



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
PROGRAM PLANNING AND INTEGRATION
Silver Spring, Maryland 20910

JUN 21 2006

To all Interested Government Agencies and Public Groups

Under the National Environmental Policy Act (NEPA), the National Oceanic and Atmospheric Administration (NOAA) has conducted an environmental review of the following action:

TITLE: University of New Hampshire Pier Facility

LOCATION: New Castle, New Hampshire

SUMMARY: The University of New Hampshire (UNH) proposes to build a new 325-foot pier and support facility on the University's 5.5-acre property at Fort Point in New Castle, New Hampshire. The new pier will replace an existing 500-foot, former U.S. Coast Guard pier that is in a deteriorated condition and of limited functionality. The pier will serve research vessels, now dispersed at several locations, associated with the University's Marine Science Program as well as NOAA's Small-Waterplane-Area Twin-Hull (SWATH)-class vessel that will be used in the joint NOAA/UNH coastal mapping program. The pier will also accommodate under-pier acclimation pens for fish and mussel seed collection rafts used in the University's aquaculture program. The Proposed Action is essential for the accomplishment of the University's research and education mission. The project as proposed is not expected to have any significant impacts on either marine or terrestrial resources. The project has been specifically designed to blend with the current character of the surrounding neighborhood. Historic military structures on the site will not be impacted by the Proposed Action.

RESPONSIBLE OFFICIAL: Richard W. Spinrad, Ph.D.
Assistant Administrator
NOAA Research
SSMC3 Rm: 11627 (OAR/R)
1315 East-West Highway
Silver Spring, MD 20910

An Environmental Assessment (EA) for the University of New Hampshire Pier Facility was completed and a Finding of No Significant Impact (FONSI) was signed. Several locations for the facility were originally considered as "build" alternatives, but only one location was determined to meet the stated purpose and need for the project. The EA considered in detail both the Preferred Alternative located in New Castle, New Hampshire, and compared it to the No Action Alternative. Subsequent to the signing of the EA and FONSI, project design has progressed including the advertising for construction bids.



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The review of all available information indicates that the Proposed Action at the site location identified above will have no significant impact on the quality of the human environment. A copy of the Finding of No significant Impact and the Final Environment Assessment are enclosed for your information. Please submit any written comments to the responsible official.

Also please send one copy of your comments to the NOAA Office of Program Planning and Integration, SSMC3, Rm. 15603 (PPI), 1315 East-West Highway, Silver Spring, MD 20910.

Sincerely,


Rodney F. Weiher, Ph.D.
NEPA Coordinator

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE PROPOSED
UNIVERSITY OF NEW HAMPSHIRE PIER FACILITY, NEW CASTLE,
NEW HAMPSHIRE**

1. Purpose and Need

The basic purpose of this project is to support University of New Hampshire (UNH) marine research activities by creating a central location for berthing of the UNH Marine Program fleet, home-porting of a new National Oceanic and Atmospheric Administration (NOAA)-funded ocean mapping research vessel (Small-Waterplane-Area Twin-Hull or SWATH design), and periodic use by visiting research vessels from other institutions. The project must also provide the capability to support in-water containment pens for aquaculture and fisheries research, and facilities necessary to support the pier and the vessels it will serve. By providing this central facility, fleet efficiency will be improved and the University's ability to meet its marine research and outreach mission will be significantly strengthened. The project will also serve an essential role in meeting UNH's cooperative partnership responsibilities with NOAA.

The proposed pier facility will supplement the existing facilities of the UNH Marine Program, which are as follows:

- UNH Coastal Marine Lab (CML) - located on Fort Point in New Castle and is housed in the historic Mines Building (within nearby Fort Constitution)
- Shoals Marine Laboratory (SML) - located on Appledore Island and jointly run by UNH and Cornell University in support of undergraduate summer courses and research in the marine sciences
- Jackson Estuarine Laboratory - located on the Great Bay estuary approximately five miles from Durham
- Jere A. Chase Ocean Engineering Laboratory - located on the University's main campus.

The University's coastal research and utility vessels play an integral role in supporting the marine programs and facilities outlined above. This fleet is currently dispersed at several facilities around Portsmouth and Great Bay. All of these locations have limitations to one degree or another. For example, existing facilities typically have only a partial infrastructure, limited utilities, inadequate fuel and staging areas, and/or uncertain lease agreements. Several lack shore-based support altogether, or are located far distances from open water.

