Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only
Executive Office of Environmental Affairs
EOEA No.: 14178
MEPA Analyst: Deirdre Buckley
Phone: 617-626-1044

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: **Madaket Marine Improvement Project**		
Street: **20 North Cambridge Street**		
Municipality: **Nantucket, MA**	Watershed: **Cape & Islands**	
Universal Transverse Mercator Coordinates:	Latitude: 41° 16' 46.27" N	
UTM Zone	Longitude: 70° 11' 26.44" W	
Estimated commencement date: **June 2008**	Estimated completion date **2113**	
Approximate cost **$ 400,000**	Status of project design: **75** % complete	
Proponent: **Hither Creek Boat Yard, Inc. d/b/a Madaket Marine**		
Street: **20 North Cambridge Street**		
Municipality: **Nantucket**	State: **MA**	Zip Code: **02554**
Name of Contact Person From Whom Copies of this ENF May Be Obtained: **Lester B. Smith**		
Firm/Agency: **Epsilon Associates**	Street: **3 Clock Tower Place Suite 250**	
Municipality: **Maynard**	State: **MA**	Zip Code: **01754**
Phone: **978-897-7100**	Fax: **(978) 897-0099**	E-mail: **lsmith@epsilonassociates.com**

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

Has this project been filed with MEPA before?
☐Yes (EOEA No. _____) ☒No

Has any project on this site been filed with MEPA before?
☐Yes (EOEA No. _____) ☒No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:

a Single EIR? (see 301 CMR 11.06(8))	☐Yes	☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes	☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes	☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes	☒No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

Are you requesting coordinated review with any other federal, state, regional, or local agency?
☐Yes (Specify _____) ☒No

List Local or Federal Permits and Approvals: The following local and federal permits and approvals may be required for the project: Local: Planning Board ; Conservation Commission – Order of Conditions; Federal – US Army Corps of Engineers, Section 10/404 approval

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- ☐ Land
- ☐ Water
- ☐ Energy
- ☐ ACEC
- ☐ Rare Species
- ☐ Wastewater
- ☐ Air
- ☐ Regulations
- ☒ Wetlands, Waterways, & Tidelands
- ☐ Transportation
- ☐ Solid & Hazardous Waste
- ☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				☒ Order of Conditions ☐ Superseding Order of Conditions ☒ Chapter 91 License ☐ 401 Water Quality Certification ☐ MHD or MDC Access Permit ☐ Water Management Act Permit ☐ New Source Approval ☐ DEP or MWRA Sewer Connection/ Extension Permit ☐ Other Permits (*including Legislative Approvals*) – Specify:
Total site acreage Madaket Marine **Total =**	17.07			
New acres of land altered		0		
Acres of impervious area Structures, roadways, and parking areas above MLW: **Existing Site Total =**	2.25 2.25	0 0	2.25 2.25	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		0		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage In Water – docks Upland - Boat racks	 5,128 11,384	 13,011 2,162	 18,139 13,546	
Number of housing units	0	0	0	
Maximum height (in feet) Floating docks: Boat Stack heights:	 2 24 – 30	 0 0 – 30	 2 30	
TRANSPORTATION				
Vehicle trips per day Boating season: - week day Boating season: - week end Non-boating season	 16-23 31-38 ~12	 20-29 38-49 0	 36-52 69-87 12	
Parking spaces	48	119	167	

WATER/WASTEWATER			
Gallons/day (GPD) of water use	660+	800+	1400+
GPD water withdrawal	660	800	1400
GPD wastewater generation/ treatment	600	670	1270
Length of water/sewer mains (in miles)	.13/.01	0/0	.13/.01

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☒Yes (Specify: Estimated Habitat of Rare Species) ☐No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☒Yes (Specify: Entire Island is in district) ☐No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) ☒No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

(a). **Project Site**: The project site consists of an existing marina on Hither Creek in the Makaket section of Nantucket. Hither Creek outlets to Madaket Harbor and Nantucket Sound. The Creek is bordered by a salt marsh system along much of the upland boundary. Prior to 1947 the area now known as Madaket Marine was a small point of high land in the tidal marsh area of Madaket used by several local residents to beach and maintain small boats. Sterling Balfor Yerxa was the property owner of record from the 1930's to about the mid 1950's. The boatyard was created in 1938. At this time some filling of the area occurred.

