



**Natural Resource Services, Inc.**

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**Project Narrative for  
Preliminary Determination Application**

*Old Harbor  
New Shoreham, Rhode Island*



**Prepared for:**

Bluewater, LLC  
c/o Paul Filippi  
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**Project Narrative Prepared by:**

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February 21, 2018

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## **Introduction**

Natural Resource Services, Inc. (NRS) was retained by Bluewater, LLC (hereafter the applicant), in the preparation and submission of a Preliminary Determination application to be submitted to the Coastal Resources Management Council (CRMC). Bluewater, LLC, is seeking permission to construct a new dock and augment an existing dock within Old Harbor on New Shoreham. The project proposes to impact tidal waters and coastal features, both of which fall under the jurisdictional authority of the CRMC and the U.S. Army Corps of Engineers (ACOE). The applicant believes this project qualifies under Section 1.3.1.C of the Coastal Resources Management Program (CRMP), a section which is designated for Residential, Commercial, Industrial and Recreational Structures. Therefore, the applicant is submitting this preliminary determination application to initiate the permitting process with the CRMC. A Variance Request along with the other documentation for a Category B Assent shall be subsequently submitted to the CRMC following this Preliminary Determination Process, and it shall be revised in accordance with any technical comments provided by CRMC staff.

The Old Harbor, Block Island waterfront supports a vibrant mix of recreational and commercial activities, and is one of the truly unique tourist destinations in Rhode Island. Section 1.1.2.39 of the CRMP qualifies Old Harbor as a “destination harbor”. This designation means that the primary use is by people arriving by vessel. It is also designated as Type 5 waters (section 1.2.1.E.), and it is one of the few locations selected by CRMC to foster commercial and recreational dockage on Block Island. Bluewater LLC is proposing the construction of two additional docks in Old Harbor, Block Island. This proposal will meet all of the highest priority uses set forth by CRMC for Type 5 waters and will increase its value as a destination harbor.

Specifically, the additional docks in Old Harbor, Block Island are required to support two major public initiatives in the State of Rhode Island. First, the Quonset to Block Island Ferry that has been approved by the Rhode Island Public Utilities Commission and Old Harbor is the permitted docking destination on Block Island. Secondly, the Deepwater Offshore Wind Farm requires regular monitoring and maintenance, a generating facility which is located approximately 3.3 nautical miles from the shoreline. The second feature will provide docks to transport workers to the existing and future offshore farms. The aim of this portion of the proposal is to provide a means of transit without impacting the existing ferry routes off-site to the west.

Additionally, the docks will make efficient use of navigable waters by expanding safe recreational use and improving navigation. Construction of the docks will increase berthing capacity for commercial and recreational boats and provide more space for the public to enjoy the waterfront, away from the commercial fishing and freight operations conducted on the existing commercial docks in Old Harbor. This construction will allow recreational vessels to use the new dockage, when ferries or CVT's (crew transfer vessels) are not docked, thus increasing the public's access to and use of the shoreline.

There are multiple stages of the project proposed as follows:

1. **Mt. Hope Dock** - The first, labeled “Proposed Mount Hope Dock” is in the approximate footprint of the Mount Hope Dock that was destroyed in the New

England Hurricane of 1938. The structure has three segments. The first section, which is closest to the shore, is a path paved with stone pavers. This path will be built on the landward side of a man-made coastal feature (CRMP 1.2.2.F.) and will then cross over to tidal water (CRMP 1.2.1.). The next section is a 10 ft. wide fixed pier. The third section is a 10ft. wide floating dock. Notably, the dock does not touch or go over any Corps of Engineers' structures and fully meets the setback requirements from both the federal channel and the breakwater. Neither the docks nor the path cross any real estate (other than that owned by the applicant's family and addressed below) except that controlled by the Corps of Engineers through the federal navigational servitude. Recognizing that the Corps may require access to the breakwater in the future, the docks are removable. Should the Corps require access to the Corps breakwater, the applicant will move the dock, and will do so at no cost to the Corps.

2. **Ballard's Wharf** - The second dock, labeled as "Proposed Ballard's Wharf" in Drawing 1, is a proposed modification and extension of the improvements authorized by Corps of Engineer permit NAE 2004-436. The project entails the removal and replacement of the existing 8 ft. wide floating dock with a 10 ft. wide fixed pier and 4 ft. wide floating docks. The applicant also requests authorization for a new 130 foot fixed pier. The applicant further requests modification of the condition of permit NAE 2004-436 to allow the use of the dock by commercial vessels and to allow encroachment of the federal project limits in the area adjacent to the new 130 foot fixed pier.

3. **Channel Dredging** - Dredging is required to make the Mount Hope Dock useable. The applicant proposes dredging approximately 16,569 cubic yards of material to 15 ft. below sea level using a hydraulic dredge. This grade shall be maintained within the marina perimeter as depicted on the accompanying site plans. The only dredging to occur outside of the perimeter shall be to achieve an adequate slope for this elevation. Due to the scope of the dredging proposed by this project, the applicant shall not require a variance to Section 1.3.1.I.5.A.5 of the CRMP. Additionally, the intended dredging shall only occur within areas designated as Type 5 Water under the CRMP.

4. **Beach Nourishment** - The spoils from the proposed dredging will be used as beach nourishment on the town-owned Crescent Beach. Permission to conduct this nourishment is being sought from the town concurrently. A proposed backup location is along Ballard's Beach on the east side of the breakwater. Both potential beach nourishment locations are on beaches (CRMP, 1.2.2.E.) associated with Type 1 Waters (CRMP, 1.2.1.A.) and would result in a net-positive impact on either shoreline in terms of erodibility. Furthermore, the locally sourced replenishment material shall also significantly reduce transportation costs which would be factored into the future replenishment needs of either shoreline.

It is anticipated that the applicant will submit a Category B application to the CRMC after the preliminary determination review has been completed. This Category B application will address, in narrative form, the standards set forth in the following sections of the CRMP:

- 1.3.1.A. – Work in Tidal Waters/Shoreline Features
- 1.3.1.C. – Residential, Commercial, Industrial and Recreational Structures
- 1.3.1.I. – Dredging and Dredge Material Disposal

The following variance request will be made at the time of the Category B application:

- A variance request from section 1.3.1.C.4.a.4, which establishes that all commercial and industrial structures and operations in tidal waters shall have a defined structural perimeter for in-water facilities, describing and limit that area in which repair or alteration activities may take place. The standard was created to promote safety. The proposed structures are situated in a unique area adjacent to a jetty that was built inside the channel. The Town received approval to build a bait dock in this very area but chose to rebuild the existing bait dock. The applicant is seeking approval from the ACOE for the reduced setback from the channel.



**1.3.1.D.2.b. - Alternatives Analysis**

Since there is no guidance for a preliminary determination submittal for applications under 1.3.1.C of the CRMP, the applicant has prepared this narrative under the guidance from Section 1.3.1.D. This standard requires project proponents, through a written narrative, to prepare an analysis of project alternatives.

