.145130	-72.891700	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	03-Jan-15	266	348	41.145250	-72.891320	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	03-Jan-15	266	348	41.145230	-72.891650	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	04-Jan-15	266	348	41.145280	-72.891770	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	07-Jan-15	266	348	41.144330	-72.891830	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	08-Jan-15	266	348	41.144920	-72.891420	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	09-Jan-15	266	348	41.144800	-72.891950	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	10-Jan-15	266	348	41.144920	-72.891650	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Jan-15	266	348	41.144580	-72.892720	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Jan-15	266	348	41.145120	-72.891330	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Jan-15	266	348	41.144330	-72.892050	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Jan-15	266	348	41.145570	-72.891850	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Jan-15	266	348	41.145480	-72.891820	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Jan-15	266	348	41.144830	-72.892120	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Jan-15	266	348	41.145220	-72.891350	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Jan-15	266	348	41.145420	-72.891320	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	13-Jan-15	266	348	41.145570	-72.892580	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	13-Jan-15	266	348	41.144330	-72.891770	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	13-Jan-15	266	348	41.144930	-72.892730	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	13-Jan-15	266	348	41.144950	-72.891900	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Jan-15	266	348	41.145570	-72.892370	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Jan-15	266	348	41.145250	-72.891520	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Jan-15	266	348	41.145080	-72.891420	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Jan-15	266	348	41.145350	-72.892000	W912WJ-14-C-0029

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	15-Jan-15	266	348	41.145320	-72.892420	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	15-Jan-15	266	348	41.145550	-72.892970	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	15-Jan-15	266	348	41.145750	-72.892150	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	16-Jan-15	266	348	41.144900	-72.891900	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	16-Jan-15	266	348	41.145230	-72.891780	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	16-Jan-15	266	348	41.144470	-72.892300	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Jan-15	266	348	41.144950	-72.891150	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Jan-15	266	348	41.144630	-72.891770	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Jan-15	266	348	41.145380	-72.891980	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Jan-15	266	348	41.145000	-72.891600	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Jan-15	266	348	41.144330	-72.891120	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Jan-15	266	348	41.145050	-72.892230	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Jan-15	266	348	41.144980	-72.892000	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Jan-15	266	348	41.144870	-72.891570	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	19-Jan-15	266	348	41.145380	-72.891480	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	20-Jan-15	266	348	41.144970	-72.892980	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	20-Jan-15	266	348	41.144830	-72.891750	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	20-Jan-15	266	348	41.144830	-72.892750	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	20-Jan-15	266	348	41.145070	-72.891480	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	20-Jan-15	266	348	41.144620	-72.892350	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Jan-15	266	348	41.145300	-72.892000	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Jan-15	266	348	41.145330	-72.892850	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Jan-15	266	348	41.145070	-72.892270	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	22-Jan-15	266	348	41.145220	-72.891230	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	23-Jan-15	266	348	41.144850	-72.891830	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	23-Jan-15	266	348	41.145200	-72.892300	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	24-Jan-15	266	348	41.145350	-72.891900	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	25-Jan-15	266	348	41.144670	-72.892380	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	29-Jan-15	266	348	41.145030	-72.890920	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	29-Jan-15	266	348	41.145030	-72.890450	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	30-Jan-15	266	348	41.145220	-72.890770	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	01-Feb-15	266	348	41.145780	-72.890220	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	02-Feb-15	266	348	41.144720	-72.890670	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	03-Feb-15	266	348	41.145680	-72.890220	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	04-Feb-15	266	348	41.145120	-72.890000	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	04-Feb-15	266	348	41.145400	-72.891230	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	05-Feb-15	266	348	41.145350	-72.890830	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	05-Feb-15	266	348	41.145320	-72.890280	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	05-Feb-15	266	348	41.144770	-72.890930	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	06-Feb-15	266	348	41.145220	-72.889830	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	06-Feb-15	266	348	41.145080	-72.890350	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	06-Feb-15	266	348	41.145670	-72.890350	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	07-Feb-15	266	348	41.144850	-72.890020	W912WJ-14-C-0029

