
ENVIRONMENTAL Fact Sheet



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2020

Permitting of Residential Tidal Docks

In New Hampshire, construction and maintenance of tidal docks have been regulated under RSA 482-A since 1967. The law requires that a wetlands permit be obtained before a tidal dock is constructed. Design considerations have evolved over time to develop consistency with the criteria and requirements of the U.S. Army Corps of Engineers and the National Marine Fisheries Service for docking structures.

Docking structures located in tidal waters have unique requirements that dictate their design: They must be built to accommodate the rise and fall of the tide and withstand wave energy and winter ice flow. Based on the nature of the tidal system where they are located, they may not provide access to water for the entire tidal cycle. This fact sheet gives a general overview of some of the permitting requirements for residential tidal docks.

Configuration and Dimensions

A residential tidal dock must have one of the following **configurations** (Figure 1):

- A pile-supported, fixed pier perpendicular to the shore, that connects to a ramp, that connects to a float.
- A ramp that connects the shore to a float.
- A pile-supported fixed pier parallel to shore.

Ramp and float portions of residential tidal docks must be seasonal and removed from the water during the non-boating season. Note that only one docking structure is allowed on the frontage of a property.

The **maximum overall structure length**, including pier, ramp and float, measured seaward from the highest observable tide line, must not exceed 200 feet or the length needed to reach water of sufficient depth to allow the terminal section of the dock to be floating at mean low water, whichever is higher.

The **maximum overall footprint** of the entire structure serving a single residence must not exceed 1,500 square feet seaward of the highest observable tide line. In contrast, a residential tidal dock proposed to serve a group of residences may be larger so long as compensatory mitigation is provided for structures exceeding 2,000 square feet.

For permanent piers:

- The maximum width must not exceed 6 feet.
- The maximum length must not exceed 200 feet.
- The height of the permanent pier must be at least equal to the width to avoid shading the substrate or vegetation below, e.g., 4 feet wide x 4 feet high.

Floats may be of any configuration so long as the total square footage does not exceed 400 square feet. However, an additional 200 square feet may be allowed for a float serving a group of residences. All floats must be designed and installed so as to prevent substantial changes in their positions from tides and storm events that are less than hurricane force.