Thoughtful project design has ensured that the proposed use of public trust resources is the most efficient and protective of the environment. The proposed locations for the two piers are in the locations that are most logical given the space available in the heavily trafficked Old Harbor. The proposed locations take into account the existing flow of boat traffic. The location

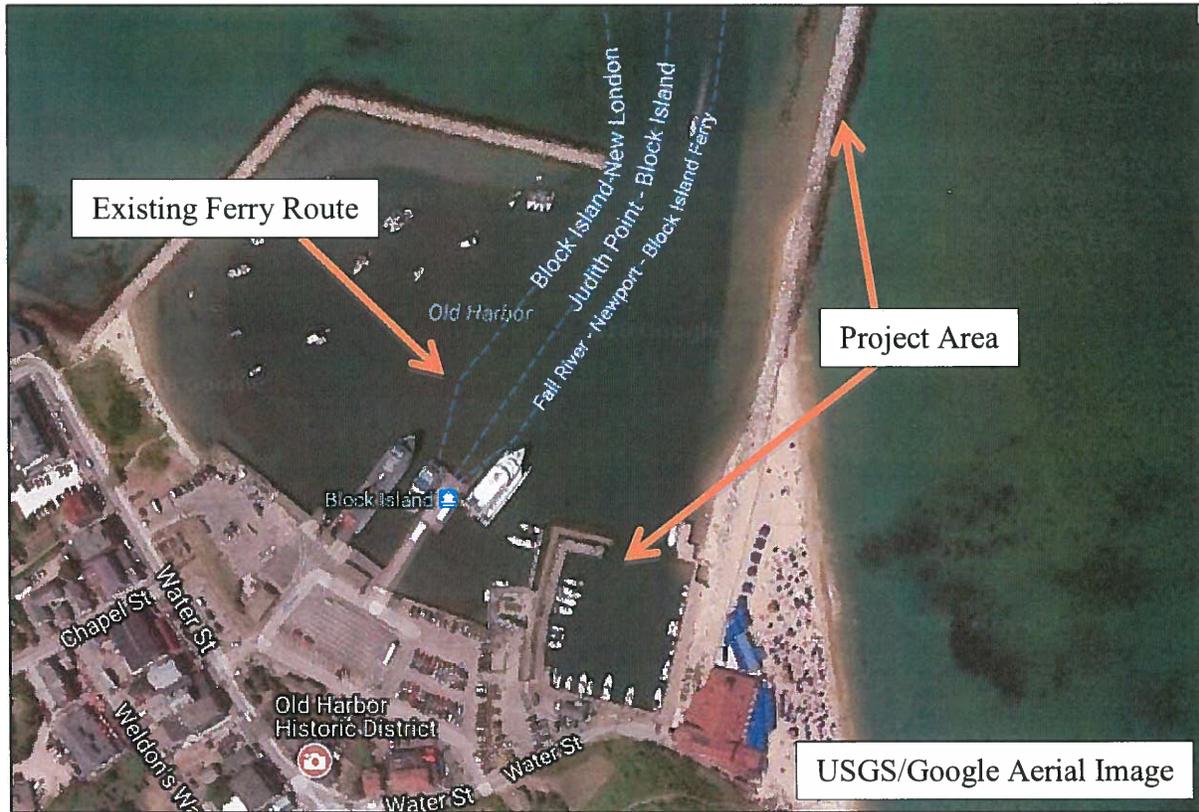
of the Mt. Hope pier is in an area where the historic Mt. Hope Dock was once located. The Ballard's Wharf pier proposes to use the current location of a floating dock which will be replaced and also proposes to use the waters in front (north side) of an existing jetty.

The applicant is somewhat limited in terms of project alternatives due to the fact that the adjacent areas are comprised of beaches featuring the Type 1 Waters. Under the CRMP, such water types are not consistent with boating or commercial ferries, and, moreover, dock structures are prohibited within these areas. Type 5 Waters are generally rare in New Shoreham; any proposal for a new marina project elsewhere on the island would likely require a water use change and would not be congruent with the historic use of the respective waterfront. The current and historic use of Old Harbor coincides with those of this project.

One alternative would also include reducing the amount of dredging proposed with this project. However, such a design would jeopardize the level of boating to be supported by this project. All dredge spoils shall be recycled for the purpose of beach nourishment as described in the preceding section of this report. Although alternative beaches within New Shoreham are in need of nourishment, the depletion of Crescent Beach due to the historic breakwater structure is a factor which contributed to this design. A second factor is the close proximity to the proposed dredging location, which significantly reduces transportation costs if the material were to be brought in from elsewhere on the island. If by some reason the town does not grant approval for these nourishment activities, then the applicant may utilize the dredge spoils on the shoreline to the east of Ballards under his family's ownership.

Another alternative would be a "no build" scenario. This alternative provides baseline comparison for the proposed action. If the proposed docks are not constructed, authorization for the alteration, occupation, or use of a USACOE civil works project will not be required. Old Harbor will continue to operate without the proposed fixed piers and floating docks. Transportation to New Shoreham will continue at a similar level as present, with an overall lesser capacity to service high speed ferry service or other commercial and recreational activities.

The applicant had also proposed utilizing the area to the west of the breakwater structure. However, pursuant to the comments of the ACOE and the harbormaster, any further development of this area would interfere with the trajectory of the existing ferry routes. The following image has been taken by the USGS interface to display these routes.



**CRMP Review Criteria**

While Section 1.3.1.C does not provide direct performance standards relating to a preliminary determination submittal, the applicant has prepared the following response based on the standards provided within Section 1.3.1.D.2.b. In assessing a proposed facility, the CRMP states that the Council shall require a preliminary determination / alternatives analysis that details the following:

**(1) the appropriateness of the facility given the activities potential to impact Rhode Island's coastal resources;**

The proposed location is the most appropriate on the island for this type of activity being that Old Harbor is designated as a destination harbor under the CRMP. The harbor is already regularly dredged by the ACOE, which has limited aquatic life. The waters adjacent to this waterfront support a variety of tourist, recreational, and commercial activities. Bluewater is proposing the additional docks in CRMC Type 5 waters. CRMC has determined (Section 1.2.1E.3.b.(1-4)) that the highest priority uses of this Type 5 water and adjoining land are (1) berthing, mooring, and servicing recreational craft, commercial fishing vessels, and ferries; (2) water-dependent commerce, including businesses that cater to tourists; (3) maintenance of navigational channels and berths; and (4) activities that maintain or enhance water quality and scenic qualities, including the preservation of historic features. Activities that significantly detract from or interfere with the above uses will be modified or prohibited.

