Standards of Performance for applications for new piers and docks and for extensions of existing structures.

1. General

The Pleasant Bay Resource Management Plan which was adopted by Town Meetings in Chatham, Harwich and Orleans in 1998, calls for the development of new regulations which will govern the permitting and siting of new docks and piers in Pleasant Bay.[1] New or revised regulations would not apply to existing licensed structures or to routine maintenance of such structures.

Although new docks and piers will continue to be prohibited from certain areas of the bay, in other areas they may be permitted provided that they conform to Town by-laws and regulations, and that they meet certain environmental performance criteria.

Performance criteria for proposed new pier/dock structures should be used by applicants to assess the feasibility of obtaining a permit prior to application preparation, and will be used by town Conservation Commissions and town Planning and/or Zoning Boards of Appeal to evaluate proposals. They will also be used by the DEP to assess applications for Chapter 91 licenses.

In general, a proposed pier/dock structure in or adjacent to an ACEC shall be designed and constructed so as to cause no adverse effect on the local ACEC ecology, including but not limited to, wildlife, marine fisheries, shellfisheries, marshland, and submerged aquatic vegetation.

Other and related areas of concern include potential impact on water circulation and quality, on the seabed or subsoil, and on navigation. Additionally, public access to and along the shoreline needs to be protected.

"Shared-use" proposals (i.e., a single pier or dock to be jointly owned and used by two or more shorefront property owners) are generally to be encouraged as a way of preserving access by shorefront property-owners while reducing the overall number of piers and docks that might otherwise be permitted. A number of setback recommendations contained herein (see Section 8) are intended to encourage two or more shorefront property owners to develop joint proposals. In addition, local permitting authorities may wish to explore other methods of encouraging shared use proposals, provided that such proposals are consistent with the new environmental performance criteria.

A walkway (also known as a catwalk, or plankwalk) is defined as an elevated structure used to transverse a resource area as defined in the Wetlands Protection Act. Walkways in general will be covered in a separate document at a later date; but

[1] Other regulations governing the permitting and siting of erosion control structures and catwalks, also called for by the Resource Management Plan, will be developed separately.

walkways that extend below Mean High Water (MHW) in particular, are equated to , and should be regulated as a dock or pier. Thus, the prohibition on docks and piers in designated areas also applies to walkways when any portion of the walkway extends beyond Mean High Water. When a walkway which extends beyond MHW is proposed in an area outside the designated prohibited areas, then it must meet the same performance standards and design criteria as a dock or pier. By the same token, under no circumstances should a walkway which is located above MHW be eligible for or have affixed to it a float, raft, dock or any other structure that would extend the functional use of the walkway below MHW.

Using creditable evidence from a competent source, it is the responsibility of the applicant to show that the proposed activity will have no adverse impact on the ACEC resources. Adverse impact in this context includes the diminution of the quality, productivity, quantity or vitality of the resource.

2. Protection of Shellfish

As a general policy, shellfish beds and habitat areas must be avoided when siting docks and piers.

A proposed pier/dock structure on land containing shellfish, or within a shellfish area or habitat as defined by the town by-laws[2] or town Shellfish Constable, should have no adverse impact on the shellfish or on the productivity of such land or shellfish habitat. Adverse impact can be caused by such factors as:

(a) Alterations in water circulation,
(b) Alterations in relief/elevation,
(c) The compacting of sediment by vehicular traffic,
(d) Alterations in the distribution of sediment grain size,
(e) Alterations in natural drainage from adjacent land, or
(f) Changes in water quality, including but not limited to addition of pollutants or other-than-natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity.

