Subaqueous Guidelines

Issued by the
Virginia Marine Resources Commission
2600 Washington Ave
Newport News, Virginia 23607

Developed pursuant to Chapter 12. of Title 28.2, of the Code of Virginia, these Guidelines were approved and become effective on June 26, 1979.

Revised March 1986
Reprinted September 1993
Revised October 2005

The development of the 2005 revisions were funded, in part, by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NAO3NOS4190104 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

Virginia Coastal Zone
MANAGEMENT PROGRAM

Subaqueous Guidelines

Table of Contents

CONSTITUTION OF VIRGINIA
ARTICLE XI

Conservation

Section 1. Natural resources and historical sites of the Commonwealth.

To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.

Forward

"Tidewater Virginia" as defined in the Code of Virginia encompasses over 5,000 miles of shoreline. There are roughly 2,300 square miles, or approximately 1,472,000 acres, of tidally influenced submerged lands. This is an area larger than the entire State of Delaware and represents an ever-increasing custodial responsibility for State government. Additionally, it is not widely recognized that this responsibility extends to non-tidal streams throughout the Commonwealth.

In a May 3, 1982 opinion, the Attorney General advised the Commission to assume jurisdiction on non-tidal streams that were determined to be "navigable-in-fact" unless the landowner could show clear title to the riparian land acquired by grant prior to July 4, 1776. Where the stream was determined to be "non-navigable-in-fact", the Commission was advised to assume jurisdiction unless the landowner could show a grant prior to 1792 in that part of the State draining to the Atlantic Ocean, or prior to 1802 in that part of the State draining toward the Gulf of Mexico.

The question of navigability is a question of fact as to whether a stream is being, or has been historically used as a highway for trade or travel or whether it is capable of such use in its ordinary and natural condition (i.e. disregarding artificial obstructions such as dams which could be abated). The Commission assumes that all perennial streams with a drainage basin of greater than 5 square miles, or a mean annual flow greater than 5 cubic feet pre second, are navigable-in-fact until evidence is presented proving non-navigability.

In 1962, the Marine Resources Commission began a permit program designed to regulate encroachments in, on, under or over the State-owned submerged lands. The authority for this permit program, established by the General Assembly, now requires that when determining to grant or deny any permit the Commission shall be guided in its deliberations by the provisions of Article XI, Section 1 of the Constitution of Virginia and the Commission shall exercise its authority consistent with the Public Trust Doctrine. The Commission shall also consider effects on other reasonable and permissible uses of state waters and state-owned bottomlands, marine and fisheries resources of the Commonwealth, tidal wetlands, adjacent and nearby properties, water quality and submerged aquatic vegetation. Numbers of permit applications have grown steadily from about 15 applications per year for such encroachments initially to over 3,000 in 2003. This steady rise is largely due to increasing developmental pressures along our shoreline. Over this period, and particularly since 1972, increasing numbers of Federal agencies have become involved in the permitting process formerly administered almost exclusively by the U. S. Army Corps of Engineers. This has necessitated much closer State/Federal joint processes in order to help the applicant through the permitting procedures.

All of the foregoing factors have generated the need for a set of criteria by which to evaluate projects**.** The criteria should be used to assure consistency of decisions and inform applicants regarding the degree of acceptability of project proposals. These guidelines have been developed and are hereby promulgated in the hope that they will serve the best interests of all citizens of this great Commonwealth.

Section I

Introduction

A. Purpose

1. The purpose of these guidelines is to make available to applicants and the public-at-large the policies and procedures of the Marine Resources Commission for the permitting of activities directly affecting the subaqueous land of the Commonwealth of Virginia. This document will also be used to guide the Commission and its staff in the application of these policies, criteria and guidelines and serve to inform citizens of the general terms and conditions under which subaqueous activities will be permitted in State waters. Nothing in this statement, however, restricts or impedes the power of the Commission to review each application on its individual merits, apply only those conditions considered appropriate or to consider unusual or mitigating circumstances in the review of applications.

2. The policies contained herein are designed to protect the rights of all citizens of Virginia to appropriately use the State-owned submerged lands, to resolve competing and incompatible claims for users of public resources, to safeguard marine fisheries by minimizing impacts on aquatic habitat, to promote public health, safety and welfare and to accommodate the economic needs of the Commonwealth.