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	07-Feb-15	266	348	41.144600	-72.890450	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	07-Feb-15	266	348	41.145680	-72.889650	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	08-Feb-15	266	348	41.145580	-72.890330	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	08-Feb-15	266	348	41.144700	-72.890330	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	08-Feb-15	266	348	41.146130	-72.890500	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	08-Feb-15	266	348	41.145480	-72.889780	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	08-Feb-15	266	348	41.145220	-72.889950	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	09-Feb-15	266	348	41.145070	-72.891020	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	10-Feb-15	266	348	41.144800	-72.889880	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	10-Feb-15	266	348	41.144730	-72.890120	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	10-Feb-15	266	348	41.145570	-72.890580	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Feb-15	266	348	41.145350	-72.891250	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Feb-15	266	348	41.145350	-72.890280	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Feb-15	266	348	41.144620	-72.890270	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	11-Feb-15	266	348	41.145300	-72.890830	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Feb-15	266	348	41.144930	-72.891280	W912WJ-14-C-0029
CLDS 14/15 1A	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Feb-15	266	348	41.145520	-72.891670	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Feb-15	266	348	41.144600	-72.890470	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Feb-15	266	348	41.145680	-72.891180	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Feb-15	266	348	41.145530	-72.890970	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	13-Feb-15	266	348	41.145200	-72.891270	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Feb-15	266	348	41.144900	-72.890130	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Feb-15	266	348	41.144600	-72.890300	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Feb-15	266	348	41.145220	-72.890280	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Feb-15	266	348	41.145250	-72.890600	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Feb-15	266	348	41.144570	-72.890120	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	17-Feb-15	266	348	41.145480	-72.890470	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Feb-15	266	348	41.145330	-72.890600	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Feb-15	266	348	41.144880	-72.891470	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	18-Feb-15	266	348	41.144870	-72.890330	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	19-Feb-15	266	348	41.144850	-72.890700	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	19-Feb-15	266	348	41.145370	-72.890050	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	19-Feb-15	266	348	41.145380	-72.890030	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Feb-15	266	348	41.144850	-72.890780	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Feb-15	266	348	41.144900	-72.890270	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	21-Feb-15	266	348	41.145050	-72.890180	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	24-Feb-15	266	348	41.144970	-72.890270	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	27-Feb-15	266	348	41.145100	-72.889630	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Harbor FNP 2014-2015	Guilford	CT	27-Feb-15	266	348	41.144980	-72.889800	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	28-Feb-15	266	348	41.144820	-72.890830	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	09-Mar-15	266	348	41.144470	-72.890480	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	10-Mar-15	266	348	41.144480	-72.890650	W912WJ-14-C-0029
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	12-Mar-15	266	348	41.144530	-72.890900	W912WJ-14-C-0029

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1B	Guilford Harbor FNP 2014-2015	Guilford	CT	14-Mar-15	214	280	41.144480	-72.890820	W912WJ-14-C-0029
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	17-May-15	641	838	41.145170	-72.889320	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	17-May-15	641	838	41.145100	-72.889450	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	18-May-15	641	838	41.144900	-72.889080	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	18-May-15	641	838	41.145480	-72.889070	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	19-May-15	641	838	41.145420	-72.888600	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	19-May-15	641	838	41.147020	-72.885380	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	20-May-15	641	838	41.145180	-72.889250	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	20-May-15	641	838	41.145480	-72.888870	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	22-May-15	641	838	41.145420	-72.888480	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	22-May-15	641	838	41.144980	-72.889150	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	23-May-15	641	838	41.144830	-72.889230	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	23-May-15	641	838	41.145470	-72.888700	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	24-May-15	641	838	41.144870	-72.889250	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	24-May-15	641	838	41.145230	-72.889200	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	25-May-15	641	838	41.144800	-72.889330	NAE-2007-1989
CLDS 14/15 1C	Guilford Yacht Club 2014-2015	Guilford	CT	25-May-15	641	838	41.145150	-72.889330	NAE-2007-1989
CLDS 14/15 1A	Gwenmor Marina	Mystic	CT	28-Oct-14	191	250	41.145057	-71.891593	NAE-2008-425
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	19-May-15	382	500	41.145000	-72.889750	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	20-May-15	382	500	41.144400	-72.890350	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	22-May-15	382	500	41.145080	-72.889780	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	24-May-15	382	500	41.145470	-72.890250	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	25-May-15	382	500	41.145150	-72.890080	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	26-May-15	382	500	41.145130	-72.890000	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	28-May-15	382	500	41.145850	-72.890750	NAE-2005-4021
CLDS 14/15 1B	Hammock River Marina	Clinton	CT	29-May-15	382	500	41.144720	-72.890070	NAE-2005-4021
CLDS 14/15 1A	Hammonasset Marina	Clinton	CT	05-Nov-14	153	200	41.145367	-72.891700	NAE-2013-2551
CLDS 14/15 1A	Hammonasset Marina	Clinton	CT	06-Nov-14	153	200	41.145543	-72.891563	NAE-2013-2551
CLDS 14/15 1A	Hammonasset Marina	Clinton	CT	10-Nov-14	153	200	41.145343	-72.892030	NAE-2013-2551
CLDS 14/15 1B	Knutson Trust	Huntington	NY	17-Nov-14	660	863	41.144720	-72.890420	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	23-Nov-14	660	863	41.145120	-72.890580	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	29-Nov-14	660	863	41.113280	-72.998330	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	01-Dec-14	660	863	41.145100	-72.890400	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	04-Dec-14	660	863	41.145250	-72.890470	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	10-Dec-14	660	863	41.127980	-72.952200	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	14-Dec-14	660	863	41.144880	-72.891450	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	16-Dec-14	660	863	41.145150	-72.891230	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	20-Dec-14	660	863	41.145430	-72.891730	NAE-2013-00847

