7/7/2025

Virginia Administrative Code

Chapter 440. Coastal Primary Sand Dune/Beaches Guidelines: Barrier Island Policy

4VAC20-440-10. Barrier island policy.

A. Introduction.

1. Definitions. For the purpose of this chapter, the definitions contained within § 62.1-13.22 of the Code of Virginia apply. In addition, the following words and terms when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise:

"Barrier islands" means elongated narrow landforms consisting largely of unconsolidated and shifting sand, fronted on one side by the ocean and on the other by a bay or marshland which separates them from the mainland.

"Dune crest" means the highest elevation of the coastal primary sand dune on the lot as determined in consultation with the Virginia Institute of Marine Science.

"Local 100-year long-term recession rate" means calculating the average shoreline recession over fixed one-mile intervals averaged over the period between surveys of 100 years or more.

2. Background. Barrier islands are transient landforms. Their dynamic and unstable nature poses significant risk to life and property located there. Scientific evidence placed before the Marine Resources Commission supports a finding that some of Virginia's barrier islands, including Cedar Island, are more fragile, more unstable and pose even greater risk to life and property than many other coastal barriers, due to their sand-deficient character. In addition, barrier islands are themselves significant natural resources that contain a number of specific features (coastal primary sand dunes, wetlands, and vast stretches of state-owned sandy beaches) including natural heritage resources and threatened or endangered species that are recognized by the General Assembly for their natural value and are protected by law. This policy applies to the barrier island systems on the seaside of the Virginia portion of the southern Delmarva peninsula, and is not intended to cover military activities essential to national security, or the construction, operation, maintenance or rehabilitation of coast guard facilities or access to them. This exclusion does not obviate compliance with other applicable provisions of the Coastal Primary Sand Dune Protection Act.

Survival of these barrier islands often depends on the ability of sand to wash across the island naturally in concert with the local wind and wave climate. The sand is then protected from loss offshore and provides a means of perpetuating the island, albeit in a more landward location. Activities which adversely affect this interaction can have an extremely detrimental impact on the island as well as the structure, form and function of its dune system. The artificial accumulation of sand along the oceanside of an island can make it more susceptible to loss offshore during a storm. Once such a loss occurs, the sand then becomes unavailable for washover and for the continued landward migration of the island. Houses, sand fences and similar structures can also alter wind patterns; this alteration impedes the wind transport of sand across the island. Accumulations adjacent to these impediments can be lost offshore as the shoreline continues to recede, leading to an increased rate of recession and a narrowing of the island. In addition, many of the Commonwealth's rarest species depend on the continuation of natural processes that currently exist on barrier islands. Consequently they are threatened by any interference with those processes. The implementation of the policies and guidelines set forth in this chapter will support a fuller achievement of the purposes of the Virginia Natural Area Preserves Act (§ 10.1-209

et seq. of the Code of Virginia), the Virginia Endangered Species Act (§ 29.1-563 et seq. of the Code of Virginia) and the Virginia Endangered Plant and Insect Species Act (§ 3.1-1020 et seq. of the Code of Virginia).

Two of the main natural features of barrier islands are natural dunes and washover areas, both of which are included in the statutory definition of a coastal primary sand dune as a "mound of unconsolidated sandy soil which is contiguous to mean high water, whose landward and lateral limits are marked by a change in grade from 10% or greater to less than 10% and upon any part of which is growing" certain designated plants as listed in § 62.1- 13.22 of the Code of Virginia. Given the particular combination of risks to both natural values and life and property posed by development on barrier islands, the commission finds it necessary and appropriate to establish a policy and supplemental guidelines to assist landowners and decision makers alike in shaping barrier island uses in a manner that preserves and protects the values of coastal primary sand dunes as set forth by the General Assembly.