B. Authority Required for Use of Subaqueous Beds

Most activities over, under, or on State-owned submerged lands require a VMRC permit. Section 28.2-1203 of the Virginia Code states that it shall be unlawful and constitute a Class I misdemeanor for anyone to build, dump, or otherwise trespass upon or over or encroach upon or take or use any materials from the beds of the bays and ocean, rivers, streams, creeks, which are the property of the Commonwealth, unless such act is pursuant to statutory authority or a permit by the Marine Resources Commission. The foundation of this concept, the Public Trust Doctrine, dates to the Roman Empire. In short, the Public Trust Doctrine is the principle that the state holds the land lying beneath public waters as trustee for the benefit of all citizens. As trustee, the state is responsible for proper management of the resource to ensure the preservation and protection of all appropriate current and potential future uses, including potentially conflicting uses, by the public.

Statutory Authority (approved by law) is, however, conferred on:

1. Construction of dams authorized by proper authority.

2. Fishing devices and shellfishing already regulated under Subtitle II of Title 28.2 of the Code.

3. Construction and maintenance of Congressionally approved navigation or flood control projects undertaken by an authorized federal agency.

4. State or local port facilities.

5. Placement of private piers for noncommercial purposes by riparian landowners provided that -

(i) the piers do not extend beyond the navigation line or private pier lines established by the Commission or the United States Army Corps of Engineers,

(ii) the piers do not exceed six feet in width,

(iii) any L or T head construction platforms or protrusions do not exceed 250 total square feet,

(iv) the piers are determined not to be a navigational hazard by the Commission, and

(v) in cases where the pier traverses commercially productive oyster grounds, is less than 100 feet in length from mean low water.

Subject to any applicable local ordinances, private piers may also include an attached boatlift and an open-sided roof designed to shelter a single boat slip or boatlift provided the roof does not exceed 700 square feet in coverage, and the adjoining property owners do not object to the proposed roof structure.

6. Agricultural, horticultural or silvicultural irrigation on riparian lands or the watering of animals on riparian lands, provided that -

(i) no permanent structure is placed on or over the subaqueous bed,

(ii) the person withdrawing water complies with requirements administered by the Department of Environmental Quality under Title 62.1, and

(iii) the activity is conducted without adverse impacts to instream beneficial uses as defined in § 62.1-10.

C. General Considerations Applying to All Permits

1. The submerged lands and the overlying waters in the state are a valuable public resource. Therefore, permitted encroachments will strive to minimize interference with the rights of all citizens of the Commonwealth to other appropriate uses.

2. In granting or denying any permit for use of State-owned submerged lands and the waters overlying those lands, the Commission will consider, among other things, the effect of the proposed project upon: other reasonable and permissible uses of State waters and State-owned submerged lands; marine and fisheries resources, wetlands, adjacent or nearby properties; anticipated public and private benefits, submerged aquatic vegetation, and water quality. The Commission will also consider the water-dependency of the project and alternatives for reducing any anticipated adverse impacts.

As defined by the Commission, water dependent means "those structures and activities that must be located in, on, or over State-owned submerged lands." When applying this definition, both of the following questions must be answered affirmatively:

1. Is it necessary that the structure be located over water? and,
2. Is it necessary that the activity associated with the structure be over the water?

Use of the definition for water dependency does not necessarily preclude issuance of a permit for non-water dependent structures over State-owned submerged lands. At public hearing, the Commission may determine that, while a structure is not water dependent, it is a reasonable use of State-owned submerged lands. These types of projects are evaluated on a case-by-case basis.

3. Should a permitted project result in a loss or impact to submerged aquatic vegetation (SAV), compensatory mitigation may be required. This may include transplantation of SAV from the area of impact or planting of a new area. Compensation ratios and requirements will depend on the density, location, and species of SAV.

4. All permit applicants must complete a Joint Permit Application (JPA) which is available from the local wetlands board, the Marine Resources Commission, the Norfolk District, U. S. Army Corps of Engineers, or can be downloaded from the Norfolk District Corps of Engineers web site at http://www.nao.usace.army.mil/Regulatory/PN/JPA.html.

5. In most cases, the owner of the property from which a proposed project will originate, or a person who has obtained legal right through an easement or other legal instrument, shall serve as the applicant. Applications by third parties cannot be accepted. Exceptions may be made for aquaculture projects and mooring buoys.