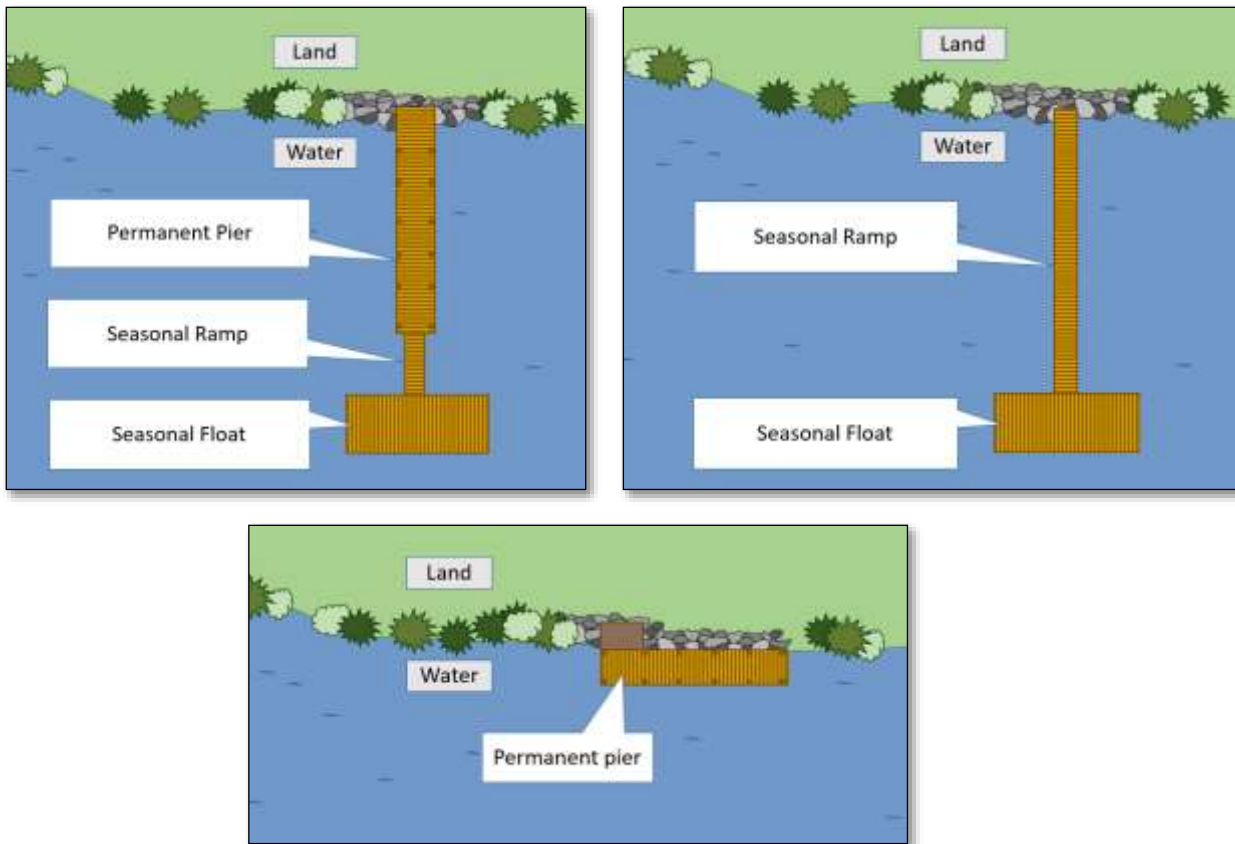


Figure 1 –
Bird's eye view
of residential
tidal dock

configurations: pile-supported fixed pier perpendicular to the shore, that connects to a ramp, that connects to a float (top left); ramp that connects the shore to a float (top right); or pile-supported fixed pier parallel to shore (bottom).

Design and Location Requirements

Docks must be located and designed to avoid impacts to important wetland and coastal resources, functions and values, such as **special aquatic sites**¹. Any adverse impacts to important wetland and coastal resource functions that cannot be avoided must be minimized as much as possible. On frontage that contains, or is adjacent to, special aquatic sites or congested or high-traffic navigation conditions that require human alteration to create and maintain access, overwater structures must be minimized by using upland boat storage and trailering to a launch point or marina to the greatest extent practicable. Docking structures must not impede the passage of non-motorized watercraft. Docking structures must not impede channel navigation to a degree that a reasonable person would find objectionable. A structure must not extend across 25% or more of the waterway width at mean low water. Pile-supported structures and floats must not be located within 25 feet of currently existing or previously known vegetated shallows.

Docking structures must be located at least 20 feet from the abutting property line or the imaginary extension into the water. An exception is permitted if the affected abutter(s) submit a written, notarized consent. (Figure 2).

To reduce the overall number of residential tidal docks and their resulting adverse impacts to nearshore habitat, preference is given to those designed to serve multiple properties.

All floats and floating structures must:

- Be positioned waterward of and to avoid all vegetated wetlands and vegetated shallows.
- Not be placed in areas supporting submerged aquatic vegetation.

¹ **Special aquatic sites** include: inland and tidal wetlands, mud flats, vegetated shallows having submerged aquatic vegetation, sanctuaries and refuges, coral reefs, and riffle and pool complexes, as identified in the coastal functional assessment report required by Env-Wt 603.044

- Be located, to the extent practicable, in water that is sufficiently deep for the intended use while avoiding intertidal and shade impacts; minimizing or eliminating the need for dredging; and avoiding displacement of nesting or breeding habitat, eel grass beds, or essential fish habitat.