The University's fleet is currently comprised of the following vessels:

R/V Gulf Challenger (50 ft Length x 18 ft Beam x 5 ft Draft), the flagship of the UNH Marine Program. This vessel performs 80 percent of its work off-shore, so proximity to the open ocean is critical. It currently occupies a berth at the New Hampshire Fish Co-op Pier, which is in great demand by local commercial fishermen, lacks adequate storage facilities for research equipment and instrumentation, and is somewhat remote to off-shore work.

Meriel B (50 ft L x 20 ft B x 5.5 ft D) is currently berthed at the near-shore end of the University's existing pier at Fort Point and, during construction, will likely berth and provision at the NH State Pier. The *Meriel B* is the core support vessel for the Open Ocean Aquaculture Program.

R/V John M. Kingsbury (47 ft L x 16.5 ft B x 5 ft D) is a research vessel associated with the SML. Although it is generally moored at Appledore Island, it is anticipated that the *Kingsbury* will utilize the new UNH pier for summer season provisioning as well as for storm and winter berthing. SML currently uses the NH State Pier for provisioning and does not have a dedicated storm and winter berth.

R/V Coastal Surveyor (40 ft L x 12 ft B x 3.7 ft D) is a purpose-built vessel designed specifically for near-shore and in-shore coastal multibeam hydrography. When brought to UNH in 2001, the University could not find suitable berthing in the Portsmouth area. The current mooring location, which is borrowed from the NH Department of Fish and Game, is located upriver in the estuarine portion of the coast near the Jackson Laboratory. This location is ten miles away from the majority of the *Surveyor's* work near the mouth of the Piscataqua River. Additionally, the *Coastal Surveyor* needs shore power, which cannot be provided at its current mooring location. Due to its association with the marine hydrographic program, it would be more efficient for the *Coastal Surveyor* to be berthed along side other hydrographic vessels in the fleet.

Rock 'n Roll (40'L x 16'B x 5'D) is currently on a temporary NH Division of Ports and Harbors mooring in Harts Cove at Fort Point. It is currently leased by UNH on a per diem basis as an auxiliary support vessel. Berthing of the *Rock'n Roll* at the new pier facility is not anticipated.

R/V John B. Heiser (36'L x 12'B x 2'D) is part of the SML program and experiences a need similar to that of the *Kingsbury* for a provisioning port closer to the open ocean and for storm and winter berthing.

Galen J. II (22'L x 8'B x 2'D) – The *Galen J. II* is temporarily berthed at an over-crowded floating dock, immediately adjacent to the U.S. Coast Guard (USCG) boathouse on Fort Point. It has been used for the past ten years on lobster research projects, for which a portion of the shore side work is carried out at the current Coastal Marine Lab. It is primarily used, however, in general support of all UNH marine biology research on the open coast.

First Light (22'L x 8'B x 2'D) is currently on a temporary USCG mooring located south of the existing pier, pending completion of the replacement pier. Being moored, it is subject to the same complications as discussed above. The *First Light* primarily supports the Open Ocean Aquaculture program, both offshore and under the pier.

Red Cloud (22'L x 8'B x 2'D) is currently on a temporary USCG mooring located south of the existing pier, pending completion of the replacement pier. It supports fisheries-related research projects based at the CML.

Pontoon Boat (20'L x 8.5'B x 1.5'D) – This boat has been adapted for inshore hydrographic survey research. Currently, it is trailered and hauled with every use, resulting in significant loss

of productivity. Programmatically, it is important that the *pontoon boat* be berthed at the same facility as other hydrographic program vessels including the SWATH and the *Coastal Surveyor*.

In addition to the above-described UNH fleet, the new pier will provide home port berthing for a new SWATH-class vessel (approximately 105 ft L x 51 ft B x 13.5 ft D) to be owned by NOAA and operated by the UNH/NOAA Joint Hydrographic Center. The ship is being designed for hydrographic surveying and ocean mapping in response to critical needs in the northeast. Delivery is anticipated in 2007.

The replacement pier will also provide short-term berthing for occasional visiting research vessels. These would generally be from NOAA and/or from other research universities. The size of the visiting vessels would be limited by the available draft alongside the new pier and would not be expected to be greater than approximately 140 feet in length. Typically, visiting vessels would stay in port for two to three day periods for provisions as well as equipment and personnel rotations, followed by 10 to 12 day periods at sea. Such activity is expected to be limited to 20-30 days per year, at most.

As does the existing pier, the new pier will accommodate under-pier fish pens and mussel seed collection rafts, critical to the University's Open Ocean Aquaculture Program. In fact, the proposed project site is uniquely suited for such research activities in that it provides full-strength seawater while being protected from the brunt of ocean storms by the peninsula that is Fort Point. Due to greater dilution and flushing, actual water quality at the Fort Point site is also higher than at other sites higher in the estuary (i.e., up river).