6. Where the total value of the project exceeds $50,000, §28.2-1207 of the Code of Virginia requires that any permit issued by the Marine Resources Commission must be approved at one of the monthly Commission meetings. The Commission normally meets on the fourth Tuesday of each month. The applicant is normally informed ten days prior to the meeting at which his application will be considered. The Commissioner of the Marine Resources Commission or his/her designated representative may approve projects costing less than $50,000 and unprotested by any individual or agency.

7. Property owners listed by the applicant as adjacent to the project location will be notified of the permit application and provided a copy of the application drawings. Comments received from adjacent property owners are given consideration in the permit review process.

8. In order to assure an adequate public interest review, an appropriate public notice of the proposed project will generally be promulgated pursuant to regulation 4 VAC 20-120-10. In instances where both federal and state permits are required, the Commission may elect to join with the Norfolk District Army Corps of Engineers to issue a joint State/Federal public notice. In most instances, however, a notice will be placed in a newspaper having general circulation in the area of the proposed project. Commission staff will prepare the notice and forward it to the newspaper. The expense of publication will be borne by the project applicant.

9. All permits shall contain an expiration date by which the work is to be completed. All general and special conditions contained in the permit remain in effect for the life of the project. The Commission has established procedures for notifying permit holders of work completion dates. Permits cannot be modified, extended or transferred without the written permission of the Commissioner or his/her designated representative.

10. It is the permit applicant's responsibility to determine if the project will be located within another individual's water rights and/or on leased oyster planting grounds. Written permission from the holder of such rights to encroach thereon is helpful. Regardless, all permits issued contain a clause that the permit is conditioned upon any existing leases. Oyster planting ground maps may be examined at the VMRC Engineering Department office.

11. Copies of the completed application are sent to other state agencies for review and comments. These agencies include, but are not necessarily limited to, the Virginia Institute of Marine Science, the Divisions of Wastewater Engineering and Shellfish Sanitation of the Department of Health, Department of Environmental Quality, Department of Conservation and Recreation, Department of Game and Inland Fisheries and, when needed, the Department of Historic Resources. A Commission environmental engineer normally conducts a field inspection of the project site. After expiration of the time allotted for public interest review by State agencies, adjacent property owners and other interested parties, the application is acted upon by the Commission at its regular monthly meeting or by the Commissioner or his/her designated representative if the total project cost is under $50,000 and unprotested by any agency or individual.

12. The completion date for construction of permitted projects is normally three years from the date of approval. Maintenance dredging permits may be granted for up to five years. Time-of-year restrictions may be placed on projects in proximity to sensitive living resources. Completion dates may be administratively extended at the request of the Permittee if such requests are timely (i.e. received prior to the permit expiration date).

13. The individual listed as Permittee must sign the permit. In cases where the Permittee is a corporation, company or political jurisdiction, the individual signing the permit for that body should be a person who has been properly authorized to bind that corporate entity to the financial and performance obligations that could result from the activity authorized by the permit. In addition, a duly authorized agent may sign a permit on behalf of an applicant.

14. A permit may be revoked at any time by the Commission upon failure of the permittee to comply with any of the terms and conditions or at the will of the General Assembly of Virginia.

15. The permit does not confer upon the permittee any interest or title to submerged land. Fee simple interest in submerged lands always remains in the Commonwealth.

16. Any person, firm, or corporation constructing or erecting any structure upon or over State-owned submerged lands shall be responsible for the maintenance or removal of such structure upon its abandonment or its falling into a state of disrepair.

17. If the nature of the proposed work is such that it could create a safety hazard, endanger adjoining property, create environmental problems or endanger living resources, a performance bond or surety bond satisfactory to the Commonwealth may be required to guarantee the faithful performance of the proposed work.

D. Permit Compliance, Inspections and Enforcement

Commission staff conducts compliance inspections on every VMRC authorized project. Any work found not to be in compliance with the conditions stipulated in a permit will be subject to enforcement action.

Projects completed without a permit or constructed in a manner other than that authorized in an issued permit are illegal and may be subject to prosecution. Where it appears that a project for which an application is made has been completed or work thereon already begun at the time the application is made, additional fees and royalties up to triple the normal amount may be assessed in lieu of prosecution. The Commission may also elect to consider civil charges not to exceed $10,000 for each violation. In the event that the Commission and the applicant cannot agree to a resolution of the violation, the case will be forwarded to the State Attorney General's Office for prosecution and enforcement. Maximum penalties may reach up to $25,000 for each day of violation upon such finding by the appropriate circuit court.