The presence or absence of shellfish at a proposed site must be determined by the applicant[3]. If the shellfish are found to be in the area of a proposed structure, they are

[2] The Town of Orleans Protective by-law defines shellfish habitat as: *Those areas below the mean high water line in any coastal resource area that provides or has provided the characteristics necessary to support shellfish species including but not limited to: sediment type and grain size, circulation patterns, hydrologic regime, water chemistry, plant communities and food supply.*

[3] Standards for acceptable survey should be set forth. For example, Orleans Wetland Regulations stipulate the following: *In areas where it is unknown if the area is likely to be a habitat for shellfish, the applicant may be required to submit evidence of shellfish populations based on a shellfish survey conducted by a qualified shellfish biologist. Survey shall include existing populations of commercially important species of shellfish (clams, quahogs, scallops, mussels) and shall also include other species of mollusks that may determine predatory/prey relationships and food preferences (i.e., filter feeders or deposit feeders). The presence of these species may indicate the capacity of the area to support commercially important species. The survey shall include a description of shell fragments to the best extent possible and the survey must also include references to historical information regarding presence or absence of shellfish species.*

assumed to be adversely affected by the direct and chronic impacts resulting from the construction and use of the proposed structure, unless the applicant can demonstrate that this assumption is invalid for the proposed project.

Relocation of shellfish encountered during construction of a project within an ACEC is not acceptable mitigation (except when the project is part of town- or state-sponsored shellfish relay program, and then only if it can be clearly shown that the productivity of that shellfish bed would not be diminished by its relocation.)

3. Protection of public access, fishing and other recreational activities

A proposed pier/dock structure shall not interfere or impede legitimate pedestrian passage along the foreshore, and at all levels of the tide, pedestrian access along the shore shall be provided. A flight of stairs on both sides of the deck shall be provided for this purpose.

4. Protection of Fish Runs

Structures proposed for siting on the bank of a fish run, on land under a fish run, or within 100 feet from the edge of a fish run shall not have any adverse impact on the fish run by:

(a) Impeding or obstructing the migration of fish,
(b) Changing the volume or rate of flow of water within the fish run,
(c) Impairing the capacity of spawning or nursery habitats necessary to sustain the various life stages of the fish, or
(d) Through construction or maintenance between 15 March and 15 June without specific written permission from the Division of Marine Fisheries.

5. Protection of Marine and Shoreline Ecology

A proposed pier/dock structure (and its future use) shall not significantly alter or endanger the ecology of the marine environment, of the seabed and the subsurface thereof, or of the adjacent shoreline, including coastal beaches, dunes, tidal flats, and coastal banks by:

(a) diminishing the quality, quantity, vitality or productivity of eelgrass or other forms of submerged aquatic vegetation,
(b) affecting the ability of the waves to remove sand from the beach, dune or tidal flat,
(c) disturbing the vegetative cover, if any, so as to destabilize the beach, dune, tidal flat, or coastal bank,
(d) causing any change to the shoreline that would increase the potential for storm or flood damage,
(e) interfering with the natural movement of the beach, dune or tidal flat, or
(f) causing artificial removal of sand from the beach, dune, tidal flat, or coastal bank.

6. Salt Marsh Protection

A pier/dock structure proposed for siting on a salt marsh or in a body of water adjacent to a salt marsh shall not destroy any portion of the salt marsh or its substratum, nor have any adverse impact on the productivity of the salt marsh. Additionally, the pier and dock should be oriented such as to minimize the effect of vessels using the structure on the adjacent salt marsh and its substratum.

The landward approach to a structure sited on or near a salt marsh should not harm the vegetation on the marsh or coastal bank.

Alterations in growth, distribution, and composition of the salt marsh vegetation and/or its substratum shall be considered in evaluating potential adverse effects on productivity.

7. Protection of Navigational Channels, and Mooring, Boating and Public Swimming Areas

A proposed pier/dock, and various uses thereof, shall not encroach upon designated or customary navigational channels, designated or customary mooring areas, or upon areas traditionally used for sailing, pleasure boating, or public swimming areas. The seaward end of the dock, including the approach and maneuvering areas associated with boats using that structure, should be sufficiently distant from existing boating channels, designated or customary mooring areas, public swimming areas and other piers to allow for safe navigation under strong wind and wave conditions.

In assessing the potential impact of a proposed pier or dock, the navigation of that waterway by vessels under oar, sail or power will be evaluated with respect to the potential for conflict with the proposed structure.