**(2) the appropriateness of the structure given environmental site conditions;**

The site is well suited to this use given that dredging occurs regularly and docks already exist in the harbor. The shoreline features in the harbor consist of man-made features such as revetments, headwalls and boulder breakwaters. According to Block Island's chamber of commerce, 65% of its 20,000 daily visitors come by ferry and 30% come by private boat to Block Island. Yet 150-200 requests for slips are denied each day on Block Island during its short tourist and boating season. Consequently, boaters are required to anchor outside the protected harbor, exposed to wave action, which affects the enjoyment and safety of the boaters and limits their access to local businesses. With no safe berths available to reserve, these boaters will increasingly choose other destinations such as Montauk or Nantucket, which provide ample berths for recreational boating. This would represent a critical revenue loss to the mostly seasonal businesses on Block Island, and an unnecessary annual loss in substantial tax revenue to the State of Rhode Island. Providing additional docking locations as proposed in this application will help alleviate this problem.

**(3) the potential impacts of the structure and use of the facility on public trust resources (e.g., fin fish, shellfish, submerged aquatic vegetation, benthic habitat, commerce, navigation, recreation, natural resources, and other uses of the submerged lands, etc.);**

A 2015 Submerged Aquatic Vegetation (SAV) survey (included in Appendix) conducted by NRS in the project location determined that no eelgrass (*Zostera marina*) or widgeon grass (*Ruppia maritima*) beds were present in the area. There is a coarse sand substrate at the site. Because no eelgrass or widgeon grass beds are present in the area, fish and wildlife species that typically utilize such habitat are not expected to occur in the project area. Examples of such species include bay scallops, quahogs, blue crabs, lobsters, starfish, snails, mussels, tautog and other fish, brant and other waterfowl. We expect a lesser range of such biodiversity in the Old Harbor due to the lack of eelgrass beds in the area. A 2012 Composite Map available through the CRMC shows eelgrass beds present in the Outer Harbor and along beaches north of Old Harbor. These areas will not be impacted by the proposed project.

The Essential Fish Habitat (EFH) mapping tools and reports available through the National Oceanic and Atmospheric Administration (NOAA) provides a list of federally managed species that may be expected to occur in the vicinity of the project area and the waters immediately surrounding Block Island. This list includes: ocean pout, winter flounder, sandbar shark, albacore tuna, red hake, skipjack tuna, silver hake, basking shark, Bluefin tuna, dusky shark, white shark, smooth dogfish, common thresher shark, tiger shark, yellowfin tuna, longfin inshore squid, Atlantic cod, Atlantic herring, spiny dogfish, little skate, winter skate, window pane flounder, scup, Atlantic butterfish, summer flounder, black sea bass, and bluefish. No Habitats of Particular Concern (HAPC) or EFH Areas Protected from Fishing are located in the project area; no critical habitat areas lie within the project area (NOAA, 2011; NOAA, 2017). The proposed

project is not expected to have any negative impact on such species or other aquatic species.

**(4) the potential navigation impacts of the structure and associated use of the structure;**

The additional docks in Old Harbor, Block Island are required to support two major public initiatives in the State of Rhode Island. First, the Quonset to Block Island Ferry that has been approved by the Rhode Island Public Utilities Commission and Old Harbor is the preferred docking destination on Block Island. Secondly, the Deepwater Offshore Wind Farm requires regular monitoring and maintenance. The second dock will provide a dock to transport workers between the offshore farm and the island.

Additionally, the docks will make efficient use of navigable waters by expanding safe recreational use and improving navigation. Construction of the docks will increase berthing capacity for commercial and recreational boats and provide more space for the public to enjoy the waterfront, away from the commercial fishing and freight operations conducted on the existing commercial docks in Old Harbor. Being the nation's first offshore wind farm, the ability to maintain the farm is directly related to the state's renewable energy portfolio.

**(5) the potential aesthetic and scenic impacts associated with the structure;**

The project is proposed in an already heavily used harbor where many boats and ferries dock. The shoreline features that abut the Type 5 water are man-made features including headwalls and boulder breakwaters. The addition of the proposed piers will not significantly decrease the aesthetic and scenic value of the harbor beyond that of pre-project levels.

**(6) the cumulative impacts associated with the increased density of existing recreational boating facilities in the vicinity of the proposed project. In considering these factors, the Council shall weigh the benefits of the proposed activity against its potential impacts while ensuring that it does not cause an adverse impact on other existing uses of Rhode Island's public trust resources;**

It is not anticipated that the additional boat traffic will pose a significant impact. Currently, many boaters that are unable to acquire slips within the harbor will anchor outside the protected harbor, exposed to wave action, which affects the enjoyment and safety of the boaters and limits their access to local businesses. The proposed project will alleviate some of the out of harbor anchoring boats when the dock is not in use. Additionally, the proposed increase in density has been configured to minimize impacts to the existing ferry routes to the greatest extent practicable.

**(7) the potential impacts to other recreational or commercial uses of the affected resource;**

The project proposes to serve recreational boaters and commercial vessels. Due to the heavy traffic, regular dredging of the harbor, and lack of submerged aquatic vegetation in the harbor, fishing is not practical here. There are no other recreational or commercial activities that would otherwise be impacted by this proposal. Tourists and residents may continue to utilize the adjacent recreational and commercial facilities to the same capacity as that of pre-project levels.

**(8) the extent to which any disruption of the public use of such lands is temporary or permanent;**

It is not anticipated that there will be a disruption of the public use of the harbor during or after construction. Boats and ferry traffic that currently use the harbor will not be impacted and pathways along the landward side of the shoreline feature will not be blocked.

**(9) the extent to which the public at large would benefit from the activity or project and the extent to which it would suffer detriment; and**

As discussed previously, according to Block Island's chamber of commerce, 65% of its 20,000 daily visitors come by ferry and 30% come by private boat to Block Island. Yet 150-200 requests for slips are denied each day on Block Island during its short tourist and boating season. Consequently, boaters are required to anchor outside the protected harbor, exposed to wave action, which affects the enjoyment and safety of the boaters and limits their access to local businesses. With no safe berths available to reserve, these boaters will increasingly choose other destinations such as Montauk or Nantucket, which provide ample berths for recreational boating. This would represent a critical revenue loss to the mostly seasonal businesses on Block Island, and an unnecessary annual loss in substantial tax revenue to the State of Rhode Island. Providing additional docking locations as proposed in this application will help alleviate this problem.

**(10) the extent to which structures that extend over submerged lands are dependent upon water access for their primary purpose.**

These structures are water dependent by definition, and the project therefore requires access to open waters as a central component of its primary purpose.

## **Conclusion**

The applicant is seeking permission to create a new dock, modify an existing dock and to perform dredging and beach nourishment activities within the vicinity of Old Harbor in New Shoreham, Rhode Island. This project is being submitted as a Request for Preliminary Determination to the CRMP. Following the review by CRMC staff, the applicant shall subsequently submit a Category B Assent application for this project, including a Request for Variance to the applicable sections of the CRMP and shall provide written responses to the standards outlined in the preceding section of this report.

The primary purpose of this project is to provide additional ferry and boating opportunities described throughout this report, including routine means of access to Quonset as well as the off-shore Deepwater Wind Farm. This narrative has been prepared to outline the various components of the project and to provide an alternatives analysis prior to the submittal of the Category B Assent.

