

# Criteria for the Siting of Marinas or Community Facilities for Boat Mooring

Virginia Marine Resources Commission

VR 450-01-0047

## **Section I**

### **Objective**

As a result of increasingly intensive development through the subdivision of lands adjacent to waters of the Commonwealth, the Commission finds it necessary to develop more detailed criteria for the siting of facilities to serve the needs of boaters in order to protect, conserve and manage properly the natural resources of the Commonwealth for the reasonable and beneficial use of all its citizens.

## **Section II**

### **Goals**

The goals of the Commission are to:

1. Insure that its decisions concerning use of the Commonwealth's natural resources are consistent with the Constitution and laws of Virginia.
2. Develop and administer siting criteria consistent with the Chesapeake Bay Initiatives and the Governor's Commitments contained in the 1987 Chesapeake Bay Agreement.
3. Maintain all fisheries resources, and where possible, enhance production on both public and private currently productive or potentially productive shellfish grounds.
4. Discourage the acquisition of private shellfish leases for any purpose other than the propagation of shellfish.
5. Accommodate, wherever possible, all reasonable and permissible uses of State waters and State-owned bottomlands.
6. Promote navigational safety.
7. Protect private riparian rights while facilitating public access to, and use of State waters to the maximum practicable extent.
8. Promote best management practices which protect and, where possible, enhance water quality.

## **Section III**

### **Background**

The pressures to develop shoreline property and State-owned subaqueous lands are increasing at an unprecedented rate. Boat mooring facilities have become an attractive and effective mechanism to enhance the marketing of subdivided lots in proximity to State waters.

In the process of providing mooring facilities to serve such developments, private benefits are realized but public detriments are often increased. Automatic shellfish closure may result; water quality can deteriorate; habitat values can be irrevocably affected and the character of the water body can be permanently changed.

The Commonwealth is historically a key shellfish producing state. Unfortunately, current shellfish leasing practices encourage the acquisition of shellfish leases by developers in order to eliminate or reduce opposition to seasonal shellfish closures which may result from the siting of mooring facilities.

In order to protect public health, the Bureau of Shellfish Sanitation of the State Health Department has established a policy which requires the establishment of buffer zones around boat mooring facilities within which shellfish cannot be harvested for direct marketing during the months of April through October. These buffer zones are as follows:

0-50 slips - 1/8 mile in all directions

51-100 slips - 1/4 mile in all directions

over 100 slips - 1/2 mile in all directions

As a result of this policy, the State Water Control Board, also as a matter of policy, considers it a violation of water quality standards if a proposed facility will result in a seasonal shellfish closure. The Commission is required by law to give due consideration to water quality standards established by the Water Control Board and to enforce the shellfish closures established by the Health Department.

## **Section IV**

### **Policy**

A comprehensive siting review process for boat mooring facilities requiring permits from the Commission is necessary to insure that permit decisions comply with statutory requirements and the legislative mandate that our natural resources be maintained and conserved for present and future generations. All public and private interests will be carefully considered in this review. As the size, density, complexity and range of services offered by a proposed facility increase, so must the detail in design and implementation of best management practices in its siting, construction and operation. Minimizing adverse environmental impacts must be the ultimate goal in all phases of planning, siting construction and operation. Furthermore, the acquisition of shellfish leases which may be affected by a seasonal shellfish closure around a proposed facility will be given no weight and absent mitigating circumstances will be viewed as a negative factor by the Commission in its evaluation of the facility.

## **Section V**

### **Definitions**

For the purposes of standardization, the definitions contained in Article 1 of Part 1 of the Department of Health Regulation, VR 355-17-01; Sanitary Regulations for Marinas and Boat Moorings; will pertain. For reference purposes, the following two definitions are reproduced herein:

“Marina means any installation operating under public or private ownership, which provides dockage or moorage for boats (exclusive of paddle or row boats) and provides, through sale, rental or fee basis, any equipment, supply or service (fuel, electricity or water) for the convenience of the public or its lessee, renters or users of its facilities.”

“Other places where boats are moored means any installation operating under public or private ownership which provides dockage, moorage or mooring for boats (exclusive of paddle or row boats) either on a free rental or fee basis or for the convenience of the public.”

For purposes of this document, “other place where boats are moored” and “community facility for boat mooring” are interchangeable.

Additionally, since community facilities increase significantly the value of the upland property they are intended to serve, the Commission has a long standing policy that such facilities are classified as commercial in nature. Accordingly, only non-commercial, private piers placed by individual owners of riparian lands in the waters opposite such riparian lands are considered statutorily exempt from public interest review.