B. Permits required.

1. Applications for new development.

a. No construction or any other activity which has the potential for encroaching on or otherwise damaging coastal primary sand dunes or state-owned beaches shall occur without review and approval by the Marine Resources Commission (commission) or a local wetland board, or both. Consequently, a permit application shall be submitted for any such construction or other activity. Each application shall include:

(1) A certified survey of the site which is representative of current conditions showing: (i) one foot contours relative to local mean high water, commencing at the line and proceeding through the site to the first wetlands vegetation, (ii) specific location for all proposed structures including septic system and drainfields, (iii) size, configuration and design of access points, (iv) location of any other activity which may affect coastal primary sand dunes or state-owned shore, and (v) a dune crest, determined in consultation with the Virginia Institute of Marine Science, which identifies the highest elevation of the coastal primary sand dune on the lot.

(2) A copy of both a valid building permit and septic or other wastewater handling or disposal system permit.

b. All lot pins and proposed construction locations, drainfield sites and access points shall be staked and tied to suitable reference points.

c. In its review of the application, the commission (or a local wetlands board) will determine the correctness of the dune crest and will establish a minimum setback necessary to prevent encroachment in or damage to the dune or interference with the natural processes of dune growth.

2. Loss of structures and applications for redevelopment. When a structure is destroyed or damaged by natural events such that the structure is condemned by health officials or local building officials, reconstruction in that location may not be authorized. Submission of a new application and evaluation as if no structure were present will be required. In the event a structure is damaged beyond repair and no longer habitable or damaged and not restored to a usable state within one year, the owner of record shall be responsible for the complete removal of all vestiges of the structure and materials resulting from them, including the septic tank, distribution box and drainfields in their entirety, or as directed by the state or local Department of Health. The owner of the lot shall restore the area to as natural a state as possible.

C. Supplemental guidelines.

1. Structures.

a. No permanent structure, other than those already specifically allowed by law or provided in subdivision C 2 b below for purposes of permanent access, will be permitted seaward of the crest of the coastal primary sand dune. No permanent alteration of the coastal primary sand dune will be permitted, except in accordance with the standards set forth in the Coastal Primary Sand Dunes Act.

b. Since it is well established that the coastal primary sand dunes and the islands themselves recede continually westward at a reasonably predictable rate, and that excessive vehicular and pedestrian use will increase the fragility of coastal primary sand dunes or impact upon significant natural resources, development must be limited to no more than low density single family use on each platted parcel. Uses other than single family dwellings can clearly be characterized as "unnecessary and inconsistent with the public interest considering all material factors."

c. The density of structures and the percentage of the shoreline frontage occupied by those structures are critical to minimizing the impact they have on sand migration across the island. Data concerning the development on barrier islands indicates that adverse impacts may be minimized when no more than 25% of the islands' linear shoreline is occupied by structures. This factor shall be considered in evaluating the individual and cumulative impacts of each permit application. In considering permit applications, the following guidelines shall be followed:

(1) There shall be adequate area within the lot that is neither sand dune, including beach and overwash areas, nor wetlands to accommodate the proposed dwelling and any appurtenant structures, including attendant sanitary facilities.

(2) Minimum frontage for a lot on the ocean capable of supporting a single-family vacation cottage shall be 100 feet.

(3) Minimum side yard requirements shall be 30 feet.

(4) The setback from the dune crest for all structures including septic systems shall be 20 times the local 100-year long-term annual shoreline recession rate. The dune crest shall be defined as the location of the highest elevation of the coastal primary sand dune, beach or washover located on the lot.

(5) The maximum allowable square footage for the first floor of a single family dwelling on a 100-foot lot shall be 900 square feet and for a 200-foot lot, 1800 square feet, including porches, decks, and other appurtenances. Houses with first floors larger than these will not be considered necessary economic development.

(6) The maximum height of a dwelling shall be 25 feet measured from the base of the first floor to the peak of the roof.

(7) All dwellings shall be constructed on elevated open pilings a minimum of 10 feet above grade. No enclosures will be permitted below the first floor.