## **References**

Coastal Resources Management Council, *Coastal Resources Management Program, as Amended*, Revised December 2012. Retrieved from <http://www.crmc.ri.gov/regulations/RICRMP.pdf>

Coastal Resources Management Council, *Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast*, Revised 2014

RIGIS. 2008, 2011 & 2014. *Topo map & aerial photoviewer*. RI Department of Environmental Management.

# **Appendix**

Site Photographs  
2015 Submerged Aquatic Vegetation (SAV) survey











## Natural Resource Services, Inc.

**Submerged Aquatic Vegetation Survey**  
Blue Water, LLC  
New Shoreham, RI



Prepared for  
Blue Water, LLC  
42 Water Street  
PO Box 1818  
Block Island, RI 02807

Survey and Report Prepared by:

Edward J. Avizinis  
Wetland Biologist/Soil Scientist

September 11, 2015

NRS File #15-233

## Introduction

Natural Resource Services, Inc. (NRS) has completed a Submerged Aquatic Vegetation (SAV) survey along the requested areas of the above referenced property. This survey was performed in accordance with the standards established within Section 300.18 E.4 (a-e) of the RI Coastal Resources Management Program (CRMP). This report and the enclosed graphic and data tables can be used for any submission to the CRMC requiring proof of an SAV survey. An SAV survey is considered valid for up to three (3) years (section 300.18 E.3).

The primary purpose of this SAV survey is to identify and map existing Eelgrass (*Zostera marina*) and Widgeon Grass (*Ruppia maritima*) beds, substrate within the survey area, mean height of eelgrass shoots, and depth of water (at time of sampling) at each quadrat location. Eelgrass and Widgeon Grass are perennial, rooted, submerged, aquatic plants that occupy shallow, estuarine waters in sheltered bays and coves. These vegetated beds provide habitat and cover for various shellfish and fin fish species, while subsequently providing food for waterfowl species. Eelgrass also plays an important role in protecting the shorelines from sedimentation and erosion by stabilizing bottom sediments. It is for these functions and values that the CRMC requires a survey of Eelgrass habitats.

## Methodology

The SAV Survey was performed on September 10, 2015, with all work occurring between 11:15 a.m. - 2:00 p.m. in a portion of Old Harbor classified as Type 5 Waters. Type 5 waters are defined as recreational and commercial harbors that are adjacent to waterfront areas supporting tourist, recreational, and commercial activities. The survey was designed to gather as much data for as possible within the physical limitations which are present.

Transects were established to encompass a long stretch of the west side of the rock jetty at Ballard's beach. Transect A was established at the southern extent of the rock wall where it meets Ballard's dock. Subsequent transects (B-Z, AA-ZZ, AAA-FFF) were established north of transect A, established successively every ten feet. Measurements began from the shoreline (shoreline determined at 11:30 a.m., 10 September, 2015) and ran perpendicular to the shore. The nearby ocean low tide was recorded to be at 12:17 p.m. (EDT) on September 10, 2015.

Due to constraints regarding the dock positioning, the proposed fast ferry dock site (west of the rock jetty) did not have transects established for an SAV survey. The area was fully surveyed from the water, however, and determined to have no Eelgrass or Widgeon Grass present.

The survey extended at its furthest point approximately 130 feet seaward from the established transects. A one meter square sampling station was established every 10 feet along most transects. As there was no Eelgrass or Widgeon Grass present at the site, and

due to the length and relative consistency of the shoreline at this site, some of the transects were not fully sampled. Data from adjacent transects and visual observations at the site are sufficient proof that there is no Eelgrass or Widgeon Grass growing along these transects. At each of the established sampling stations, the water depth, substrate characteristics, percent cover of *Zostera marina* and/or *Ruppia maritima*, and mean shoot height (n/a) was recorded.

### Findings and Conclusion

Upon completion of the NRS site investigation, it was determined that there are no Eelgrass or Widgeon Grass beds in the area. There is a coarse sand substrate at the site which transitions to mucky sand approximately 50-70 feet seaward. The area has historically been maintained as a harbor and has ample water depth (10'+/-) past the limits of this SAV survey. The full survey data are depicted on the attached graphic and attached data tables.

## **Appendix**



### Ballards Dock SAV Survey

Performed on 9/10/15

New Shoreham, RI

2014 USGS Digital True  
Color Orthophotography

- Approximate Site Locations
- Transects
- Sampling points

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 (c) RIGIS

**RIGIS**



Positions GPS located with  
Trimble Geoexplorer 6000 series

**A**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of Eelgrass	Mean Shoot Height (in.)
A1	10	0	Coarse Sand	0	n/a
A2	20	0	Coarse Sand	0	n/a
A3	30	0	Coarse Sand	0	n/a
A4	40	0	Coarse Sand	0	n/a
A5	50	0.5	Coarse Sand	0	n/a
A6	60	4	Mucky Sand	0	n/a
A7	70	8	Mucky Sand	0	n/a
A8	80	>10	Mucky Sand	0	n/a

**B**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
B1	10	0	Coarse Sand	0	n/a
B2	20	0	Coarse Sand	0	n/a
B3	30	0	Coarse Sand	0	n/a
B4	40	0.25	Coarse Sand	0	n/a
B5	50	1.75	Coarse Sand	0	n/a
B6	60	4.5	Mucky Sand	0	n/a
B7	70	8	Mucky Sand	0	n/a
B8	80	>10	Mucky Sand	0	n/a

**C**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
C1	10	0	Coarse Sand	0	n/a
C2	20	0	Coarse Sand	0	n/a
C3	30	0	Coarse Sand	0	n/a
C4	40	0.25	Coarse Sand	0	n/a
C5	50	1.75	Coarse Sand	0	n/a
C6	60	4.5	Mucky Sand	0	n/a
C7	70	10	Mucky Sand	0	n/a
C8	80	>10	Mucky Sand	0	n/a

**D**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
D1	10	-	-	0	n/a
D2	20	-	-	0	n/a
D3	30	-	-	0	n/a
D4	40	-	-	0	n/a
D5	50	-	-	0	n/a
D6	60	-	-	0	n/a
D7	70	-	-	0	n/a
D8	80	-	-	0	n/a

**Submerged Aquatic Vegetation Survey Data**

Ballard's Inn, New Shoreham, RI  
 Prepared by: Edward J. Avizini 9/11/2015

**E**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
E1	10	0	Coarse Sand	0	n/a
E2	20	0	Coarse Sand	0	n/a
E3	30	0	Coarse Sand	0	n/a
E4	40	1	Coarse Sand	0	n/a
E5	50	2	Coarse Sand	0	n/a
E6	60	3.75	Mucky Sand	0	n/a
E7	70	9	Mucky Sand	0	n/a
E8	80	>10	Mucky Sand	0	n/a