E. Permit Fees and Royalties

Some fees and royalties are defined by statute §28.2-1206 of the Code of Virginia; others are within the discretion of the Commission. Permit fees and royalties are due and payable only after the proposed project is approved.

Permit fees are determined by the total project costs. A $ 25.00 permit fee is assessed for projects with total costs of $10,000 or less. The permit fee for projects with total cost of more than $10,000 is $100.00.

Royalties are fees paid to the Commonwealth for certain uses of submerged public lands. They are assessed in addition to permit fees. All royalties are subject to change in accordance with the Commission's public participation procedures and regulatory adoption process. Contact the Virginia Marine Resources Commission Habitat Management Division for a current royalties schedule.

Section II

Dredging Operations

A. Where dredging is proposed to increase the depth of navigable water, the depths should be determined by the proposed use and controlling water depths outside the area to be dredged.

B. Overdredging to reduce the frequency of maintenance dredging should not exceed an additional two feet and the need for overdredging should be based on the expected rate of sedimentation at the dredge site. Applicants should take care to request authorization for maximum total depth (desired depth + overdredge). Commission permits will be issued with a stipulated maximum allowable depth. Any dredged areas found to exceed this maximum allowable depth will be considered to be out of compliance with the permit conditions and the permittee will be subject to enforcement action by the Commission.

C. Generally, side slope cuts of a dredging area should not be steeper than a two horizontal to one vertical slope (1V: 2H) to prevent slumping of material into the dredged area.

D. In order to lessen the possibility of dredging having adverse effects on commercially or recreationally important fisheries, certain seasonal dredging limitation*s* may be imposed on a site specific basis depending on sediment type, proximity to shellfish areas or spawning grounds, dredging method, the project's size, location and measures taken to reduce turbidity. In important spawning and nursery areas in fresh and near fresh waters, dredging may be restricted to the months of November through mid-March. For brackish and saline waters where significant quantities of oysters and clams are present the better months for dredging are mid-March through June and in October and November. Where commercial dredging for crabs in deeper waters is an important consideration, the better months for dredging are from April through November. These limitations will be judiciously applied in order to prevent undue economic burdens on the Permittee or his contractor. Where dredging in commercially productive clamming grounds is necessary, the permittee will be limited to the minimum dredge footprint necessary to accomplish the stated objective of the project and may be required to mitigate for the loss of the resource through the purchase and planting of clams at a sanctuary. The number of clams required for mitigation of impacts is determined by the density of clams impacted by the proposed dredging project multiplied by a ratio determine by the Commission. Typically, the required mitigation ratio is 1.33:1, although it can be greater.

E. Dredging for proposed small craft channels should be no more than one foot deeper than adjacent natural water bodies and only as wide as necessary to safely navigate in order to avoid creating water circulation and flushing problems. Dredging to depths deeper than the nearest channel can create stagnant conditions that can lead to decreased oxygen levels, unpleasant odors and degradation of local marine resources.

F. Only under special or unusual circumstances should dredged material be double handled. This practice involves the placement of dredged material at another location in the waterway from which it was dredged only to be redredged for proper disposal.

G. Sidecast dredging with overboard disposal will only be authorized under exceptional circumstances.

H. Dredging in or near shellfish areas, both public and private, beds of submerged aquatic vegetation and other highly productive areas is discouraged. In cases where no other alternatives exist, a plan for compensation for the lost or impacted resources will be required.

I. The minimum and maximum royalty for new dredging is prescribed by law. The maximum may be assessed if the material is to be used for fill or other commercial use. Please see §28.2-1206 of the Code of Virginia for more information regarding minimum and maximum royalty assessments. As of 2005, the Commission is assessing a minimum royalty of $0.45 per cubic yard for all new dredging.

J. In order to prevent the slumping of vegetated tidal wetlands into dredge cuts, channels and basins should be designed with a buffer. The buffer width normally recommended is four times the depth of material (buffer = 4X depth) measured from the edge of the base width of the design channel side slope.

K. Maintenance dredging is strictly defined by the VMRC as dredging activities for navigation purposes that have been previously authorized by the Commission, to the depth previously authorized by the Commission, and where a royalty has been previously paid to the Commission for the initial removal State-owned submerged lands. Dredging to reach additional depths in a previously authorized area or in an area where no VMRC permit has ever been issued will be treated as new dredging subject to royalty assessment regardless of any authorization that may have been granted by any other agencies.