(8) An appropriate identification number shall be affixed to all septic tanks made of nonbiodegradable plastic materials to aid in their indentification.

(9) Exceptions to these requirements may be authorized in individual cases. No such exception shall be authorized unless the commission finds (i) that the strict application of the requirement would produce undue hardship, and (ii) that the authorization of such exception will not result in significant detriment to barrier islands, their natural resources, or adjacent property.

d. Evidence of cumulative environmental impacts of existing and proposed structures, as well as the secondary impacts resulting from their use, shall be considered in passing upon any application for a permit.

2. Access.

a. No cuts through the dune will be permitted. Temporary vehicular access for purposes of construction will be permitted only by open-pile or "corduroy" ramps. Permits for temporary vehicular access will be limited as necessary to protect significant natural resources. At expiration of the authorized term all structures, except as noted in subdivision b below, shall be removed and the dune restored to its preconstruction contours and revegetated. All plans for temporary construction access must be specified in the application of any construction permit.

b. Permanent vehicular access across the dune will be permitted only by "corduroy" or open-pile vehicular ramps which allow the natural process of dune growth and migration to occur. An open-pile or "corduroy" ramp developed for purposes of construction access may remain in place for permanent access if it meets the above criteria and is specifically approved. All plans for permanent access must be specified in the application for any construction permit.

c. Each dwelling will be limited to a maximum of one vehicle for access to and from the island's landings. All vehicles shall be subject to the following conditions:

(1) Each vehicle shall have a no-cost annually renewable permit to travel on the beach. The owner shall attest at the time of renewal the vehicle's status and condition.

(2) The permit number for each vehicle shall be displayed in two-foot high letters on the roof and sides of the vehicle.

(3) When a vehicle for a particular dwelling is no longer functional, it must be removed from the island. Evidence of its removal must be provided prior to the issuance of a permit for a new vehicle.

(4) All driving will be limited to the intertidal zone and between there and approved dune crossovers. Vehicular use of the beach at periods greater than four hours either side of low water shall be considered a violation of this section.

(5) All bird nesting areas posted by the Virginia Department of Game and Inland Fisheries, U.S. Fish and Wildlife Service, or Department of Conservation and Recreation shall be off limits to all vehicles.

(6) No all terrain vehicles (ATVs) will be permitted on barrier islands.

(7) Evidence of vehicular use in areas other than those authorized shall be cause for revocation of the permit and a requirement that the vehicle be removed from the island. Any person having his permit revoked shall be precluded from reapplication for a one-year period.

3. Roads. No roads or trails will be permitted on or across any coastal primary sand dune or in any wetland.

4. Sand movement. No artificial relocation of sand will be permitted.

5. Shore hardening. Structures normally associated with or used for shoreline protection or erosion control, including but not limited to bulkheads, riprap, revetments, gabion baskets, sand bags, groins and jetties, or any other hardening of the shoreline will not be permitted under any circumstances.

6. Point source discharges. No point source discharge pipe, structures or other devices will be permitted.

7. Bond requirement. A reasonable bond or letter of credit will be required prior to granting any permit to assure restoration of any temporary alteration of the coastal primary sand dune including, but not limited to, regrading to the original elevation, resprigging with appropriate vegetation and removal of any and all construction debris.

8. Sand fence. The use of sand fencing or other artificial barriers is discouraged because of its interference with the natural sand transport and migration on barrier islands.

9. Solid waste. All solid waste generated on barrier islands must be removed and disposed of appropriately on the mainland.

10. Pets. In order to prevent unrestricted roaming which may result in the disturbance of, or depredation to wildlife, domestic pets must (i) be restrained or under control of their owner at all times, (ii) shall not be allowed off of the owner's property except under leash, and (iii) shall not be abandoned on a barrier island.

11. Endangered species. Encroachment upon the nesting sites of threatened and endangered species identified by the Virginia Department of Game and Inland Fisheries or Department of Conservation and Recreation is prohibited. Evidence of impact or potential impact on threatened and endangered species shall be considered in passing upon any application for a permit.

