

COASTAL FEATURES

JANUARY 1991

The Rhode Island Coastal Resources Management Council's Report on Current Events

George N. DiMuro, CRMC Chairman
Grover J. Fugate, CRMC Executive Director

SHORELINE HAZARDS: COASTAL MANAGEMENT AS A FIRST DEFENSE



A December coastal storm wreaks havoc at Green Hill Beach. The CRMC provides hazards technical assistance for individuals living in coastal areas.

Coastlines are one of the most popular populated and embattled regions of the country. Their very popularity makes them vulnerable.

Barrier beaches, a first defense against major storms, are also sought out for development and recreation. Decades of improper use have caused serious erosion problems along beaches. An increased greenhouse effect, caused by other pollution problems threatens rapid sea level rise — ultimately another threat to the coast.

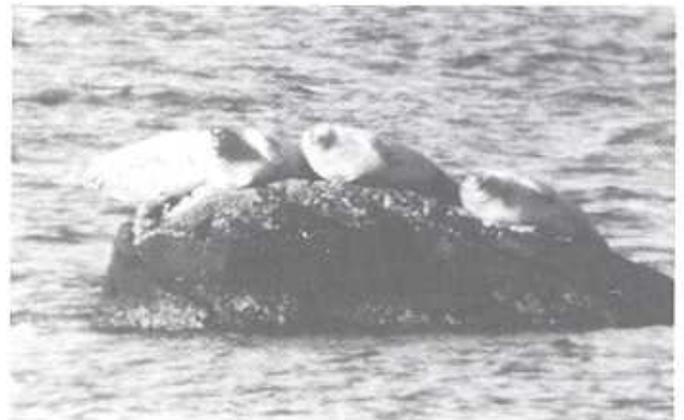
The National Oceanic and Atmospheric Administration (NOAA) has published a report on the varied methods states (including Rhode Island) are using to fight shoreline degradation. Management, at the state level, is emphasized as key.

In Rhode Island, coastal zone management is under the authority of the CRMC, a 17 member governing

board that must decide, in conjunction with local governing agencies, on all issues effecting the state's coastline. Management means setting restrictions and requirements on the use of a public resource, and trying to balance development with environmental concerns.

Development along the coastline is Rhode Island's biggest concern. The CRMC has worked to limit development in sensitive coastal areas, such as barrier beaches or near tidal ponds. Such properties, prized for their proximity to the ocean, are also located in extremely hazardous locations. In the event of a major storm, these buildings can be severely damaged, and can also cause considerable destruction. Stringent regulations now apply to building on the Rhode Island coast. For further information read the article on barrier beaches.

The CRMC provides hazards technical assistance for individuals living in coastal areas. This information can provide background about what to do in the event of a coastal storm. It also provides information regarding geologic processes, beach renourishment, local beach management planning, and other mitigation measures.



Harbor seals sun themselves on a convenient rock near North Kingstown.

A BEACH IS NOT JUST A BEACH

In Rhode Island, 82 percent of the State's beaches are designated as "undeveloped" or "moderately" developed areas by the CRMC, to help balance current development trends along the coast.

The CRMC has three categories of beaches: undeveloped, moderately developed and developed. Specific rules and regulations outline appropriate use for all three.

Moonstone Beach in South Kingstown, and East Beach, Charlestown, are undeveloped beaches. They are unspoiled, undeveloped stretches of coastal land to be left in their natural state.

Charlestown Beach is an example of a moderately developed barrier beach. Roads have been built, but no commercial development is permitted. Houses must adhere to strict regulations regarding building on the dune.

Narragansett Town Beach is a developed beach. Historically this coastal area has been used for a combination of residential and commercial purposes. Commercial establishments like the Narragansett Public Bath House, The Canonchet Club and the Dunes Club share use of this land with residential landowners and the public.

Building Rules and Restrictions

Installation or expansion of sewer lines, gas lines or utility lines is prohibited on barrier beaches, and all new construction is prohibited on undeveloped or moderately developed barrier beaches. When building does take place, it must be 75 feet landward of the dune crest. Building on the dune crest itself is prohibited.