## **Section VI**

### **General Siting Criteria**

In addition to the criteria contained on Pages 8 and 9 of the current *Subaqueous Guidelines* promulgated by the Commission in 1979 and revised in 1986, the following should be considered by the applicant in planning and will be considered by the Commission during the public interest review of each application for recreational boat mooring facilities.

1. The physical dimensions and characteristics of the water body should be compatible with the size of the marina and the type of vessels it will house. For example, a shallow cove or basin is not an appropriate site for a deep draft sailboat marina.
2. Marinas must have sufficient upland area to provide all necessary parking, storm-water management BMP's, fuel, and sanitary facilities without filling wetlands or subaqueous bottom.
3. All marinas should be located in areas with good natural flushing to minimize the build-up of organic material and other pollutants on the bottom.
4. Marinas should not be sited close to areas of very high natural resource value such as shellfish beds, seagrass communities and areas frequented by endangered species.
5. The transfer of control of shellfish leases in order to accommodate marina development is generally unacceptable.
6. Projects that by their cumulative impact will result in dense concentrations of boats in one area will be critically evaluated as to their impacts on natural resources; however, in densely populated areas, concentration of slips in a single facility may be justified to prevent disturbance at undeveloped shorelines.

### **Specific Siting Guidelines**

1. For community piers and marina facilities which are appurtenances to residential developments, the number of slips will not necessarily be predicated by the number of units on the property.
2. The dredging of access channels should be limited to the minimum dimensions necessary for navigation and should avoid sensitive areas such as wetlands, shellfish grounds and seagrass beds.
3. Dredged material disposal areas for initial as well as future disposal needs should be clearly defined and designated.
4. Dredged areas should be no more than one foot deeper than controlling depths in the waterway and should be connected to natural channels of similar depth.
5. Piers and wharves crossing vegetated wetland and seagrass areas should be limited to the minimum necessary for water access.
6. Where vegetated areas are crossed, the height of the pier above the substrate should be equal to one foot less than its width with a three foot minimum required.
7. Site specific stormwater management BMP's are required (such as buffer strips, grassed swales, wet detention ponds and permeable parking surfaces.)
8. A solid waste disposal and recovery plan with facilitated marina user access must accompany marina development plans.
9. Sanitary facilities and pumpout facilities convenient to marina users should accompany development plans.
10. All fuel facilities must incorporate automatic shutoff valves and must have spill contingency plans.
11. Methods of insuring against the discharge of wastes, gray water, fuels, bilge wastes and the use of TBT paints shall be provided.
12. Facilities incorporating boat maintenance operations shall include plans for the efficient collection and removal of sand blasting material, paint chips and other by-products of maintenance operations.

## **Section VII**

### **Best Management Practices (BMP's)**

In order to reduce discharge of non-point source pollutants into State waters, the Commission will require the applicant to demonstrate how appropriate BMP's will be incorporated into both the upland development plan associated with the facility as well as the Erosion and Sediment (E&S) Control Plan required by local government.

The Commission may require, as a condition of any permit issued, that BMP structures be completed before any slips can be occupied and that the permittee cooperate fully with local governmental agencies in complying with the E&S Plan, including maintenance of any required BMP structures. An appropriate surety bond or letter of credit may be required to ensure proper installation, stabilization and maintenance of any vegetative or structural measures.

## **Section VIII**

### **Siting Criteria Check List**

The following criteria will be considered by the Commission in determining whether, and upon what condition to issue any permit for a boat mooring facility. In addition, the Commission may consider other factors relevant to a specific project or application.

<b>Criteria</b>	<b>Undesirable</b>	<b>Desirable</b>
Water depth	Less than 3 ft. mlw.	Greater than 3 ft. mlw
Salinity	Suitable for shellfish growth	Unsuitable for shellfish growth
Water Quality	Approved, conditionally approved or seasonally approved for shellfish harvesting	Closed for direct marketing of shellfish. Little or no potential for future productivity.
Designated Shellfish Grounds	Private leases or public oyster ground in proximity	No private leases or public ground within affected area. No potential for future productivity
Maximum Wave Height	Greater than 1 ft.	Less than 1 ft.