12. Landscaping. The planting of exotic species or introduction of non-native fauna are impermissible. Broadcast spraying of pesticides or herbicides is impermissible except when necessary to protect the public health or safety as decreed by the appropriate public health official.

D. Public hearings. The public hearing required by § 6 of the model ordinance may be held in Newport News, Virginia. Such hearing will not be scheduled until the commission staff has determined that it is in receipt of a complete application.

E. Comments/advisory notes.

1. Risks. While future events and their impacts on human activity cannot be forecast with any degree of precision, experience in other coastal areas suggests a proclivity to seek public assistance when catastrophic events occur or when services are needed beyond the ability of private resources to provide. The commission believes that any development on barrier islands should be undertaken only with the full acceptance by the owners of the risks involved.

a. No public protection of private property. Authorization of structures should in no way serve as justification for the future expenditure of public resources to protect such structures.

b. Services. Any services which may be provided by local government to promote public health, safety and general welfare must be installed, maintained and operated in a manner consistent with the policy, standards and guidelines of both the Wetlands and Dunes Protection Acts.

c. Relocation of structures. Once local mean high water approaches a structure to within 10 times the average recession rate, a plan for its movement/relocation must be submitted for review. No movement or relocation will be permitted without the written permission of the commission.

2. Interference with natural processes. The serious sand deficiency which currently exists on Virginia's barrier islands is exacerbated by any artificial manipulation, including sand fences, which might render the supply more vulnerable to export offshore or interfere with the natural movement onshore in washover areas during storm events. Private property owners have even more at stake than the public-at-large in assuring that natural processes are not interfered with to any discernible degree.

3. Value of dune preservation. Special emphasis is placed on the legislative declaration of public policy that coastal primary sand dunes "in their natural state serve as protective barriers from the effects of flooding and erosion caused by coastal storms, thereby protecting life and property."

a. Accordingly, every reasonable precaution to avoid permanent alteration is expected to be exercised by all users in gaining temporary access to private property for construction or for continued access to authorized structures.

b. All construction, including septic systems, shall bet set-back from mean high water a distance at the site to assure reasonable survival duration. Setbacks from the dune crest were specified in subdivision C 1 c (4) of this chapter.

4. Water quality. While the commission believes that properly functioning septic systems in the limited density anticipated will have no measurable effect, failing systems of greater numbers than now forecast could impact important public shellfish growing areas. Therefore, staff will request at least biannually from the Department of Health an assessment of the cumulative impact or catastrophic failure of septic systems they have authorized.

F. Policy with regard to private restrictive agreements. In addition to the above guidelines and advisory comments and as an additional means to reasonably "preserve and protect coastal primary sand dunes and reaches and to prevent their despoliation and destruction," and to help achieve the other purposes set forth by the General Assembly in the Coastal Primary Sand Dune Protection Act, the commission endorses and looks favorably upon restrictive private covenants which "accommodate necessary economic development in a manner consistent with the protection of coastal primary sand dunes." For example, the Commission encourages restrictive private covenants which:

1. Protect the "natural habitat for coastal fauna," "wildlife habitat," and "vegetation which stabilizes coastal primary sand dunes."

2. Prohibit special exemptions or attempt to obtain such exemptions from the application of controlling statutes.

3. Enhance the "scenic and recreational attractiveness of Virginia's coastal area," protect the "important natural habitat for coastal fauna," and protect the "vegetation which stabilizes such features."

4. Require cooperation with the state and federal conservation agencies to protect the ecologically significant natural resources including granting permission to post critical bird nesting sites.

Statutory Authority

§ 28.2-103 and Chapter 14 (§ 28.2-1400 et seq.) of Title 28.2 of the Code of Virginia.

Historical Notes

Derived from VR450-01-0058, Virginia Register Volume 6, Issue 26, eff. October 24, 1990.

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