During the 1950's, the owners at the time, Mr. John Wagley and Mr. Willauer, brought in large amounts of fill from various parts of the island, and erected several buildings. In 1956, the property was acquired by Mr. J. Winston Fowlkes who started a marina business called Harbor Sales & Service. At this time much of the filling occurred bringing the site to its present approximate boundary. In 1967 Hither Creek Boatyard, Inc. a Massachusetts corporation acquired the property and operated a marine sales and service yard. Since 1966 the property has been operated as Madaket Marine.

Project Overview: The Project will consist of changes to the in-water and upland area boat storage facilities in an effort to make improvements to the overall infrastructure of the Marina, and allow the Applicant to maximize public access to the water by providing needed boat slips and boat storage. In-water Project activities include the removal of 13 existing and permitted moorings, the reconfiguration of the current floating dock system, and the expansion of the current floating dock system from 5,128 sf to 18,139 sf which increases the number of boat slips from 60 to 126. Upland activities include the removal of a covered boat storage shed, the installation of 3 new boat storage valet racks and modifying and reconfiguring the existing 4 boat valet rack storage facilities, providing stormwater drainage improvements, and parking improvements. All upland activities are in previously disturbed areas. A detailed description of work activities is provided in the following sections.

In-water Activities

At present, the marina has 5,128 sf of pile-anchored floating docks, with 60 boat slips, fuel, transient, and valet staging areas. In addition, the Applicant has 12 permitted, single swing, chain and anchor moorings located in Hither Creek (8 of these are near the center of the channel along the length of Hither Creek, and, 4 are at the western edge of the widening of Hither Creek in front of Madaket Marine). An additional mooring located near existing marina basin is owned by a Nantucket resident, who has offered it to the Applicant as part of the Master Plan. The Applicant proposes to remove all 13 of these moorings and replace them with pile-anchored floating docks and piers running along the northern edge of Hither Creek, These docks will be located seaward of the salt marsh a distance of at least 2 feet to over 10 feet. The dimensions of the existing and proposed floating docks are provided in the table below.

Table 1-1 Summary of existing and proposed in-water docking facilities

	Existing		Proposed	
	Length (Linear Feet)	**Area (Square Feet)**	**Length (Linear Feet)**	**Area (Square Feet)**
Floating Main Dock	643	3,698	2,132	12,718
Floating Finger Piers	715	1,430	1,955	5,421
Totals	1,358	5,128	4,087	18,139
Number of Boats Slips	60		126	
Number of Moorings	13		0	
Number of In-Water Valet Staging Area Spaces	4		7	
Floating Fuel Dock	No Change			

The new floating dock system will create 126 slips, with 61 in the existing marina boat basin, 54 boats in the length of Hither Creek up to 35 feet and 11 boats in the widened portion of Hither Creek up to 41 feet in length. This is a significant improvement over the current system of floating docks and moorings, which can only store 73 boats up to 30+ feet in length (60 at the dock, 13 on moorings). The floating dock will be located within the previously approved and dredged areas of Land Under the Ocean.

Upland Activities

The upland portion of the Project site currently consists of 3 buildings. One building houses fuel sales, a second building (in 2 sections) is used to service boats and engines, and an office, ships store, storage and locker complex. In addition, there is an open building with roof which could be used for valet storage in summer and winter storage. This building will be removed; no changes are proposed to the other buildings. There are also 4 valet boat rack facilities as shown on the attached site plans.

Boat Storage Racks

Due to the limited acreage of the Project Site, the Applicant proposes to build up rather than out to increase the upland boat rack storage capacity of the Marina. The Applicant will remove the existing covered boat storage shed which is approximately ±4,060 sf and approximately ±24 feet in height, and replace it with ADA and other parking. The proposed changes also include the installation of 3 new valet boat rack facilities and modification/reconfiguration of 4 existing valet rack facilities which will allow boats to be stacked three layers high, holding up to 219 boats. The new storage rack facilities will extend up to ±29.9 feet above grade, which is in compliance with local zoning regulations. A portion of the new storage rack will be located within the 50-foot No Build Zone to the Salt Marsh. The rack structure will continue to be a minimum of 4 feet landward of the delineated edge of salt marsh.

Stormwater Drainage

The proposed Master Plan improvements will result in improvements to on-site hydrological characteristics. As shown by the following calculations, design elements will attenuate the existing stormwater runoff rates for the 25-year storm event and implement pollutant removal via Best Management Practice's (BMP's) to the maximum extent practical in accordance with all applicable regulatory requirements. This will decrease the potential adverse impacts to adjoining and downstream wetlands.

Pre-Development Site Conditions

For the purpose of the stormwater drainage evaluation, a project locus total of 17.08 acres was used, of which 2.37 acres has been previously developed and continually used for upland marina and boat yard operations located on the west side of North Cambridge Street.