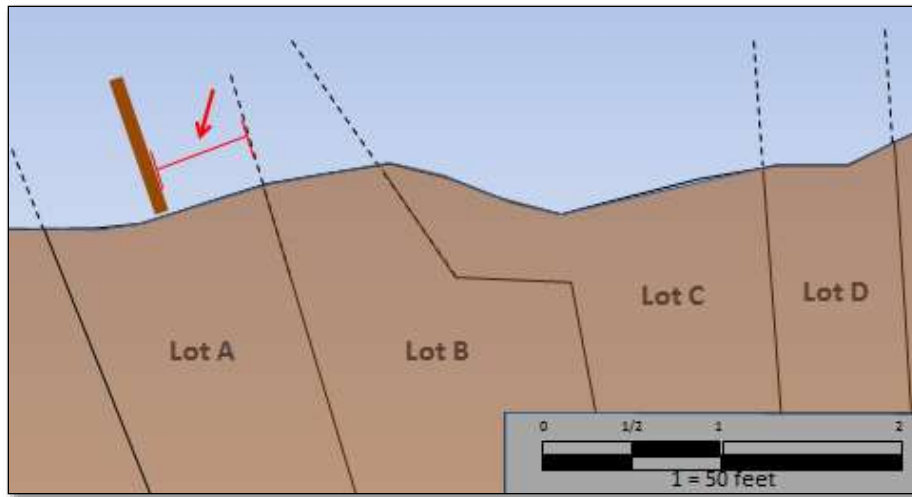


Figure 2 - Dock setback from property lines and the imaginary extension of property lines over the water. Installing a new dock on Lot "A" is permissible without abutter consent because the dock will be located greater than 30 feet from the abutter's property boundary, including the imaginary property boundary that extends over the water (dashed lines).

Docking structures must be designed to prevent mechanical damage or hydraulic damage, or both, to the substrate from the float(s) during low tides in cases where:

- Mean lower low water is seaward of the terminal float(s) at low tide, or
- It is impracticable or impossible to place floating docks in water deep enough to avoid contact with the bottom.

The design must include float stops or other means of suspending the float at least 2 feet of clearance between the bottom of the float and substrate. Greater clearances may be required in high energy environments that experience strong wave action.

Docking structures must be constructed with non-toxic materials. Untreated wood, concrete, steel, or similar materials are also preferred as they help reflect light under docks and typically do not release contaminants into the aquatic environment. An applicant who wishes to use treated wood timbers or pilings, or both, must demonstrate that using non-toxic materials is not practicable.

Docking structures must be designed to minimize under-structure shading. Examples of design features that can facilitate ambient light transmission under docking structures include, but are not limited to:

- Maximizing the height and minimizing the width of the structure.
- Using grated decking material.
- Using the fewest number of pilings necessary to support the structures.
- Aligning docking structure components in a north-south orientation.

Note that the spacing between decking components must be at least $\frac{3}{4}$ -inch.

Open piles must be placed at least 12 feet apart as they are the least impacting alternative of permanent docking construction. At most, supporting piles can occupy 5% of the total volume under the docking structure at mean high water, to allow most wave and current energy to pass through so as to prevent deepening of the area.

Please note that the following would not be approved for residential tidal docks:

- Lightweight aluminum or similar seasonal pipe docks.
- Cantilevered or crank-up dock systems.
- One or more floats, a string of floats, or floating walkways connected directly to the shore.

- Floats that sit directly on the mud at low tide or on skids that sit directly on the mud at low tide.
- Boardwalks over tidal marsh to reach a dock.
- Boathouses located in or over tidal waters/wetlands or over slips dug into the shore.

Additional location and design requirements are described in Env-Wt 606.06.