Statewide, the CRMC employed setback from any coastal feature is 50 feet. Some areas known as *critical erosion areas*, have greater setbacks; no less than 30 times the calculated average annual erosion rate for less than four dwelling units, and not less than 60 times the calculated average annual erosion rate for more than 4 dwelling units. This is particularly important in areas like Matunuck Beach, where erosion has caused a great deal of damage to personal property.

To help those who live in coastal areas identify sites of critical erosion, CRMC has developed a computer program in conjunction with The Coastal Resources Center at the University of Rhode Island. This program can be used as a planning tool for evacuation in the event of sea level rise.

Should a hurricane occur and wind, storm surge, waves to other coastal processes result in a structure being damaged more than 50 percent, the owner must approach CRMC for a new assent. In some cases, the structure may have to be removed.

Erosion Control Devices Prohibited

Most of Rhode Island's waters are type I, or conservation area waters. They are used for fishing, shellfishing

and water recreation. Erosion control devices are another building feature strictly prohibited because of possible damage to fish, shellfish and plant populations.

Sediment catch basins, however, are allowed in certain high hazard areas, such as inside a stabilized breachway. These devices help lessen sediment transportation during a coastal storm.

Those seeking technical assistance for dune management, dune re-establishment, or hazards mitigation are encouraged to contact the CRMC at 277-2476.

NATIVE VEGETATION AND BUFFERS

Before there was a coastal zone management program the state, there were homes along the shoreline — many of whose owners had replaced native plantings in buffer and setback areas with green grass, exotic trees and shrubs unsuited to the land. Many of these introduced species are not salt resistant. Some have shallow root systems easily displaced in storms; all provide limited protection against erosion from wind and waves.

Homeowners who spend money clearing buffer areas and introducing plants not native to coastal areas are making a costly mistake. A homeowner's best protection from erosion during coastal storms is a stable coastal feature. This means the coastal area between the home and the shoreline is planted with hardy, native, vegetation, with special adaptations that allow for salt tolerance, and root structures that withstand high winds and waves. Special seed preparations are available at local nurseries which can help you begin this reconstruction process.

Many of these native trees, shrubs and grasses are also favored nesting sites for migrating birds and year-round feathered residents. Homeowners can increase birdlife on their property by planting intensive vegetative screens in buffer zones. These types of areas are attractive to snowy egrets and great blue herons.

Homeowners often object to plantings along the coast because they say it limits views and makes access to the shore difficult. Within CRMC guidelines, homeowners are allowed a four foot access path through the buffer area to the water. As for limiting views, several species of wildflowers, grasses and low-lying shrubs are native to coastal marshes and dune systems. And all of these plantings offer a special feature — *protection of your home and property from the high winds and waves of coastal storms.*

- Please note that any alterations to your property, within 200 feet of the coastline require a permit. Call 277-2476 and ask for a staff biologist for further information.

If you live along the coast, the following plantings are suitable for buffer and setback areas between your home and water. Consider planting a few this spring.

TREES

- | | |
|--------------|---------------------|
| Black Oak | Red Cedar |
| Black Cherry | Japanese Black Pine |
| Shadbush | Pitch Pine |

SHRUBS

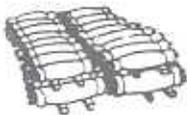
- | | |
|-----------------------|------------------|
| Bayberry | Wild (Fox) Grape |
| Salt-Spray Rose | Staghorn Sumac |
| Arrow-wood | Smooth Sumac |
| Tartarian Honeysuckle | Elderberry |
| Virginia Creeper | Gary Dogwood |

HERBACEOUS PLANTS AND GRASSES

- | | |
|------------------|-------------------------|
| Red Fescue | Rough-stemmed Goldenrod |
| Switch Grass | Seaside Goldenrod |
| Bermuda Grass | Queen Ann's Lace |
| Foxtail Barley | Evening Primrose |
| Tail Wheatgrass | Common Tansy |
| Savoryleaf Aster | Thistle |

THE FOLLOWING GUIDE CAN HELP ASSURE HEALTHY GROWTH OF NEW PLANTINGS

Care of Seedlings Until Planted



Seedlings should be planted immediately. If it is necessary to store moss-packed seedlings for more than 2 weeks, one pint of water per pkg. should be added. If clay-treated, do not add water to pkg. Packages must be separated to provide ventilation to prevent "heating". Separate packages with wood strips and store out of the wind in a shaded, cool (not freezing) location.