The Applicant currently has three buildings housing fuel sales, servicing boats and engines, an office, ships store, storage and locker complex, and a steel frame boat rack with roof. The ground cover on the upland site consists primarily of impervious areas of bituminous concrete and cement concrete, with additional areas of exposed gravel/sand with the eastern portion of the proper primarily grass. The site is nearly level with three general watershed areas flowing North and South of the entrance driveway and West to Hither Creek from the Launching Pad Area. Elevations of the upland range from 6.0± to 2.0±. Half Tide Level (HTL) datum of 1934.

Site soils in the upland area as determined from the Soil Survey of Nantucket County, Massachusetts (SCS, 1979), consist of Riverhead sandy loam (ReA) soils. This well drained soil is located in nearly level irregularly shaped convex areas on broad outwash plains.

Proposed Improvements

The Applicant is not creating any impervious surfaces or disturbing any previously undisturbed areas on the property. The project will actually result in a net decrease in impervious surface coverage as a result of removal of just over 2,000 sf of existing asphalt and replacing it with gravel. The Applicant is also proposing to implement an enhanced storm water management system that will include placing hydrocarbon filter inserts in the stormwater catch basin and in the washdown pad catch basin on the property, and installing a stormwater swale system beneath the new racks and existing racks with pervious surfaces. The stormwater swale system will include the placement of approximately 1,080 linear feet of a gravel trench approximately 6 inches deep and lined with filter fabric along with a 6 inch high seeded earth berm which will prevent direct flows into the wetlands adjacent to system.

Site drainage and stormwater management comply to the maximum extent possible with the Massachusetts Stormwater Management Policy (MSMP). Since the project is in an area subject to tidal flooding, controlling peak discharge rates is impractical. Per Standard # 1 of the MSMP, mitigating Pre-Development and Post-Development discharge rates is not required in areas subject to tidal action. The proposed drainage improvements achieve water quality improvements through proposed BMP's and the decrease in existing impervious areas.

The Applicant recently received approval from the Nantucket Conservation Commission and will construct a new boat washdown pad, which will capture and recycle boat washdown water and remove contaminants. The water treatment system is comprised of a Watermaze EC1-200S which is an automated wastewater treatment and recycling system. During normal stormwater events the treatment system will be closed and washdown pad runoff will flow to a new stormwater

catch basin which will be connected to the existing catch basin in the boat launch area. Triton filters will be placed in both the existing catch basin and the washdown catch basin to filter out stormwater contaminants. These filters will decrease the Total Suspended Solids (TSS) during the first flush from rainfall events. The filters will remove 80% TSS for flows up to 0.17cfs. The estimated TSS removal for the first flush has assumed 35% removal for the catch basins with filters.

Infiltration trenches are proposed to help decrease the TSS from drainage at the perimeter of the parking areas and under the boat racks. Percolation testing was performed in the vicinity of these proposed trenches and found that rates vary between 5 minutes and 9 minutes per inch. At high tide, groundwater was found about 12" below grade. The infiltration trenches are proposed to be 6 inches deep, and therefore will have only 6" of unsaturated soil during high tide. This design does not meet the recommended 2 foot offset from high watertable, but is considered to be an improvement over the existing condition. [The 2 foot offset from high water watertable could only be achieved by raising the property a minimum of 1.5 feet, which is not being proposed.] The majority of the stormwater runoff from the existing driveway will be directed to infiltration trenches.

(b) Alternatives/Community Process: In addition to the preferred alternative, the following alternatives were evaluated to meet the goals of the proposed project: 1. No Action; 2. Undertaking a Lesser Project; 3. Undertaking a Larger Project; and 4. Alternate Configurations or Uses of the Property.

1. No Action Alternative

The "No Action" alternative does not provide residents of Nantucket with any foreseeable way to improve access to marine waters for recreational boating, nor does it provide the applicant with a long-term opportunity to continue as a water-dependent use. As stated earlier, there has been and continues to be a high demand to obtain slip space for recreational boating on Nantucket, and specifically at Madaket. At the same time, restrictions have increased for providing moorings and/or docking facilities on Nantucket (including residences); this trend will add to the swelling demand for such space and services at existing facilities.