**F**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
F1	10	0	Coarse Sand	0	n/a
F2	20	0	Coarse Sand	0	n/a
F3	30	0	Coarse Sand	0	n/a
F4	40	0.5	Coarse Sand	0	n/a
F5	50	-	-	0	n/a
F6	60	-	-	0	n/a
F7	70	-	-	0	n/a
F8	80	-	-	0	n/a

**G**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
G1	10	0	Coarse Sand	0	n/a
G2	20	0	Coarse Sand	0	n/a
G3	30	0	Coarse Sand	0	n/a
G4	40	0	Coarse Sand	0	n/a
G5	50	1.5	Coarse Sand	0	n/a
G6	60	3	Mucky Sand	0	n/a
G7	70	8	Mucky Sand	0	n/a
G8	80	10	Mucky Sand	0	n/a

**H**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
H1	10	0	Coarse Sand	0	n/a
H2	20	0	Coarse Sand	0	n/a
H3	30	0	Coarse Sand	0	n/a
H4	40	0	Coarse Sand	0	n/a
H5	50	1	Mucky Sand	0	n/a
H6	60	-	-	0	n/a
H7	70	-	-	0	n/a
H8	80	-	-	0	n/a

**Submerged Aquatic Vegetation Survey Data** (#15-233)

Ballard's Inn, New Shoreham, RI  
 Prepared by: Edward J. Avizinis 9/11/2015

**J**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of Eelgrass	Mean Shoot Height (in.)
J1	10	0	Coarse Sand	0	n/a
J2	20	0	Coarse Sand	0	n/a
J3	30	0	Coarse Sand	0	n/a
J4	40	0.5	Coarse Sand	0	n/a
J5	50	-	-	0	n/a
J6	60	-	-	0	n/a
J7	70	-	-	0	n/a
J8	80	-	-	0	n/a

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
J1	10	0	Coarse Sand	0	n/a
J2	20	0	Coarse Sand	0	n/a
J3	30	0	Coarse Sand	0	n/a
J4	40	0.5	Coarse Sand	0	n/a
J5	50	-	-	0	n/a
J6	60	-	-	0	n/a
J7	70	-	-	0	n/a
J8	80	-	-	0	n/a

**K**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
K1	10	0	Coarse Sand	0	n/a
K2	20	0	Coarse Sand	0	n/a
K3	30	0	Coarse Sand	0	n/a
K4	40	0.75	Coarse Sand	0	n/a
K5	50	1.5	Coarse Sand	0	n/a
K6	60	2.5	Mucky Sand	0	n/a
K7	70	8	Mucky Sand	0	n/a
K8	80	>10	Mucky Sand	0	n/a

**L**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
L1	10	0	Coarse Sand	0	n/a
L2	20	0	Coarse Sand	0	n/a
L3	30	0	Coarse Sand	0	n/a
L4	40	0	Coarse Sand	0	n/a
L5	50	0.5	Coarse Sand	0	n/a
L6	60	-	-	0	n/a
L7	70	-	-	0	n/a
L8	80	-	-	0	n/a

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**M**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
M1	10	0	Coarse Sand	0	n/a
M2	20	0	Coarse Sand	0	n/a
M3	30	0	Coarse Sand	0	n/a
M4	40	0.5	Coarse Sand	0	n/a
M5	50	1.5	Mucky Sand	0	n/a
M6	60	5	Mucky Sand	0	n/a
M7	70	6	Mucky Sand	0	n/a
M8	80	8	Mucky Sand	0	n/a
M9	90	>10	Mucky Sand	0	n/a

**N**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
N1	10	0	Coarse Sand	0	n/a
N2	20	0	Coarse Sand	0	n/a
N3	30	0	Coarse Sand	0	n/a
N4	40	0.5	Coarse Sand	0	n/a
N5	50	-	-	0	n/a
N6	60	-	-	0	n/a
N7	70	-	-	0	n/a
N8	80	-	-	0	n/a
N9	90	-	-	0	n/a

**O**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
O1	10	0	Coarse Sand	0	n/a
O2	20	0	Coarse Sand	0	n/a
O3	30	0.25	Coarse Sand	0	n/a
O4	40	0.5	Coarse Sand	0	n/a
O5	50	1.25	Mucky Sand	0	n/a
O6	60	1.75	Mucky Sand	0	n/a
O7	70	5	Mucky Sand	0	n/a
O8	80	8	Mucky Sand	0	n/a
O9	90	>10	Mucky Sand	0	n/a

**P**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
P1	10	0	Coarse Sand	0	n/a
P2	20	0	Coarse Sand	0	n/a
P3	30	0.5	Coarse Sand	0	n/a
P4	40	-	-	0	n/a
P5	50	-	-	0	n/a
P6	60	-	-	0	n/a
P7	70	-	-	0	n/a
P8	80	-	-	0	n/a
P9	90	-	-	0	n/a

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**Q**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
Q1	10	0	Coarse Sand	0	n/a
Q2	20	0	Coarse Sand	0	n/a
Q3	30	0.5	Coarse Sand	0	n/a
Q4	40	-	-	0	n/a
Q5	50	-	-	0	n/a
Q6	60	-	-	0	n/a
Q7	70	-	-	0	n/a
Q8	80	-	-	0	n/a
Q9	90	-	-	0	n/a

**R**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
R1	10	0	Coarse Sand	0	n/a
R2	20	0	Coarse Sand	0	n/a
R3	30	0.5	Coarse Sand	0	n/a
R4	40	1.25	Coarse Sand	0	n/a
R5	50	1.75	Mucky Sand	0	n/a
R6	60	1.5	Mucky Sand	0	n/a
R7	70	4.5	Mucky Sand	0	n/a
R8	80	8	Mucky Sand	0	n/a
R9	90	>10	Mucky Sand	0	n/a

**S**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
S1	10	0	Coarse Sand	0	n/a
S2	20	0	Coarse Sand	0	n/a
S3	30	0.75	Coarse Sand	0	n/a
S4	40	-	-	0	n/a
S5	50	-	-	0	n/a
S6	60	-	-	0	n/a
S7	70	-	-	0	n/a
S8	80	-	-	0	n/a
S9	90	-	-	0	n/a

**T**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
T1	10	0	Coarse Sand	0	n/a
T2	20	0	Coarse Sand	0	n/a
T3	30	0.5	Coarse Sand	0	n/a
T4	40	0.75	Coarse Sand	0	n/a
T5	50	1..75	Mucky Sand	0	n/a
T6	60	1.25	Coarse Sand	0	n/a
T7	70	2.25	Mucky Sand	0	n/a
T8	80	6	Mucky Sand	0	n/a
T9	90	10	Mucky Sand	0	n/a

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**U**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
U1	10	0	Coarse Sand	0	n/a
U2	20	0	Coarse Sand	0	n/a
U3	30	0.75	Coarse Sand	0	n/a
U4	40	-	Coarse Sand	0	n/a
U5	50	-	Mucky Sand	0	n/a
U6	60	-	Mucky Sand	0	n/a
U7	70	-	Mucky Sand	0	n/a
U8	80	-	Mucky Sand	0	n/a
U9	90	-	Mucky Sand	0	n/a