Current use of the existing pier is severely limited. Internal restrictions allow for the vessel, *Meriel B*, to berth only on the innermost 125 feet of the pier. Other University vessels also must use the innermost portion of the pier for loading and unloading activities. Further, the University must restrict the existing pier's use during poor weather conditions. Since the University does not have the capacity to support these critical marine operations elsewhere, the need for the Proposed Action is considered urgent.

The proposed pier facility is essential to the marine programs at the University. The ability of the University to meet its marine research and outreach mission in the areas of mariculture, marine fisheries management, and coastal ocean mapping are a direct function of the quality of its facilities.

2. Description of the Proposed Action and Alternatives

The Proposed Action and the No Action alternatives represent the maximum and minimum practicable plan for construction of the new pier facility. No other location alternative was identified that could meet the University's needs for a centralized location, available space, and environmental requirements for high salinity levels and water quality. The latter constraints are necessary for the acclimation fish pens and mussel-seed collection rafts that will be installed under the new pier as part of the aquaculture research program.

The Proposed Action involves construction of a new pier and support facility on a 5-acre parcel of land owned by UNH on Fort Point in New Castle, New Hampshire. The existing 500-foot long concrete pier and associated approach trestle will be removed, along with the stone-filled

timber crib under-structure. The new 325-foot pier will have a 28-foot wide concrete deck supported on fourteen concrete-filled steel pile bents. Like the existing pier, the new pier will be connected to the shore by an angled 110-foot approach trestle, which will be supported by the existing abutment, one near-shore transverse concrete wall, and two steel pile bents. The new pier will be slightly realigned such that its easterly end will be located about 40 feet north of the current pier alignment. This is being done to avoid encroachment into the maneuvering space required for the adjacent USCG boathouse, and to provide improved berthing depths on the north side of the new pier for the NOAA ocean mapping vessel to be home-ported at the pier as well as occasional visiting ships. An 8-foot wide floating dock will be attached to the pier's south side for berthing of smaller boats (approximately 50 ft or less in length). A concrete-panel wave screen will be installed along the north side of the pier to provide wave protection for under-pier fish pens as well as the afore-mentioned floating docks and the small boats tied thereto. It will also provide fendering for berthed ships.

Other miscellaneous elements associated with the new pier and floating docks include: a jib crane located at the end of the pier to facilitate the loading and unloading of materials and equipment; a gangway, measuring 4 feet wide by 80 feet long, spanning from a platform off the approach trestle down to the floating docks; and a 12-foot by 35-foot floating breakwater located at the far end of the floating docks, which will protect the smaller vessels from wave action from the north. At the head-end of the pier, there will be a wrought iron security gate and space to accommodate a future guard shack, in the unlikely event that such a structure is considered necessary in the future.

The new pier will also provide under-pier space for fish pens and mussel seed collection rafts associated with the Open Ocean Aquaculture program. Species to be held in the under-pier operations include cod, haddock, steelhead trout, halibut and mussels, all of which are native to the area. The University currently operates under existing aquaculture permits from the NH Department of Fish & Game and will continue to do so with the new operation.

Pier utilities will include domestic water, dry standpipe fire service, sewer, electrical and telecommunications. At the head-end of the pier, there will be a valve pit for the domestic water service, an underground sewer pump station, and an above-grade electrical transformer and distribution station.

The pier support facility, to be located nearby in what is now a large parking lot, is expected to have a combined total footprint of approximately 6,900 square feet and be of a character compatible with the nearby residential neighborhood. The core building (approximately 4700 square feet) will be of single-story construction and will include offices, a dive locker, a workshop, public restrooms, and tempered storage. In addition, approximately 2200 square feet of unconditioned and covered outdoor storage space was included in the design to minimize outdoor storage based on discussions with town representatives. Storage of 5-gallon cans of gasoline for the small boats (20 to 40 feet) will occur either at the head-end of the pier or at the support facility, in National Fire Protection Association and Occupational Safety & Health Administration-approved storage boxes with sumps. Fueling of larger vessels (40 feet plus) will generally be handled by commercial fuel trucks.

The No-Action alternative would result in the continued operation of the University's overcrowded Coastal Marine Laboratory and continued lack of adequate berthing facilities for the UNH fleet. Docking opportunities for research vessels would continue to be limited and the highly anticipated SWATH vessel would be home ported elsewhere. All of this would be a serious blow to both the UNH Marine Program and the UNH/NOAA cooperative mariculture and ocean mapping efforts, among others. Research activities currently supported by the laboratory would not be able to expand as planned and future funding opportunities, as well as the recruitment of both faculty and students, would be jeopardized.