The economic realities of responsibly operating a clean marine are increasingly challenging: property taxes have increased more than 65% since 2000, insurance costs are similarly escalating, and regulatory restrictions on land use are all important considerations. To remain economically viable, the applicant must be able to expand its water-dependent operations. Simply raising prices is not a realistic long-term solution for continuing the marine-dependent operation. While such a strategy might provide the applicant with a short-term economic reprieve, the magnitude of price increases would likely reduce the number of customers able to utilize the facility and could adversely affect this island's recreational boating community. In fact, this very scenario has been the catalyst for many small marinas/boatyards selling out to developers of residential subdivisions or condominiums. Over the last 5-10 years, New England alone has lost over 10 percent of its total number of marinas, a disturbing trend that ultimately reduces the public's access to our valuable waterways.

2. Undertaking a Lesser Project Alternative

Undertaking a Lesser Project Alternative would not enable the applicant to continue long-term operations as a marine-dependent use. As discussed in terms of the No Action alternative, continually increasing costs of responsible marine operations require the applicant to expand in order to remain economically viable.

In designing this project, the applicant examined two approaches for reconfiguring and expanding boat slips. These approaches involved in-water and upland designs, both with the intent to meet the demands of Nantucket's boating population. Any reduction in the project would adversely affect marine access for the public in the Madaket area of the Island.

Upland Boat Rack Storage:

This evaluation focused primarily on increasing the valet rack storage by expanding the number of racks and allowing boats to be placed on the top rack. These racks are positioned on pervious, previously-disturbed and developed surfaces. Furthermore, the applicant has very limited upland area to work with, and only has a long narrow strip for all upland uses; there are no other locations within Madaket Marine where valet rack storage could be located. Boats are stored with the sterns towards the driveway, which ensures that any runoff from the boats would flow onto the pervious surfaces and into the stormwater system. There will be no significant adverse environmental impacts from the expanded use of valet rack

storage, and such an expansion would satisfy existing and expanding boating needs for both summer and winter boat storage.

The Town of Nantucket has already allowed top rack use for valet boat storage at Glyn's Marine, Grey Lady Marine and Nantucket Marine. The applicant acknowledges that the expanded boat racks will alter the view for some of the facility's neighbors, but it is significant to note that the existing view from neighboring properties is certainly not "pristine" and the view of existing racks already includes valet storage two racks high. The proposed third rack will add only 4-8 feet to the top of the existing racks. One of the new racks will be located just north of the existing covered rack that could have been used for boat storage, so there is little change in this view, and the other two new racks will be located closer to North Cambridge Street in areas currently used for on-ground winter boat storage.

Many boating facilities are constructing valet rack storage buildings rather than using the open racks proposed at Madaket; such storage buildings resemble apartment buildings and are often more objectionable. Other facilities are enclosing valet racks with roofs and sides using various architectural motifs. The Applicant has rejected both of these approaches with the belief that such alternatives, while operationally effective, would be contrary to the character of Nantucket. The applicant has not proposed any buildings or architectural motifs. In fact, the applicant is proposing to eliminate the only existing roofed valet rack storage building at Madaket Marine and is proposing to use open racks exclusively.

Valet rack storage is normally used by relatively infrequent fishermen and recreational boaters who want to keep boat hulls as clean as possible and/or who are looking for what is typically a lower-cost form of boat storage. At the same time, there are many boaters for whom valet rack storage is not an option, and that is one explanation for the expansion of in-water boating slips.

In-Water:

In-water changes include reconfiguring the existing marina basin in a more efficient manner and expanding the docking facilities to replace single swing moorings along Hither Creek. The area of the proposed reconfiguration and expansion of docking is over previously-disturbed and dredged areas. Reducing the proposed in-water docking facilities would decrease access for the public, particularly for more avid fishermen and recreational boatsmen as well as those who enjoy sitting on the boat at the marina. Adding these boats to the upland valet storage would also require much larger upland racks.

Failure to reconfigure the marina would prevent a more efficient use of the basin and would eliminate the additional staging areas for the valet rack boats and boats seeking service and supplies. The result would be more congestion and idling of boats awaiting berthing space on busy peak hours.

If the single swing moorings in the middle of Hither Creek are not removed and replaced with the more efficient docking facilities along the side of the creek, adverse impacts associated with single swing moorings such as turbidity and scraping of the bottom habitat will continue. The applicant also evaluated possibly increasing the number of single swing moorings, but concluded there simply is not sufficient space. It needs to be noted that leaving the single swing moorings in the middle of the creek creates more of a navigational hazard than moving them and increasing the number of boats on the north side of the Creek. Under the proposed conditions, the fairway becomes more defined and easier to navigate; with the single swing moorings, the moored boats are always moving and the occupied area continually changes in response to changes in wind and tide direction and magnitude.