**V**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
V1	10	0	Coarse Sand	0	n/a
V2	20	0	Coarse Sand	0	n/a
V3	30	0.25	Coarse Sand	0	n/a
V4	40	0.75	Coarse Sand	0	n/a
V5	50	1	Mucky Sand	0	n/a
V6	60	1.5	Mucky Sand	0	n/a
V7	70	1.75	Mucky Sand	0	n/a
V8	80	5	Mucky Sand	0	n/a
V9	90	>10	Mucky Sand	0	n/a

**W**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
W1	10	0	Coarse Sand	0	n/a
W2	20	0	Coarse Sand	0	n/a
W3	30	0.25	Coarse Sand	0	n/a
W4	40	-	Coarse Sand	0	n/a
W5	50	-	Mucky Sand	0	n/a
W6	60	-	Mucky Sand	0	n/a
W7	70	-	Mucky Sand	0	n/a
W8	80	-	Mucky Sand	0	n/a
W9	90	-	Mucky Sand	0	n/a

**X**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
X1	10	0	Coarse Sand	0	n/a
X2	20	0	Coarse Sand	0	n/a
X3	30	0.25	Coarse Sand	0	n/a
X4	40	1	Coarse Sand	0	n/a
X5	50	1.5	Mucky Sand	0	n/a
X6	60	1.75	Mucky Sand	0	n/a
X7	70	3	Mucky Sand	0	n/a
X8	80	5	Mucky Sand	0	n/a
X9	90	>10	Mucky Sand	0	n/a

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**Y**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
Y1	10	0	Coarse Sand	0	n/a
Y2	20	0	Coarse Sand	0	n/a
Y3	30	0.25	Coarse Sand	0	n/a
Y4	40	0.5	Coarse Sand	0	n/a
Y5	50	0.75	Coarse Sand	0	n/a
Y6	60	1.25	Coarse Sand	0	n/a
Y7	70	1.5	Coarse Sand	0	n/a
Y8	80	2	Mucky Sand	0	n/a
Y9	90	8	Mucky Sand	0	n/a
Y10	100	>10	Mucky Sand	0	n/a

**Z**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
Z1	10	-	-	0	n/a
Z2	20	-	-	0	n/a
Z3	30	-	-	0	n/a
Z4	40	-	-	0	n/a
Z5	50	-	-	0	n/a
Z6	60	-	-	0	n/a
Z7	70	-	-	0	n/a
Z8	80	-	-	0	n/a
Z9	90	-	-	0	n/a
Z10	100	-	-	0	n/a

**AA**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
AA1	10	0	Coarse Sand	0	n/a
AA2	20	0	Coarse Sand	0	n/a
AA3	30	0.25	Coarse Sand	0	n/a
AA4	40	0.5	Coarse Sand	0	n/a
AA5	50	0.75	Coarse Sand	0	n/a
AA6	60	1.5	Coarse Sand	0	n/a
AA7	70	1.75	Coarse Sand	0	n/a
AA8	80	2.25	Mucky Sand	0	n/a
AA9	90	6	Mucky Sand	0	n/a
AA10	100	>10	Mucky Sand	0	n/a

**BB**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
BB1	10	-	-	0	n/a
BB2	20	-	-	0	n/a
BB3	30	-	-	0	n/a
BB4	40	-	-	0	n/a
BB5	50	-	-	0	n/a
BB6	60	-	-	0	n/a
BB7	70	-	-	0	n/a
BB8	80	-	-	0	n/a
BB9	90	-	-	0	n/a
BB10	100	-	-	0	n/a

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**CC**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
CC1	10	0	Coarse Sand	0	n/a
CC2	20	0	Coarse Sand	0	n/a
CC3	30	0.5	Coarse Sand	0	n/a
CC4	40	0.5	Coarse Sand	0	n/a
CC5	50	0.75	Mucky Sand	0	n/a
CC6	60	1.5	Mucky Sand	0	n/a
CC7	70	2	Mucky Sand	0	n/a
CC8	80	2.5	Mucky Sand	0	n/a
CC9	90	6	Mucky Sand	0	n/a
CC10	100	>10	Mucky Sand	0	n/a

**DD**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
DD1	10	-	-	0	n/a
DD2	20	-	-	0	n/a
DD3	30	-	-	0	n/a
DD4	40	-	-	0	n/a
DD5	50	-	-	0	n/a
DD6	60	-	-	0	n/a
DD7	70	-	-	0	n/a
DD8	80	-	-	0	n/a
DD9	90	-	-	0	n/a
DD10	100	-	-	0	n/a

**EE**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
EE1	10	0	Coarse Sand	0	n/a
EE2	20	0	Coarse Sand	0	n/a
EE3	30	0.5	Coarse Sand	0	n/a
EE4	40	0.5	Coarse Sand	0	n/a
EE5	50	0.75	Mucky Sand	0	n/a
EE6	60	1.25	Mucky Sand	0	n/a
EE7	70	1.75	Mucky Sand	0	n/a
EE8	80	2	Mucky Sand	0	n/a
EE9	90	6	Mucky Sand	0	n/a
EE10	100	>10	Mucky Sand	0	n/a

**FF**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
FF1	10	-	-	0	n/a
FF2	20	-	-	0	n/a
FF3	30	-	-	0	n/a
FF4	40	-	-	0	n/a
FF5	50	-	-	0	n/a
FF6	60	-	-	0	n/a
FF7	70	-	-	0	n/a
FF8	80	-	-	0	n/a
FF9	90	-	-	0	n/a
FF10	100	-	-	0	n/a

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**GG**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
GG1	10	0	Coarse Sand	0	n/a
GG2	20	0	Coarse Sand	0	n/a
GG3	30	0.25	Coarse Sand	0	n/a
GG4	40	0.5	Coarse Sand	0	n/a
GG5	50	0.5	Coarse Sand	0	n/a
GG6	60	1	Mucky Sand	0	n/a
GG7	70	1.5	Mucky Sand	0	n/a
GG8	80	1.75	Mucky Sand	0	n/a
GG9	90	6	Mucky Sand	0	n/a
GG10	100	>10	Mucky Sand	0	n/a

**HH**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
HH1	10	-	-	0	n/a
HH2	20	-	-	0	n/a
HH3	30	-	-	0	n/a
HH4	40	-	-	0	n/a
HH5	50	-	-	0	n/a
HH6	60	-	-	0	n/a
HH7	70	-	-	0	n/a
HH8	80	-	-	0	n/a
HH9	90	-	-	0	n/a
HH10	100	-	-	0	n/a

**II**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
II1	10	0	Coarse Sand	0	n/a
II2	20	0	Coarse Sand	0	n/a
II3	30	0.25	Coarse Sand	0	n/a
II4	40	0.5	Coarse Sand	0	n/a
II5	50	0.5	Mucky Sand	0	n/a
II6	60	1	Mucky Sand	0	n/a
II7	70	1.5	Mucky Sand	0	n/a
II8	80	2	Mucky Sand	0	n/a
II9	90	6	Mucky Sand	0	n/a
II10	100	>10	Mucky Sand	0	n/a