Displacement of designated mooring area is an extraordinary action in waters of the Commonwealth and will only be considered when:

(a) There is some overriding public interest in allowing the displacement to occur, and
(b) The local harbormaster can accommodate the displaced moorings in another suitable location within the anchorage.

8. Proximity to Other Structures

A minimum setback of 50 feet from the property boundaries and associated riparian lines (demarcations of rights in the water associated with owning waterfront property) will be required unless the structure will be owned and used by two or more contiguous shorefront property owners. In such cases the 50-foot setback requirement shall apply to the outermost boundaries of the two or more contiguous properties so that the structure may be placed on a shared property line. The proposed pier should be an adequate distance (e.g. 250 feet) from any existing pier or boat ramp.

9. Prohibition in Specific Resource-Sensitive Areas within Pleasant Bay

The Massachusetts Waterways (Chapter 91) Regulations prohibit the licensing of new privately-owned docks and piers in an Area of Critical Environmental Concern unless such a structure is consistent with the approved Resource Management Plan for that area.

In the case of the Pleasant Bay ACEC, an assessment of the shoreline waters based on nine factors that represented the critical biological, physical and human use characteristics of these areas has been completed. The complete assessment is an addendum to the Pleasant Bay Resource Management Plan and is on file with the Town Clerks of Chatham, Orleans and Harwich. One result of the assessment (undertaken by the Technical Resource Committee of the towns of Chatham, Harwich and Orleans) indicates that a significant portion of the bay's shoreline is resource-sensitive, and is not appropriate for siting new docks and piers. This conclusion is now incorporated into the Pleasant Bay Resource Management Plan, which has been approved by Town Meetings and by the Commonwealth of Massachusetts. Therefore, the current prohibition on new docks and piers will need to continue in these resource-sensitive areas, which are delineated in the attached list.

In general, these prohibited areas are located around

(a) Little Pleasant Bay, The River, and the inlets that lead off it, including
    - -Pochet Inlet
    - -Meetinghouse Pond and Frostfish Cove
    - -Kescayogansett Pond
    - -The Namequoit River, Arey's Pond and
    - -Paw Wah Pond
(b) Quanset Pond, and the western shore of Sipson's Island
(c) Round Cove
(d) Crow's Pond, Ryder's Cove, and Bassing Harbor
(e) The shorelines running north of Bassing Harbor, and from Bassing Harbor south to Minister's Point.

The study areas for the Resource Management Plan is the marine water recharge area of Pleasant Bay, which includes (in addition to the ACEC area itself) the areas south of the ACEC boundary from Minister's Point to the Chatham Inlet. Within this area, the intertidal zone north of Tern Island, south of Minister's Point, and west of the channel is identified in the plan as an Area of Critical Marine Habitat. In such areas, the plan recommends that the placing of a shoreline structure be prohibited until such time as further scientific data is collected and assessed. Therefore, the plan recommends that a prohibition on new shoreline structures be established for this area, with no effect for existing structures. However, because this area is outside of the ACEC boundary, it is important to note that the existing restriction on Chapter 91 licenses for structures is not in effect, and the recommendation to prohibit new structures in this area would be implemented at the local level.

The Resource Management Plan also identifies areas within the ACEC considered to be relatively less resource-sensitive, where the siting of new docks and piers may be permitted provided they meet all other environmental performance criteria.

In summary, siting of new docks and piers (or the extension of existing docks and piers) will not be permitted in the areas designated on the parcel identification list; siting of new docks and piers may be permitted in other areas provided they comply with all other environmental performance criteria.