The proposed docking facilities along the north side of Hither Creek would also act as a protective barrier for the northern edge of salt marsh, and without such facilities salt marsh erosion can be expected to continue. The floating docks proposed in this area will act as a floating attenuator, buffering the marsh from waves while promoting enhanced growth of marsh grasses.

The proposed docks would also offer habitat for fouling organisms (e.g., attached algae, barnacles, etc.). Such an environment establishes conditions suitable to other organisms such as juvenile fish and larvae, which in turn attract larger fish and waterfowl. An alternative that eliminates the proposed docks would not provide these benefits.

The applicant acknowledges that expanding the floating docks will increase shading of the bottom. Since the area is devoid of submerged aquatic vegetation, however, shading will not be a significant environmental impact. In fact, many fish are attracted to the shade provided by floating docks and other in-water structures. The proposed design maintains the docks a minimum of 1 foot seaward of the dead low water line, which translates to setbacks to the marsh of between approximately 2 feet to over 10 feet. The applicant has considered design alternatives such as making the docks narrower.

To effectively hold boats over 20 feet long, however, the dock fingers must be at least 3 feet wide, which is reflected in the current design. While the applicant presently has fingers as narrow as 2 feet, these are considered sub-optimal in terms of functionality and safety. As a general rule of thumb, the width of floating fingers should be 10% of the length, with a minimum of 3 feet. ADA requirements are for a minimum width of 5 feet. To minimize the width, the fingers have been held at the minimum of 3 feet. This is a conservative design approach relative to most new or reconfigured marinas in the U.S. today, which use fingers that are 4 feet or wider.

3. Undertaking a More Extensive Project Alternative

The proposed Project could be more extensive in terms of extending farther from shore or having wider floating docks typical at other facilities. The Applicant has evaluated the option of servicing larger boats, an alternative which considered using the northern parcel with a series of elevated accessways over the marsh as well as taller valet rack storage buildings.

This alternative was rejected for the following reasons. First, while Hither Creek could have shallow draft boats of over 40 feet in length, the applicant has maximized navigable area by limiting the boat length under most circumstances to a maximum of 35 feet. Second, constructing pathways through the northern parcel with fixed piers over the marsh would be less desirable in terms of environmental impact to the salt marsh system, and would not improve access to the slips in the Creek. Third, taller valet racks would require a variance to exceed the allowable structure height.

The proposed changes would allow the necessary increase in access for the public without changing either the market or type of access presently being provided.

4. Alternate Configurations or Uses of the Property

The Applicant has considered numerous configurations of both the upland and in-water areas as part of the design process leading to the current plan. These alternative configurations included many minor variations on the proposed plan as well as more significant changes that could have resulted in greater or lesser alterations to upland or in-water areas.

To significantly reduce the scope of the proposed in-water project, significantly greater upland development would be needed; this might include, for example, constructing a large multi-story rack storage building. Such a facility would require height variances and would significantly alter views of the property, which the applicant felt might be inconsistent with the character of the area.

Use of the northern parcel for upland marina/boatyard activities was considered but would present various issues related to public access and wetlands impacts. While these could be mitigated, the applicant decided that retaining the active upland marina boatyard activities within the limits of the more recently and traditionally used area of boat yard operations would be more consistent with the overall desires of the community.

To reduce the scope of the proposed upland project, significantly greater in-water development would be needed, such as extending farther west into Hither Creek or excavating into Madaket Marine's lands along the north side of the Creek. The former option would require the current owners of the moorings that extend further down the creek to abandon them, which is an unlikely scenario; the latter option would significantly impact the salt marsh system, creating substantial regulatory hurdles and running counter to efforts intended to minimize impacts to salt marsh resources. Even if regulations allowed for salt marsh removal, requirements associated with mitigation would be difficult to satisfy due to limited suitable locations and associated costs.

If a viable marina can not be operated at Madaket, other possible uses for the property include selling the property to a developer, who could conceivably seek approval for a residential waterfront project, commercial hotel, or some other commercial waterfront use that is viable in today's economy.

The preferred alternative provides for the reasonable use of upland and in-water areas to ensure the continued existence of the water-dependent use of the property. The current proposal seeks to achieve this objective with the least possible impact to the environment and surrounding area while at the same time increasing boating access for Nantucket boaters.

(c) Proposed Mitigation Measures and Public Benefits: The Project is a water-dependent use which directly supports Chapter 91 public purposes, and since there are no adverse impacts on any protected water-related interests, no mitigation is proposed.