L. Typically, a pre-dredging conference, to be held on site prior to the commencement of the dredging, is required. The permittee, the dredging contractor and a member of the VMRC staff must attend the meeting. The meeting should be held within seven (7) days prior to the commencement of dredging and includes an inspection of the dredge material containment area, an inspection of the previously staked dredge area, and a discussion of the terms and conditions of the permit.

M. For most projects, the permittee will be required to provide a post-dredging bathymetric survey of the dredged area within 30 days after the completion of the dredging. The survey must be signed and dated as being accurate and true. The survey must be referenced to mean low water and include a transect at the channelward end of the dredge cut and at 50 foot intervals along the dredged channel to the landward terminus of the dredged area. Accurate bathymetric data from each transect shall be used to establish the top width of the dredge cut (± 1') and must include a depth measurement exterior to both sides of the dredge cut. If applicable, the survey must also indicate the horizontal distance between the top of the dredge cut and the vegetated wetlands depicted on the project drawings.

Section III

Filling And Dredged Material Placement

A. Filling on State-owned subaqueous land for the purpose of reclaiming or creating highland property is generally not permitted. If special circumstances warrant such fill, an appropriate royalty will be assessed on a square foot basis. Clean material from an upland source is generally preferable to dredged material for use as fill.

B. Filling on wetlands to create upland property is generally not permitted unless unusual conditions warrant. Decisions by a local wetlands board or the Commission will be based on the Commission's Wetlands Guidelines that categorize wetlands species according to type and relative importance.

C. Dredged material must be placed in a disposal area which is acceptable to the Commission. Factors considered include, but are not limited to, the following:

1. Encroachment into natural drainage ways.

2.Chemical nature of the dredged material and its potential for polluting adjacent or nearby underground water supplies.

3. Encroachment over underground utilities, i.e., water lines and sewer facilities.

4. Value of the site to the natural environment.

5. Proximity to populated areas.

6. Anticipated use of the material or disposal site after dredged material is placed and consolidated.

D. The disposal area should be property prepared to receive and permanently contain the fill before the start of dredging or filling.

E. Overboard disposal of dredged material into tidal waters is generally not permitted unless the material is uncontaminated and granular (sand size).

1. When overboard disposal is authorized, areas to be used for placement of the material will be located to minimize impacts on commercially important bottom dwelling organisms such as oysters and clams, submerged aquatic vegetation, wetlands and other productive shallow water habitats.

2.Overboard disposal areas should be properly shaped and positioned to reduce scour and sedimentation.

F. Quality dredged material is a valuable State resource and may be used for beach replenishment at public beaches in Virginia where natural sources of sand supply are inadequate. In accordance with § 10.1-704 of the Code of Virginia, the beaches of the Commonwealth shall be given priority consideration as sites for the disposal of that portion of dredged material determined to be suitable for beach nourishment. Sandy dredged materials of suitable quality may be placed on private beaches if a public beach placement site is not suitable or available.

G. Fill material may only be placed on submerged land for shoreline stabilization and/or wetland enhancement when the project can be shown to have positive aquatic resource benefits.

Section IV

Structures

A. Piers, Wharves and Boathouses.

1. The placement of open-pile or floating private piers, uncovered lifts and boathouses for non-commercial purposes by owners of riparian lands in the riparian waters opposite such lands may require a permit from the Commission. Submission of a Joint Permit Application is required in order for Commission staff to evaluate whether a proposed pier is statutorily authorized or requires authorization from the Marine Resources Commission. Commission staff will consider the following when reviewing applications for private piers, uncovered lifts, and boathouses -

a. impacts to navigation;
b. width of the proposed pier;
c. size of any L- or T- head, platforms, finger piers and floating dock sections;
d. statements by an application explaining their desire for oversized portions of a pier;
e. square footage and design of boathouses;
f. encroachment into productive oyster grounds;
g. concurrence or opposition by adjacent property owners
h. water dependency of any structures, i.e. roofs for shade and storage facilities, to be placed over submerged lands;
i. presence or absence of submerged aquatic vegetation (SAV).

Commission authorization for design and placement of piers, boathouses, lifts, and other similar or related structures may be subject to local ordinances. Please contact your local government to ensure compliance with any local standards or requirements. Restrictions regarding the placement of structures within the Resource Protection Area (RPA) as defined under the Chesapeake Bay Protection Act are not a justification for placement of non-water dependent structures on piers over submerged lands.