10. Pier and Dock Design Criteria

Parameter	Design Criteria	Comments
Maximum length: (pier & float)	80 ft. from MHW	Already in use in Chatham and Orleans. Intended to limit navigation interference and limit blockage of sunlight. Also has aesthetic value.
Required water depth at MLW	2.5 ft Min.	Reflects current Chatham requirement, is consistent with Orleans which requires sufficient depth at MLW to avoid prop dredging.
Width	4 ft. Max.	Measured from outside of structure; intended to limit adverse impact on underlying vegetation.
Height	4 ft. Max.	Measured from MHW.
Pile size and spacing	Not more than 4x4 posts spaced a min of 8 ft apart. Stub piles are not appropriate below MHW.	Makes installation least intrusive to underlying seabed and marshland.
Plank spacing	Min. of 1” spacing between planks or alternate decking that achieves same light penetration.	Intended to increase sunlight penetration to underlying seabed.
Seasonal Requirement	Seasonal use only (6 months/yr); off-season storage plan to be approved.	Givens underlying seabed full exposure to sunlight during remaining 6 months.
Float size	300 sq. ft. max.	15x20 ft. nominal size considered more than adequate to accommodate reasonable number of people for boats up to 25 ft.
Float configuration	“T” preferred	Encourages use of float at its deepest end.

Parameter	**Design Criteria**	**Comments**
Pier location and setbacks	No less than 50 ft setback from property boundary. Shard use piers may be located 50 ft. from outermost property boundary of the contiguous waterfront properties.	Setbacks from property lines and distance from other piers is to avoid undue density of docks and to avoid impeding navigation.
	No closer than 50ft. from existing eelgrass bed.	Protection of eelgrass beds from the effects of prop was is essential to health and productivity of the bay.
	No closer than 50 ft. from existing boating channels or mooring areas.	To allow for safe navigation.
	Adequate distance (e.g. 250 ft.) from nearest pier or boat ramp.	Protects against excess density of piers and docks; encourages shared use.
Pier orientation	N/S preferred, or perpendicular to coastal bank	North-South orientation results in maximum sunlight penetration under the structure, but is not always feasible.
Materials and Installation	Non-leaching materials preferred.	Use of treated materials will minimize stubs of rotten piles which have broken off.
	Installation to use floating barge or boat	Minimizes impact on seabed.
	Design and installation plan must be approved by licensed engineer.	

Definition of Resource-Sensitive Areas Where the Siting of New Private Docks and Piers is to be Prohibited

The resource assessment incorporated into the *Pleasant Bay Resource Management Plan* concludes that the areas listed below are extremely resource-sensitive and therefore are not appropriate for siting new private docks and piers. The resource management plan recommends that the construction of new private docks and piers or the extension of existing private piers be prohibited in these areas. This recommendation does not apply to existing licensed piers or the maintenance of existing licensed piers.

Orleans

Quanset Pond, from the westerly boundary of the property with Map and Parcel number 93-9 to the easterly boundary of the property with the Map and Parcel Number 93-12.

On the Northside of Big Pleasant Bay and through the Narrows, from the westerly boundary of the property with Map and Parcel Number 93-17 to the northerly boundary of the property with Map and Parcel Number 89-11, and the Western shore of Sipson's Island from the northerly boundary of the property with Map and Parcel Number 94-7 and all contiguous properties running counterclockwise to the southerly boundary of the property with Map and Parcel Number 94-10.

From the entrance channel of Paw Wah Pond beginning at the southerly boundary of the property with Map and Parcel Number 76-16, and continuing through the River Complex to the southerly boundary of the property with the Map and Parcel Number 64-7, including Paw Wah, Arey's and Meeting House Ponds, the Namequoit River and The River.

Pochet Inlet, from the southerly boundary of the property with Map and Parcel Number 65-02 and continuing Northward to the southerly boundary of the property with Map and Parcel Number 52-11, and including the Eastern Shore of Pochet Inlet.

Harwich

All contiguous parcels beginning with the northerly boundary of the property with Map and Parcel Number 115,S1-3 and extending southerly along the shore to the southerly boundary of the property with Map and Parcel Number 109,B1-5, and all shorefront parcels between these two properties including Round Cove.

Chatham

Pleasant Bay from the Town Line at Jackknife Harbor to the southerly property line of 4 Minster's Lane, including Crows Pond, Ryder's Cove, Frost Fish Creek and Bassing Harbor.

In Chatham Harbor from the southerly property line of 4 Minister's Lane to Cow Yard Landing.