Construction Requirements

Docks must be installed by barge or upland to prevent the driving of construction equipment in or through tidal waters/wetlands or on the bottom of the inter-tidal zone. Access by construction equipment on any high salt marsh must be limited to that provided by Env-Wt 307 and mats must not be dragged into location. Moreover, construction of docks in or near essential fish habitat are subject to review by the New Hampshire Fish and Game Department and the National Marine Fisheries Service for design recommendations or time of year restrictions.

Access

For access, an applicant may propose a fabricated wooden or metal stairway at the landward end of a dock. This stairway would require a wetlands permit. The stairway must not exceed six feet in width, must be construction over the bank, and must be above the mean high tide. Note that a proposal for a walkway that requires regrading or re-contouring would not be permissible.

Calculation of Application Fees

The application fee for a tidal dock is calculated as follows:

To the base fee of \$400 add:

- \$4 per square foot of permanent dock area, such as a permanent pier, or any other permanent part of the dock.
- \$2 per square feet of seasonal dock, such as a ramp or a float.
- \$0.40 per square foot of dredge and/or fill area.

However, note that the application fee for projects involving only the maintenance, repair, or replacement in-kind of an existing legal docking structure *may be* capped at \$400.

The following diagram illustrates a typical docking structure with dimensions (Figure 3):

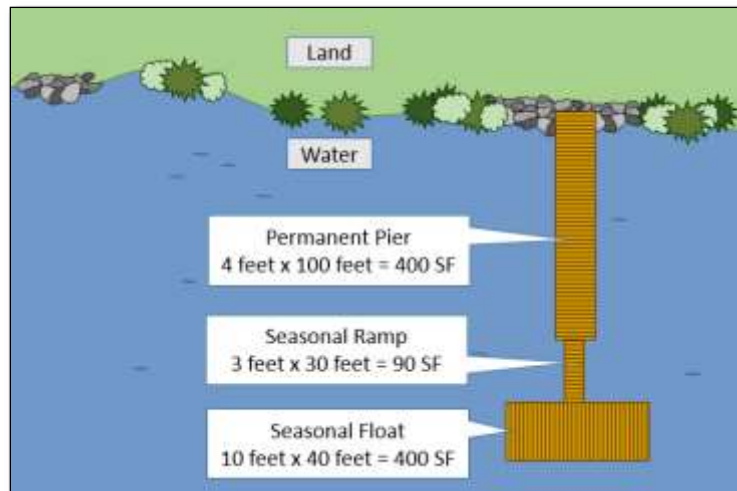


Figure 3 – Typical tidal docking structure.

Table 1 provides a breakdown of the fee calculation for a Standard Dredge and Fill application for the illustrated proposed tidal docking structure:

Item for which fee is calculated	Square feet of impact	×	Fee/square feet of impact	Fee
Base Fee				\$400
Permanent Pier	400 sq. ft	×	\$4	\$1600
Seasonal Ramp	90 sq. ft.	×	\$2	\$180
Seasonal Float	400 sq. ft.	×	\$2	\$800
Total Fee				\$2,980

Table 1 – Example of a permit fee calculation for a Standard Dredge and Fill application.

Additional Guidance Documents

- Please review the [Overwater Structures Project-Specific Worksheet For Standard Application \(NHDES-W-06-72\)](#). This worksheet summarizes the criteria and requirements for a Standard Dredge and Fill Wetlands Permit for tidal docking structures. In addition to the project-specific criteria and requirements on this worksheet, all Standard Applications must meet the criteria and requirements listed in the [Standard Dredge and Fill Wetlands Permit Application form \(NHDES-W-06-012\)](#) and the [Coastal Resource Worksheet](#).
- *Chapter 11 – Tidal Project* of the [Wetlands Best Management Practice Techniques for Avoidance and Minimization](#) is an excellent resource with more information for consideration.

For More Information

For more information or to set up an appointment for assistance, please contact the NHDES Wetlands Bureau Coastal staff at the Pease field office at (603) 559-1500, by email at coastal@des.nh.gov, or go to www.des.nh.gov.