**JJ**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
JJ1	10	-	-	0	n/a
JJ2	20	-	-	0	n/a
JJ3	30	-	-	0	n/a
JJ4	40	-	-	0	n/a
JJ5	50	-	-	0	n/a
JJ6	60	-	-	0	n/a
JJ7	70	-	-	0	n/a
JJ8	80	-	-	0	n/a
JJ9	90	-	-	0	n/a
JJ10	100	-	-	0	n/a

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**KK**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
KK1	10	0	Coarse Sand	0	n/a
KK2	20	0	Coarse Sand	0	n/a
KK3	30	0.25	Coarse Sand	0	n/a
KK4	40	0.5	Coarse Sand	0	n/a
KK5	50	0.5	Coarse Sand	0	n/a
KK6	60	0.75	Mucky Sand	0	n/a
KK7	70	1.5	Mucky Sand	0	n/a
KK8	80	2	Mucky Sand	0	n/a
KK9	90	5	Mucky Sand	0	n/a
KK10	100	>10	Mucky Sand	0	n/a

**LL**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
LL1	10	-	-	0	n/a
LL2	20	-	-	0	n/a
LL3	30	-	-	0	n/a
LL4	40	-	-	0	n/a
LL5	50	-	-	0	n/a
LL6	60	-	-	0	n/a
LL7	70	-	-	0	n/a
LL8	80	-	-	0	n/a
LL9	90	-	-	0	n/a
LL10	100	-	-	0	n/a

**MM**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
MM1	10	0	Coarse Sand	0	n/a
MM2	20	0	Coarse Sand	0	n/a
MM3	30	0.25	Coarse Sand	0	n/a
MM4	40	0.5	Coarse Sand	0	n/a
MM5	50	0.5	Coarse Sand	0	n/a
MM6	60	1	Mucky Sand	0	n/a
MM7	70	1.5	Mucky Sand	0	n/a
MM8	80	2	Mucky Sand	0	n/a
MM9	90	5	Mucky Sand	0	n/a
MM10	100	>10	Mucky Sand	0	n/a

**NN**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
NN1	10	-	-	0	n/a
NN2	20	-	-	0	n/a
NN3	30	-	-	0	n/a
NN4	40	-	-	0	n/a
NN5	50	-	-	0	n/a
NN6	60	-	-	0	n/a
NN7	70	-	-	0	n/a
NN8	80	-	-	0	n/a
NN9	90	-	-	0	n/a
NN10	100	-	-	0	n/a

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**OO**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
OO1	10	0	Coarse Sand	0	n/a
OO2	20	0	Coarse Sand	0	n/a
OO3	30	0.25	Coarse Sand	0	n/a
OO4	40	0.5	Coarse Sand	0	n/a
OO5	50	0.75	Coarse Sand	0	n/a
OO6	60	1	Mucky Sand	0	n/a
OO7	70	1.5	Mucky Sand	0	n/a
OO8	80	2	Mucky Sand	0	n/a
OO9	90	4	Mucky Sand	0	n/a
OO10	100	8	Mucky Sand	0	n/a
OO11	110	>10	Mucky Sand	0	n/a

**PP**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
PP1	10	-	-	0	n/a
PP2	20	-	-	0	n/a
PP3	30	-	-	0	n/a
PP4	40	-	-	0	n/a
PP5	50	-	-	0	n/a
PP6	60	-	-	0	n/a
PP7	70	-	-	0	n/a
PP8	80	-	-	0	n/a
PP9	90	-	-	0	n/a
PP10	100	-	-	0	n/a

**QQ**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
QQ1	10	0	Coarse Sand	0	n/a
QQ2	20	0	Coarse Sand	0	n/a
QQ3	30	0.5	Coarse Sand	0	n/a
QQ4	40	0.75	Coarse Sand	0	n/a
QQ5	50	1.25	Coarse Sand	0	n/a
QQ6	60	1.5	Mucky Sand	0	n/a
QQ7	70	1.75	Mucky Sand	0	n/a
QQ8	80	2	Mucky Sand	0	n/a
QQ9	90	3.5	Mucky Sand	0	n/a
QQ10	100	8	Mucky Sand	0	n/a
QQ11	110	>10	Mucky Sand	0	n/a

**RR**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
RR1	10	-	-	0	n/a
RR2	20	-	-	0	n/a
RR3	30	-	-	0	n/a
RR4	40	-	-	0	n/a
RR5	50	-	-	0	n/a
RR6	60	-	-	0	n/a
RR7	70	-	-	0	n/a
RR8	80	-	-	0	n/a
RR9	90	-	-	0	n/a
RR10	100	-	-	0	n/a
RR11	110	-	-	0	n/a

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**SS**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
SS1	10	0	Coarse Sand	0	n/a
SS2	20	0	Coarse Sand	0	n/a
SS3	30	0.5	Coarse Sand	0	n/a
SS4	40	0.75	Coarse Sand	0	n/a
SS5	50	1	Mucky Sand	0	n/a
SS6	60	1.5	Mucky Sand	0	n/a
SS7	70	1.75	Mucky Sand	0	n/a
SS8	80	2	Mucky Sand	0	n/a
SS9	90	3.25	Mucky Sand	0	n/a
SS10	100	8	Mucky Sand	0	n/a
SS11	110	>10	Mucky Sand	0	n/a

**TT**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
TT1	10	-	-	0	n/a
TT2	20	-	-	0	n/a
TT3	30	-	-	0	n/a
TT4	40	-	-	0	n/a
TT5	50	-	-	0	n/a
TT6	60	-	-	0	n/a
TT7	70	-	-	0	n/a
TT8	80	-	-	0	n/a
TT9	90	-	-	0	n/a
TT10	100	-	-	0	n/a
TT11	110	-	-	0	n/a

**UU**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
UU1	10	0	Coarse Sand	0	n/a
UU2	20	0	Coarse Sand	0	n/a
UU3	30	0.5	Coarse Sand	0	n/a
UU4	40	0.5	Coarse Sand	0	n/a
UU5	50	1	Coarse Sand	0	n/a
UU6	60	1.25	Mucky Sand	0	n/a
UU7	70	1.5	Mucky Sand	0	n/a
UU8	80	1.75	Mucky Sand	0	n/a
UU9	90	3	Mucky Sand	0	n/a
UU10	100	6	Mucky Sand	0	n/a
UU11	110	8	Mucky Sand	0	n/a
UU12	120	>10	Mucky Sand	0	n/a

**VV**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
VV1	10	-	-	0	n/a
VV2	20	-	-	0	n/a
VV3	30	-	-	0	n/a
VV4	40	-	-	0	n/a
VV5	50	-	-	0	n/a
VV6	60	-	-	0	n/a
VV7	70	-	-	0	n/a
VV8	80	-	-	0	n/a
VV9	90	-	-	0	n/a
VV10	100	-	-	0	n/a
VV11	110	-	-	0	n/a
VV12	120	-	-	0	n/a