2. Piers for commercial or community purposes ~~do~~ require a permit from the Commission. A structure is considered commercial if it is in support of operations that charge for the production, distribution or sale of goods or services. For example, dock facilities associated with condominium type dwellings are considered commercial because they increase the value of units offered for sale. Community and shared use piers are also considered to be commercial.

3. Construction material and designs being used should ensure stability and safety.

4. Utilization of open-pile type structures to gain access to navigable waters are preferred over construction of solid fill structures. Floating piers are generally acceptable when located in water deep enough that they float during all normal tide conditions.

5. Piers constructed over vegetated wetlands should be high enough to prevent loss of existing vegetation through shading and generally should be limited to no more than 5 feet in width.

B. Marinas

1. The appropriate siting of marinas is a complex process that requires careful review of numerous factors. Specific siting guidelines have been adopted by the Commission under regulation 4 VAC 20-360-10 ET SEQ. in the Virginia Administrative Code.

2. Marinas provide a public service (benefit) through increased public access but can result in a net public detriment (loss) in certain locations through degradation of living resources.

3. The numbers of waterborne craft that may be drawn to the waterway, and existing and anticipated congestion must be considered.

4. Adequate riparian waters which can accommodate all aspects of the project is essential, i.e., vessel movement in and out of the facility should not infringe on the riparian waters of adjacent properties.

5. The structure should encroach no more than one third the distance across the waterway except in unusual channel configurations.

6. Development along concave shorelines can create serious congestion problems and infringement on the riparian rights of adjacent property owners is more likely to occur.

7. Convex shoreline areas are generally better suited to marina activity where a marginal wharf with perpendicular finger piers can be utilized to reduce encroachment into the waterway.

8. Locations near the mouth of a waterway provide better flushing characteristics for marine activity than is provided further upstream.

9. In accordance with §28.2-1205(C) of the Code of Virginia, approval of a plan for onshore sanitary and pump-out facilities by the State Department of Health is required prior to issuance of a Commission permit.

10. Dry storage type facilities are encouraged because of their greatly reduced encroachment into the waterway and greater pollution controls.

11. The condemnation of shellfish areas as a result of marina location is a serious consideration in the permitting process and should be avoided if at all possible. The Department of Health, Division of Shellfish Sanitation advises the Commission as to shellfish condemnations which may occur.

12. In presently condemned shellfish areas, measures to ensure no further degradation of water quality may be required.

13. In order to reduce the amount of dredging required for a marina, slips for deep draft boats should be built in the naturally deeper waters of the marina. This is commonly referred to a zonation mooring.

14. Proper water circulation and tidal exchange should be maintained by avoiding dead-end canals and restricted inlets.

15. Applicants are encouraged to consider participation in the Virginia Clean Marina Program. For more information, please contact VMRC Habitat Management Division staff or http://www.deq.state.va.us/vacleanmarina

C. Bulkheads and Riprap

1. Where soil conditions are suitable, sloped stone riprap with a filter cloth barrier between the highland and the riprap is preferable to a vertical bulkhead.

2. Where vertical bulkheads are necessary, either concrete or chemically treated tongue and groove wood material with equally spaced deadmen, filter cloth, and galvanized tiebacks is recommended. Vinyl sheet bulkheads are also acceptable. Depending on manufacturer recommendations, filter cloth may or may not be necessary.

3. Railroad tie bulkheads are discouraged.

4. Bulkheads should have return walls or be tied into adjacent bulkheads to prevent flanking**.**

5. Bulkheads should be placed landward of vegetated wetlands. Where no vegetated wetlands exist, bulkheads should be placed as far landward as possible to minimize impacts on non-vegetated wetlands and the marine environment.

6. Areas of highly unstable shorelines and/or areas having high levels of reflected wave energy will normally require construction materials which absorb and dissipate wave energy. Structures such as riprap revetments, gabions, breakwaters, marsh toe sills are examples of shoreline stabilization structures that dissipate wave energy. When utilizing vertical bulkheading, which tends to deflect and reflect wave energy onto adjoining parcels, a protective riprap toe is often desirable.

D. Jetties, Groins and Breakwaters

1. Jetties, groins and breakwaters should be designed in such a manner that their location will not create adverse sediment transport patterns or unduly disturb marine resources.