3. Environmental Consequences and Mitigation

The proposed pier facility will be built at Fort Point on land immediately adjacent to the USCG Portsmouth Station. The 5.5-acre project site, transferred to UNH in 2001 by the USCG, is bordered by the Piscataqua River to the north and the Atlantic Ocean to the south. The USCG station property forms its eastern boundary, with private residences and a public street, Ocean Street, along its western boundary.

The site is currently occupied by several historic, coastal-defense structures, now abandoned, that were constructed to defend Portsmouth Harbor during the 19th and 20th centuries. These historic structures are located on a 3-acre contiguous, ocean facing piece of the overall 5.5-acre parcel. A paved access drive, parking areas, and grassy or wooded areas comprise the remaining portions of the site. The existing 610-foot pier and approach trestle extends seaward to the east from a bedrock outcrop located along the northern shore of the property.

Construction of the pier and support facility will generate a short-term stimulus for the local economy, but generally beyond the limits of the small Town of New Castle. The project will require expenditures for equipment, materials, and supplies, and will employ construction workers and tradesmen to build the new facility. It is expected that a one-time investment of approximately \$5,000,000 will be necessary for construction of the new pier and support buildings. The new facility will not be sited in an area where minority and low-income populations are located. The Proposed Action exhibits environmental justice in that it does not affect specific areas or neighborhoods where populations of low income or ethnic minorities live or work.

Construction of the pier facility will not directly impact any eligible historic building, structure, or object at Fort Point, nor will it impact any associated archaeologically sensitive areas. The pier-support buildings will be a minimum of 35 to 40 feet from the closest historic structure and will be built in an existing paved parking lot. The existing UNH pier was built circa 1970 and is not eligible for the National Register. Replacement of the pier itself will not affect any extant historical resources. The State Historic Preservation Office has concluded that the Proposed Action will have "No Adverse Effect" on cultural resources as defined under Section 106 of the National Historic Preservation Act.

There will be no adverse effects on any public facilities due to the project. The proposed pier and support facility, like other University facilities, will be publicly-owned yet not open for unrestricted public access. While access to and around the site will generally be the same as exists today, the pier and support buildings will not be open to the general public, except for the

provision of a public bathroom for users of nearby Fort Constitution. No portion of the property has been improved with funds under Section 6(f) of the Land and Water Conservation Fund Program.

The project will have no adverse effect on traffic as the increase in the number of vehicles using the site will be minor. The facility will utilize existing public utilities that are at or adjacent to the project site. Utility providers have all indicated that they have adequate capacity to support the site.

The design of the project has carefully considered aesthetics and visual quality. Artist renderings and photographic simulations have been used to elicit public feedback. The project will have no adverse impact on visual quality nor will it have any negative effect on adjacent property values.

No freshwater wetlands are affected by the project. Some benthic habitat will be lost due to placement of the new pier, however this loss will be more than offset by removal of the existing pier. As a consequence there will be a net gain in available habitat over existing conditions. The shorter and more open design of the new pier will result in currents, tidal exchange, and wave action more closely approximating natural or pre-construction conditions. An Essential Fish Habitat (EFH) Assessment was conducted in consultation with NOAA's National Marine Fisheries Service and the New Hampshire Fish & Game Department's Marine Fisheries Division. This assessment concluded that any potential adverse effect on EFH would not be substantial.

The U.S. Fish and Wildlife Service has concluded that the Proposed Action will have no effect on any federally-listed threatened or endangered species. Consultation with the New Hampshire Natural Heritage Bureau and site inspections also indicated that there are no rare or exemplary natural communities that will be impacted by the project.

Because the proposed pier will replace an existing pier (and be shorter), there will be no direct loss of potential habitat for marine mammals. Furthermore, since users of the pier are all well versed in the importance of protecting marine mammals, activities associated with the pier's operation are not expected to have any effect on any marine mammals (*e.g.*, seals) that may occasionally visit the project site.

There will be no adverse effects of the project related to the accidental introduction of invasive species. None of the species currently used in the mariculture program or in research studies are invasive. In fact, all of the marine science programs are federally funded with the granting actions having already undergone their own National Environmental Policy Act review. The faculty and staff of the various programs are all very aware of the issue of invasive species and can be expected to be vigilant for it.

With the exception of the pier itself, the pier support buildings are all located beyond the 100-year floodplain as established by the Federal Emergency Management Agency. The pier will have no measurable effect on the floodplain elevations.

Operation of the pier facility will not have any significant impact on the water quality of the adjacent river or estuary. The pier, paved areas, sidewalks and other structures onsite will be

