3. Coastal Shoreline Protection Measures (Sections 3.1 - 3.1.3)

Coastal shorelines, those areas where the water meets the land, are inherently dynamic environments. A given shoreline may be stable for many decades, erode significantly in one season, and then remain stable in its new configuration for many decades.[[1]](#endnote-2) Shorelines are shaped over time by winds, waves, tides and currents, as well as human activities. These forces interact to move sand, rock and other types of beach sediment from one place to another, causing shorelines to recede in one area and accrete, or expand, in another - a process called littoral transport, or “littoral drift.”

Chronic erosion occurs in locations where littoral sediment supplies are insufficient to balance wave and current forces, or in areas where sediment transport is blocked by erosion control structures such as jetties, groins, breakwaters and bulkheads. Chronic or excessive erosion can cause water pollution and water quality degradation as well as damage to vegetation, natural coastal features and built structures.

Flooding occurs when strong winds and/or high tides drive water inland over shoreline protective structures, beaches, wetlands and/or through inlets, channels, and tributaries. In addition, heavy precipitation events can cause river levels to rise in inland areas and travel downstream, adding to the rise in coastal water level. Increasing sea levels will result in more frequent and extensive storm flooding even on days with calmer winds or tides. Over the long term, this will mean permanent inundation in some areas. (See *Chapter Four: Management of Floodplain Development*).

Building structures too close to the shore places them at greater risk to erosion and flooding. This often leads to costly and problematic erosion control and shoreline armoring measures, placing undue economic and environmental strain on communities. Zoning amendments that establish setbacks, special use permit requirements and other local regulatory measures can reduce the risk of damage to structures and preserve natural features critical to the resilience of coastal systems. While such measures do not eliminate risk due to erosion and flooding, they can provide a measure of safety and an opportunity for other adaptive measures in the future.

**Coastal Ecosystems and Natural Protective Features**

Coastal ecosystems are comprised of natural features such as dunes, bluffs, beaches, wetlands and nearshore areas. Article 34 of Environmental Conservation Law, known as the Coastal Erosion Hazard Areas (CEHA) Law, refers to these features as “natural protective features” because of the natural erosion, storm and flood protection they can provide to coastal communities.

* Beaches protect inland areas from flooding and erosion by dissipating wave energy that would otherwise be expended against the toe or face of bluffs and dunes or that would send storm waters spilling onto upland property.
* Beaches and dunes act as a reservoir of sand and other unconsolidated sediments that wash along the shoreline and form protective offshore sandbars and shoals that dissipate offshore wave energy.[[2]](#endnote-3)
* Wide beaches with a gradual slope dissipate wave energy better than beaches that are steep or narrow.
* Dunes or bluffs located landward of a beach provide an additional layer of protection to uplands by absorbing wave energy.
* Coastal wetlands serve as a buffer to upland areas and provide flood protection and erosion control by absorbing flood waters and wave energy. (See *Chapter Two: Wetland and Watercourse Protection Measures*).

In addition to the functions listed above, natural protective features provide enhanced water quality, fish and wildlife habitat, and recreational opportunities. In developed areas or where development is desirable, zoning amendments and other local regulatory measures can help preserve natural protective features and their many benefits. Undeveloped areas with intact natural protective features and extensive fish and wildlife habitat and/or public recreation areas may be best protected through measures such as conservation area designation, conservation easements, and/or conservation zoning (See *Chapter One: Basic Land Use Tools for Resiliency*).

**Coastal Erosion Hazard Areas (CEHA) Law**

Article 34 of Environmental Conservation Law, known as the Coastal Erosion Hazard Areas (CEHA) Law, seeks to protect New York’s built and natural shoreline environment from coastal hazards such as erosion and flooding. The CEHA law distinguishes between “natural protective feature areas” or NPFAs - areas that possess natural protective features including nearshore areas, beaches, dunes, and bluffs - and “structural hazard areas.” The phrase “structural hazard areas” in this case refers to areas that are located landward of natural protective feature areas and that are receding at a long-term average annual recession rate of one foot or more per year. NPFAs are delineated on CEHA maps. Only beaches, bluffs, dunes, and nearshore areas are mapped and regulated.

Human activities such as development or modification of beaches, dunes, or bluffs can decrease, or completely remove the ability of these natural protective features to reduce erosion. CEHA restricts the siting of shoreline structures in areas designated under Article 34 to maintain the integrity of natural protective features and to reduce risk to shoreline communities. As coastal erosion increases and water levels rise, communities may wish to implement similar restrictions for non-CEHA shorelines using the authority granted by the State zoning enabling statutes, the New York State Constitution Article IX, or the Municipal Home Rule Law §10. Additional information on coastal erosion protection measures for both CEHA and non-CEHA areas is provided in sections 3.1-3.1.3 of this chapter.

RESOURCES

*Coastal Risk Reduction and Resilience*, USACE, September 2013[[3]](#endnote-4)

Scenic Hudson, *Protecting the Pathways: A Climate Change Adaptation Framework for Hudson River Estuary Tidal Wetlands*. May 2016[[4]](#endnote-5)

The Nature Conservancy, Coastal Resilience[[5]](#endnote-6)

New York State Department of Environmental Conservation, Coastal Management[[6]](#endnote-7)

3.1 Coastal Erosion

Coastlines are eroding along New York’s Great Lakes, Long Island Sound, Hudson River, and Atlantic coast. Coastal erosion is a naturally occurring process that can place coastal development and shoreline environments at risk. While municipal zoning laws can help reduce and manage coastal erosion, the State has statutory jurisdiction over the management of the most highly erodible coastal environments. State authority to regulate these areas is contained in Article 34 of the Environmental Conservation Law and exercised through the Coastal Erosion Hazard Areas (CEHA) Permit Program.[[7]](#endnote-8)

Article 34 of Environmental Conservation Law empowers the New York State Department of Environmental Conservation (NYSDEC) to identify, map, and regulate designated Coastal Erosion Hazard Areas (CEHAs). These are areas that the NYSDEC has identified as likely to erode within a 40-year period or that serve as natural protection against erosion or flooding. The purpose of the law is to minimize or prevent damage to these areas, including built-structures and natural resources, and to protect human life.