2. Jetties, groins and breakwaters should be designed in such a manner that they will not be breached by tides and/or fail under wind, current or tide conditions normally experienced at the site.

3. Professional advice on the suitability of jetties, groins and breakwaters is recommended since their effectiveness at a specific site is difficult to predict.

4. The anticipated effect of a proposed groin-field upon adjacent properties is an extremely important consideration in evaluating a permit application.

Section V

Overhead And Submarine Crossings

Overhead and/or submarine crossings are normally permitted if reasonable measures are taken to protect aquatic resources and other uses of the waterway.

A. Overhead Crossings

1. Overhead structures must be designed in such a manner that they will not impede normal waterborne traffic.

2. Where practical, overhead structures should be designed in such a manner that supports will not be constructed in the natural channel.

3. Overhead crossings should be located at or near existing crossings.

B. Submarine Crossings

1. Submarine crossings should be designed such that a minimum of three feet of cover will be provided over the upper extremity of the submerged structure when placed in an area where fishing devices are normally employed.

2. Alteration of submerged aquatic vegetation, shellfish beds and wetlands should be minimized wherever possible in the planning and location of submerged structures.

3. Backfill material for submarine crossings should clean and serve to restore, as closely as possible, the depth and natural condition of the original bottom.

4. In general, directional drill methodologies are preferred over trenching.

Section VI

Private Riparian and Non-riparian Moorings

A. General Conditions

1. Mooring buoys should not normally be located:
    a. On private shellfish leases or on designated public shellfish grounds.
    b. In submerged cable-crossing areas.
    c. In or near designated navigational channels.
    d. Within 200 feet of a public or commercial bathing beach.
    e. So as to interfere with the operation of or access through any bridge.
    f. So as to infringe on the riparian rights of adjacent properties.
    g. Within beds of submerged aquatic vegetation (SAV).

2. Moorings should be marked and maintained in accordance with the "Uniform State Waterway Marking System" (USWMS) as approved by the U. S. Coast Guard which require buoys to be white with a blue band around the middle and must be further marked with the VMRC permit number for identification purposes.

3. All permits granted by the Commission will contain a stipulation that "The Permittee agrees to remove said structure from State-owned subaqueous bottom within ninety (90) days after ***receiving*** written notification by the Commissioner."

4. The Permittee is required to notify the Commission within thirty (30) days of any changes to the information contained in the permit application as submitted. This includes, but is not limited to changes in Permittee domicile, vessel type, vessel registration, or intent to vacate the buoy.

5. The Permittee is required to notify the Commission of their desire to continue to occupy the mooring on an annual basis.

6. Upon revocation of the permit, or a notice of intent to vacate, the permittee will be required to completely remove all anchors, weights, and mooring tackle.

B. Riparian Moorings

The Commission will normally honor a permit request by a riparian owner for a single mooring to be placed in accordance with the general conditions above and which is located within his riparian waters.

C. Non-Riparian Moorings

1. The Commission may grant a permit requested by an individual who does not own waterfront property for a single mooring buoy if:

a. The mooring is placed in accordance with the general conditions in paragraph 1 above.
b. It can be demonstrated that there is access to the mooring without trespassing on private riparian property.
c. Approval**,** in writing, is obtained from the riparian owner if the mooring buoy will be placed in their riparian area.

2. The Commission may consider a permit request for a group (multiple) mooring under unusual circumstances.

D. Designation of Mooring Areas, Mooring Restrictions

Any local government or state or federal agency may recommend to the Commission that the placement of moorings in the waters that fall within their political jurisdiction be restricted in certain areas or that certain areas be designated as mooring areas in order to protect public safety, welfare, and recreational and commercial interests.

Section VII

Activities in non-tidal areas

The Virginia Marine Resources Commission, as the custodian of Virginia's submerged lands, has the proprietary authority and responsibility to issue permits for activities that take place over, under, through and on all submerged lands throughout the Commonwealth. This authority is based on the Commonwealth's ownership of submerged lands and was clarified through an opinion by Gerald L. Baliles, Attorney General, on May 3, 1982. This opinion stated, in part, that "(t)he Commission should assume that all streams above some administratively determined minimum size…." are subject to its jurisdiction.

The Commission has defined the minimum size of non-tidal waterways as those perennial streams with a drainage area of 5 square miles or with a mean annual instream flow of 5 cubic feet per second. Activities within waterways with characteristics below these threshold attributes do not require authorization from this agency.