<b>Criteria</b>	<b>Undesirable</b>	<b>Desirable</b>
Current	Greater than 1 knot	Less than 1 knot
Dredging	Requires frequent dredging	Does not require frequent maintenance
	No suitable site for dredged material	Suitable site for all dredged material
Flushing Rate (Tidal Exchange)	Inadequate to maintain water quality	Adequate to maintain water quality
Proximity to Natural or Improved Channel	Greater than 50 ft. to navigable water depths	Less than 50 ft. to navigable channel
Threatened or Endangered Species	Present as defined in existing regulations, or project has potential to affect habitat	Absent; project will not affect
Adjacent Wetlands	Cannot maintain suitable buffer	Suitable buffer to be maintained
Navigation and Safety	Water body difficult to navigate or presently overcrowded conditions exist	Navigation not impeded
Existing Use of Site	Presently used for skiing, crabbing, fishing, swimming or other potentially conflicting uses	Not presently used for skiing, fishing, swimming or other recreational use
Submerged Aquatic Vegetation	Present	Absent
Shoreline Stabilization	Bulkheading required	Shoreline protected by natural or planted vegetation or riprap
Erosion Control Structures	Groins and/or jetties necessary	No artificial structures needed
Finfish Habitat Usage	Important spawning and nursery area	Unimportant area for spawning or nursery for any commercially or recreationally valuable species

# Selected Marina Bibliography

Caine, Edsel A. 1887. Potential effect of floating dock communities on a South Carolina estuary. *J. Exp. Mar. Biol. Ecol.* Vol. 108 pp. 83-91.

Cardwell, R.D., R.E. Nice and E.P. Richey. 1980. Fish, flushing and water quality: Their roles in marina design. In *Coastal Zone '80: Proceedings of the Second Symposium on Coastal and Ocean Management*, ASCE, Hollywood, FL.

Chmura, G.L. and N.W. Ross. 1978. *The Environmental Impacts of Marinas and Their Boats*. Marine Advisory Service. University of Rhode Island. Narragansett, R.I. 02882

Connecticut Department of Environmental Protection. 1992. Best Management Practices for Coastal Marinas. Final Report for Connecticut Department of Environmental Protection. Office of Long Island Sound Programs and Bureau of Water Management. Hartford, CT.

Department of Natural Resources and Environmental Control. 1985. *State of Delaware Marina Criteria*. Delaware Department of Natural Resources and Environmental Control. Dover, DE.

Department of Natural Resources and Environmental Control. 1990. *State of Delaware Marina Guidebook*. Delaware Department of Natural Resources and Environmental Control. Dover, DE.

Falk, J., et al. 1992. *Recreational Boating on Delaware's Inland Bays: Implications for Social and Environmental Carrying Capacity*. Del-SG-19-92. Univ. Delaware Sea Grant Program. Newark, DE. 160pp.

Hershner, Carl H. 1986. Marina siting from the scientific advisor's viewpoint. *Proceedings of the Chesapeake Bay Research Conference*. Williamsburg, VA.

Milliken, A.S. and V. Lee. 1990. *Pollution Impacts from Recreational Boating: A Bibliography and Summary Review*. Rhode Island Sea Grant Publications, University of Rhode Island Bay Campus. Narragansett, RI.

Moul, Robert M. 1985. Assessment of marinas and dredging projects. *Proceedings of the National Wetland Assessment Symposium*. Portland, ME. Assoc. of State Wetland Managers.

Natale, C. J. Jr., et al. 1990. Environmental issues controlling marina growth and development in the New England coastal states. In: *Technical Papers of the Environmental Management for Marinas...An International Conference*. Washington, D.C. International Marina Institute, 35 Steamboat Avenue, Wickford, R.I. 02852.

Nixon, S.W., C.A. Oviatt and S.C. Northby. 1973. *Ecology of Small Boat Marinas*. Marine Technical Report Series #5. University of Rhode Island. Kingston, RI.

North Carolina Division of Environmental Management. 1990. North Carolina Coastal Marinas: Water Quality Assessment. North Carolina Division of Environmental Management, Raleigh, NC. Report #90-01.

North Carolina Division of Environmental Management. 1991. Coastal Marinas: Field Survey of Contaminants and Literature Review. North Carolina Division of Environmental Management. Raleigh, NC. Report # 91-03.

U.S. Environmental Protection Agency. 1985. *Coastal Marinas Assessment Handbook*. USEPA, Region 4. Atlanta, GA.

Voudrias, E.A. and C. L. Smith. 1986. Hydrocarbon pollution from marinas in estuarine sediments. In *Estuarine, Coastal and Shelf Science*. Vol. 22, 271-284.

Welch, J.A. 1993. *Examining South Carolina's marina permitting criteria: How should regulator's evaluate need?* Available through J.A. Welch, Eckerd College, Box 12560, St. Petersburg, FL 33733.

Zabawa, C. et al. 1980. *Final Report on the Role of Boat Wakes in Shoreline Erosion in Anne Arundel County, Maryland*. Tidewater Administration, Maryland Department of Natural Resources. Annapolis, MD.