Target Site Code	Project Name	City/Town	State	Placement Date/Time	Load Volume (CM)	Load Volume (CY)	Placement Latitude	Placement Longitude	Permit Number
CLDS 14/15 1B	Knutson Trust	Huntington	NY	22-Dec-14	660	863	41.145030	-72.891850	NAE-2013-00847
CLDS 14/15 1B	Knutson Trust	Huntington	NY	30-Dec-14	665	870	41.144850	-72.891580	NAE-2013-00847
CLDS 14/15 1B	New Haven Harbor			14-Nov-14	**153**	**200**	41.144980	-72.890500	1983C0007
CLDS 14/15 1A	S & S Marine Holdings	Old Sayvrook	CT	14-Dec-14	262	343	41.145200	-72.891782	NAE-2008-2185
CLDS 14/15 1A	S & S Marine Holdings	Old Sayvrook	CT	16-Dec-14	262	343	41.145143	-72.892937	NAE-2008-2185
CLDS 14/15 1A	S & S Marine Holdings	Old Sayvrook	CT	19-Dec-14	262	343	41.145122	-72.892507	NAE-2008-2185
CLDS 14/15 1A	S & S Marine Holdings	Old Sayvrook	CT	20-Dec-14	262	343	41.145158	-72.891912	NAE-2008-2185
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	12-Nov-14	688	900	41.145467	-72.890207	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	14-Nov-14	688	900	41.145507	-72.890400	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	16-Nov-14	688	900	41.145317	-72.891018	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	27-Nov-14	688	900	41.145205	-72.891597	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	01-Dec-14	688	900	41.144610	-72.891667	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	04-Dec-14	688	900	41.145377	-72.890582	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	06-Dec-14	688	900	41.145195	-72.890770	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	18-Apr-15	688	900	41.145232	-72.890740	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	19-Apr-15	688	900	41.145222	-72.890345	NAE-2008-1468
CLDS 14/15 1B	Shennecossett Yacht Club	Groton	CT	24-May-15	688	900	41.145280	-72.890915	NAE-2008-1468
CLDS 14/15 1A	St. Ann Boat Club	Norwalk	CT	30-Oct-14	191	250	41.144627	-72.891507	NAE-2012-904
CLDS 14/15 1C	USCG Academy	New London	CT	08-Dec-14	546	714	41.144620	-72.888570	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	10-Dec-14	546	714	41.144850	-72.888400	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	13-Dec-14	546	714	41.144450	-72.888980	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	15-Dec-14	546	714	41.145430	-72.888770	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	16-Dec-14	546	714	41.145100	-72.888820	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	17-Dec-14	546	714	41.145170	-72.888230	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	19-Dec-14	546	714	41.144870	-72.893030	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	20-Dec-14	546	714	41.144570	-72.889470	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	21-Dec-14	546	714	41.145600	-72.889600	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	22-Dec-14	546	714	41.144700	-72.889330	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	28-Dec-14	546	714	41.145350	-72.888700	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	29-Dec-14	546	714	41.145580	-72.889350	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	30-Dec-14	546	714	41.145700	-72.888280	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	31-Dec-14	546	714	41.145280	-72.889430	NAE-1994-340
CLDS 14/15 1C	USCG Academy	New London	CT	04-Jan-15	552	722	41.144870	-72.888450	NAE-1994-340

TOTALS	**93,046**	**121,699**