**Submerged Aquatic Vegetation Survi (#15-233)**  
 Ballard's Inn, New Shoreham, RI  
 Prepared by: Edward J. Avizinis 9/11/2015

**WW**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
WW1	10	0	Coarse Sand	0	n/a
WW2	20	0	Coarse Sand	0	n/a
WW3	30	0.25	Coarse Sand	0	n/a
WW4	40	0.5	Coarse Sand	0	n/a
WW5	50	0.75	Coarse Sand	0	n/a
WW6	60	1	Mucky Sand	0	n/a
WW7	70	1	Mucky Sand	0	n/a
WW8	80	1.5	Mucky Sand	0	n/a
WW9	90	2	Mucky Sand	0	n/a
WW10	100	3.5	Mucky Sand	0	n/a
WW11	110	8	Mucky Sand	0	n/a
WW12	120	>10	Mucky Sand	0	n/a

**XX**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
XX1	10	-	-	0	n/a
XX2	20	-	-	0	n/a
XX3	30	-	-	0	n/a
XX4	40	-	-	0	n/a
XX5	50	-	-	0	n/a
XX6	60	-	-	0	n/a
XX7	70	-	-	0	n/a
XX8	80	-	-	0	n/a
XX9	90	-	-	0	n/a
XX10	100	-	-	0	n/a
XX11	110	-	-	0	n/a
XX12	120	-	-	0	n/a

**YY**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
YY1	10	0	Coarse Sand	0	n/a
YY2	20	0	Coarse Sand	0	n/a
YY3	30	0.25	Coarse Sand	0	n/a
YY4	40	0.5	Coarse Sand	0	n/a
YY5	50	0.5	Coarse Sand	0	n/a
YY6	60	0.75	Coarse Sand	0	n/a
YY7	70	1	Mucky Sand	0	n/a
YY8	80	1.25	Mucky Sand	0	n/a
YY9	90	2	Mucky Sand	0	n/a
YY10	100	3	Mucky Sand	0	n/a
YY11	110	6	Mucky Sand	0	n/a
YY12	120	>10	Mucky Sand	0	n/a

**ZZ**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
ZZ1	10	-	-	0	n/a
ZZ2	20	-	-	0	n/a
ZZ3	30	-	-	0	n/a
ZZ4	40	-	-	0	n/a
ZZ5	50	-	-	0	n/a
ZZ6	60	-	-	0	n/a
ZZ7	70	-	-	0	n/a
ZZ8	80	-	-	0	n/a
ZZ9	90	-	-	0	n/a
ZZ10	100	-	-	0	n/a
ZZ11	110	-	-	0	n/a
ZZ12	120	-	-	0	n/a

**Submerged Aquatic Vegetation Surv. (#15-233)**  
 Ballard's Inn, New Shoreham, RI  
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**AAA**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
AAA1	10	0	Coarse Sand	0	n/a
AAA2	20	0	Coarse Sand	0	n/a
AAA3	30	0.25	Coarse Sand	0	n/a
AAA4	40	0.25	Coarse Sand	0	n/a
AAA5	50	0.5	Coarse Sand	0	n/a
AAA6	60	0.5	Coarse Sand	0	n/a
AAA7	70	1	Mucky Sand	0	n/a
AAA8	80	1	Mucky Sand	0	n/a
AAA9	90	1.75	Mucky Sand	0	n/a
AAA10	100	2	Mucky Sand	0	n/a
AAA11	110	5	Mucky Sand	0	n/a
AAA12	120	>10	Mucky Sand	0	n/a

**CCC**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
CCC1	10	-	-	0	n/a
CCC2	20	-	-	0	n/a
CCC3	30	-	-	0	n/a
CCC4	40	-	-	0	n/a
CCC5	50	-	-	0	n/a
CCC6	60	-	-	0	n/a
CCC7	70	-	-	0	n/a
CCC8	80	-	-	0	n/a
CCC9	90	-	-	0	n/a
CCC10	100	-	-	0	n/a
CCC11	110	-	-	0	n/a
CCC12	120	-	-	0	n/a

**BBB**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
BBB1	10	-	-	0	n/a
BBB2	20	-	-	0	n/a
BBB3	30	-	-	0	n/a
BBB4	40	-	-	0	n/a
BBB5	50	-	-	0	n/a
BBB6	60	-	-	0	n/a
BBB7	70	-	-	0	n/a
BBB8	80	-	-	0	n/a
BBB9	90	-	-	0	n/a
BBB10	100	-	-	0	n/a
BBB11	110	-	-	0	n/a
BBB12	120	-	-	0	n/a

**DDD**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
DDD1	10	-	-	0	n/a
DDD2	20	-	-	0	n/a
DDD3	30	-	-	0	n/a
DDD4	40	-	-	0	n/a
DDD5	50	-	-	0	n/a
DDD6	60	-	-	0	n/a
DDD7	70	-	-	0	n/a
DDD8	80	-	-	0	n/a
DDD9	90	-	-	0	n/a
DDD10	100	-	-	0	n/a
DDD11	110	-	-	0	n/a
DDD12	120	-	-	0	n/a

**Submerged Aquatic Vegetation St** (#15-233)

Ballard's Inn, New Shoreham, RI  
 Prepared by: Edward J. Avizinis 9/11/2015

**EEE**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
EEE1	10	-	-	0	n/a
EEE2	20	-	-	0	n/a
EEE3	30	-	-	0	n/a
EEE4	40	-	-	0	n/a
EEE5	50	-	-	0	n/a
EEE6	60	-	-	0	n/a
EEE7	70	-	-	0	n/a
EEE8	80	-	-	0	n/a
EEE9	90	-	-	0	n/a
EEE10	100	-	-	0	n/a
EEE11	110	-	-	0	n/a
EEE12	120	-	-	0	n/a

**FFF**

Sample ID	Distance from transect (ft)	Depth (ft)	Bottom substrate	% Cover of eelgrass	Mean Shoot Height (in.)
FFF1	10	0	Coarse Sand	0	n/a
FFF2	20	0	Coarse Sand	0	n/a
FFF3	30	0	Coarse Sand	0	n/a
FFF4	40	0	Coarse Sand	0	n/a
FFF5	50	0.25	Coarse Sand	0	n/a
FFF6	60	0.5	Coarse Sand	0	n/a
FFF7	70	0.75	Coarse Sand	0	n/a
FFF8	80	1	Coarse Sand	0	n/a
FFF9	90	1.25	Coarse Sand	0	n/a
FFF10	100	1.75	Mucky Sand	0	n/a
FFF11	110	2.5	Mucky Sand	0	n/a
FFF12	120	6	Mucky Sand	0	n/a
FFF13	130	>10	Mucky Sand	0	n/a