The Commission has determined the extent of jurisdiction within non-tidal waterways to extend no further landward than the ordinary high water mark. While the State of Virginia has not adopted a legal definition of ordinary high water, the Federal definition represents an informative explanation of the term. The Army Corps of Engineers defines ordinary high water in 33 CFR Part 329 "Definition of Navigable Waters of the US" Section 329.11a.1. This regulation states that the "ordinary high water mark" on non-tidal rivers is the line on the shore established by the fluctuations of water and indicated by the physical characteristics such as a clear, natural line impressed on the bank, shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding area."

When evaluating project proposals that fall within the jurisdiction of this agency, Commission staff will normally consult with the Department of Game and Island Fisheries, the Department of Conservation and Recreation, the Department of Environmental Quality, and local government officials before granting permits for any encroachments into State-owned submerged lands.

This coordination may result in specific permit conditions such as limits on the time of year when instream construction activities can take place (e.g. construction should be performed only during low-flow conditions.) Specific construction methodologies may be required, such as the use of cofferdams constructed of non-erodible materials and placement of cofferdams in such a manner that no more than half the width of the waterway shall be obstructed at any point in time. In all cases, the cofferdams and any excess material will be required to be removed to an approved upland area upon completion of construction, and the streambed will be required to be restored to its pre-existing contours and conditions.

It should be noted that the Virginia Erosion and Sediment Control Handbook (3rd Edition, 1992 or subsequent edition) should be followed throughout construction. If blasting to create a trench is necessary, the Department of Game and Inland Fisheries shall be notified a week prior to the blasting to permit representatives of that agency to observe the operation.

Section VIII

VMRC Regulations

In order to facilitate the effective, appropriate and balanced management of Virginia's submerged lands, various regulations have been adopted to assist in this endeavor. The regulations can be found on the agency's web page at www.mrc.state.va.us. Since regulations may be adopted or repealed after publication of this booklet, be sure to verify this information through the Commission's web page or by calling the Habitat Management Division.

Regulation Citation	Title	Effective date
4 VAC 20-120-10 ET SEQ.	Pertaining to the Promulgation of a Public Notice on Applications to Encroach In, On, or Over Subaqueous Lands of the Commonwealth	03/01/83
4 VAC 20-333-10 ET SEQ.	Virginia General Permit for Projects undertaken by the Virginia Department of Transportation In, On or Over State-Owned Subaqueous Lands Anywhere Within the Commonwealth.	07/06/99
4 VAC 20-335-10 ET SEQ.	Pertaining to On-Bottom Shellfish Aquaculture Activities	01/01/98
4 VAC 20-336-10 ET SEQ.	General Permit for Noncommercial Riparian Shellfish Growing (i.e. "Gardening") Activities.	01/01/98
4 VAC 20-337-10 ET SEQ	Submerged Aquatic Vegetation (SAV) Transplantation Guidelines	11/01/00
4 VAC 20-340-10 ET SEQ.	Public Participation Guidelines	06/30/93
4 VAC 20-345-10 ET SEQ.	General Wetlands Permit for Emergency Situations	03/01/98

Regulation Citation	Title	Effective date
4 VAC 20-360-10 ET SEQ.	Criteria for the Siting of Marinas or Community Facilities for Boat Mooring	06/07/88
4 VAC 20-390-10 ET SEQ.	Wetlands Mitigation-Compensation Policy	06/06/89 Updated: 07/05
4 VAC 20-395-10 ET SEQ	General Permit for Emergency Situations and Water Quality Improvement Projects	07/01/98
4 VAC 20-398-10 ET SEQ.	Ballast Water Discharge Reporting	11/01/01
4 VAC 20-400-10 ET SEQ.	Criteria for the Placement of Sandy Dredged Material along Beaches in the Commonwealth	11/01/88
4 VAC 20-440-10 ET SEQ.	Coastal Primary Sand Dune / Reaches Guidelines: Barrier Island Policy	10/24/90
4 VAC 20-1030-10 ET SEQ.	Management Plan for the Ungranted State Lands in Accomack and Northampton Counties	03/15/99
	Guidelines for the Establishment, Use and Operation of Tidal Wetland Mitigation Banks in Virginia	01/01/98
	Subaqueous Guidelines	3/86 Updated 11/05