Care of Seedlings During Planting



When planting, roots must be kept moist until trees are in the ground. Do not carry seedlings in your hand exposed to the air and sun. Keep moss-packed seedlings in a container packed with wet moss or filled with thick muddy water. Cover clay-treated seedlings with wet burlap only.

Hand Planting



Insert bar at angle shown and push forward to upright position.



Remove bar and place seedling at correct depth.



Insert bar two inches toward planter from seedling.



Pull bar toward planter firming soil at bottom of roots.



Push bar forward from planter firming soil at top of roots.



Fill in last hole by stamping with heel.



Firm soil around seedling with feet.

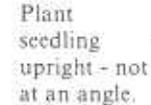


Test planting by pulling lightly on seedling.



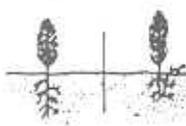
Right Wrong

Don't expose roots to air during freeze or plant in frozen ground.

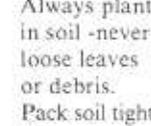


Right Wrong

Plant seedling upright - not at an angle.



Do not bend roots so that they grow upwards out of the ground.

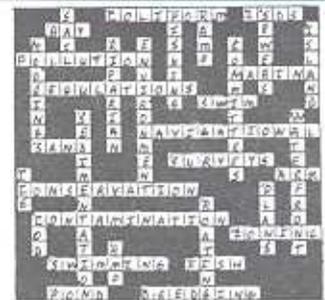


Always plant in soil - never loose leaves or debris. Pack soil tightly.

Planting Bare-Rooted Seedlings

Source: Virginia Soil and Water Conservation Commission 1980, Virginia Erosion and Sediment Control Handbook.

ANSWERS TO THE HARBOR MANAGEMENT CROSSWORD PUZZLE



Those wishing to comment on articles in *Coastal Features* are invited to do so. Please send to:

Coastal Features
 Coastal Resources Management Council
 Oliver H. Stedman Government Center
 Tower Hill Road
 Wakefield, RI 02879

Coastal Features is a publication of the
 Rhode Island Coastal Resources Management Council.
 Telephone: (401) 277-2476

RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL

MEMBERS

George N. DiMuro, Chairman
John A. Lyons
James Beattie, DEM
Samuel Snow
Charles "Ted" Wright
Representative George Caruolo
Senator Ralph E. Walsh
Roger D. Medbury
Richard H. James

George L. Sisson, Jr., Vice Chairman
Paul T. Hicks
Representative Edward J. Smith
Kathryn G. Owen
Michael Bernstein
H. Denman Scott, Dept. of Health
Patrick G. Kirby II
Senator Paul P. Pederzani III

Alan J. Goldman, Esq. - Legal Counsel

Grover J. Fugate - Executive Director

If you would like to be placed on our mailing list contact the CRMC office at 401-277-2477

The preparation of this newsletter is financed in part by a planning grant from the National Oceanic and Atmospheric Administration, under the provisions of the Coastal Zone Management Act of 1972 (Public Law 92-583), through the Integrated Grant Administration Program administered as part of Federal Regional Council Grant FRC-IGA-01-07.

COASTAL FEATURES

JANUARY 1991

The Coastal Resources Management Council's Report on Current Events

George N. DiMuro, Chairman
Grover J. Fugate, Executive Director

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
Tower Hill Road
Wakefield, RI 02879

BULK RATE
U.S. Postage
PAID
Providence, RI 02904
Permit No. 1286