CEHAs are located along the shores of the Atlantic Ocean, Long Island Sound, Lake Erie and Lake Ontario. All CEHAs have mapped “Natural Protective Feature Areas” (NPFA) where human activities are limited or prohibited in order to preserve coastal ecosystems and the natural erosion and flood protection they provide. CEHAs that have areas with a long-term erosion rate greater than one foot per year also have mapped “Structural Hazard Areas” (SHA) where new construction is limited or prohibited.

Erosion protection or control structures are allowed within CEHAs if the project meets permitting requirements, but the preference of the State is to see non-structural or nature-based solutions instead of structural measures. Permits will not be issued for structures that would cause negative impacts such as increased erosion.

|  |  |  |
| --- | --- | --- |
|  | Examples |  |
| Non-Structural Solutions | Nature-Based Solutions | Shoreline Hardening Structures |
| Shoreline Retreat  Building Elevation | Vegetative Plantings  Re-grading  Geogrid | Rock Structures  Concrete Walls  Sandbags |

See the NYSDEC *Coastal Management* web page[[8]](#endnote-9) and sections 3.4-3.4.2 of this chapter for more detailed information on shoreline hardening and alternative shoreline management measures.

**Local Regulation of Coastal Erosion Hazard Areas**

While NYSDEC has the authority to regulate CEHAs under Article 34, cities, towns and villages with mapped CEHAs may request NYSDEC assign that authority to them. If the authority is delegated, the municipality may review applications, issue permits, and conduct enforcement in these areas as part of a program to regulate its CEHA areas. These municipalities must submit to DEC a certified copy of the erosion management local law or ordinance and all other local laws, ordinances, zoning regulations, subdivision and site plan approval regulations, or any other applications of police power that are elements of the local program and meet the additional requirements of 6 NYCRR 505.16(b)(1). The municipality must also submit an annual assessment of its program to the NYSDEC Coastal Erosion Management Program. NYSDEC provides a model local CEHA law for municipalities to adapt or modify that has been certified as meeting the minimum standards of section 505.17 of 6 NYCRR Part 500. [[9]](#endnote-10) See Section 3.1.1 of this chapter.

Out of 85 coastal municipalities that fall under CEHA jurisdiction, presently 37 municipalities have been delegated authority to administer their own CEHA.Twenty-four of the municipally-managed CEHA programs are in the marine area and 11 are along the freshwater coast. NYSDEC provides a list of communities that administer their own CEHA law on the NYSDEC website.[[10]](#endnote-11)

Municipalities that have coastal areas which are subject to erosion but are not mapped CEHAs are encouraged to adopt or amend local laws that address the increased risk from sea level rise, storm surge, and coastal flooding (Section 3.1.3).

|  |  |
| --- | --- |
| TOOL | DESCRIPTION |
| Coastal Erosion Hazard Area Management (Section 3.1.1) | This model local law from NYSDEC meets the minimum standards established for municipal assumption of responsibility for CEHA programs. It was last updated in 2009. |
| Alternative Coastal Erosion Hazard Area Management Model (Section 3.1.2) | An example of local refinement of the NYSDEC model for locally-delegated CEHA programs |
| Shoreline Protection Outside of Coastal Erosion Hazard Areas (Section 3.1.3) | Zoning language that can be used to regulate land use and development in areas with eroding coastlines that are not regulated by state law. |

Communities that proactively reduce and manage erosion can lower their costs of flood insurance. The National Flood Insurance Program (NFIP) Community Rating System (CRS) is a FEMA program that provides discounts for communities that take measures that are beyond the minimum requirements of the NFIP. Flood insurance policies for structures within communities with over 500 CRS points receive a five percent discount on each insurance policy premium, and additional discounts for a lower CRS class that is achieved in part through accumulation of CRS points. A variety of credits are available pertaining to areas subject to erosion.

RESOURCES

*How are coastal areas regulated by the CEHA Permit Program?* NYS Department of Environmental Conservation, Coastal Management.[[11]](#endnote-12)

*National Flood Insurance Program, Community Rating System: CRS Credit for Management of Coastal Erosion Hazards.* (2006). FEMA. [[12]](#endnote-13)

3.1.1 Coastal Erosion Hazard Area Management

In order for a municipality to receive the authority to regulate erosion hazard areas from the New York State Department of Environmental Conservation (NYSDEC) it must adopt an ordinance or local law that meets required standards and is certified by NYSDEC. NYSDEC continues oversight of a local CEHA program through review of an annual assessment form submitted by the municipality and through periodic community assessment visits.

Communities that have been delegated authority to administer CEHA programs must use CEHA maps developed by NYSDEC. These maps were created in the late 1980’s and may be updated in the future. For more information on CEHA updates, please visit the NYSDEC web page on the CEHA map revision process.[[13]](#endnote-14)

The model local law below was provided by NYSDEC and meets minimum standards established by the Coastal Erosion Management Regulations in 6 NYCRR Part 505. Before assuming responsibility for management of a CEHA area within the municipality, the municipality must submit its law to NYSDEC for certification. An earlier version of the model was prepared by the St. Lawrence/Eastern Ontario Commission to facilitate municipal participation in enforcing and administering CEHA.

USAGE

Adopt as a standalone provision in the municipal code, or as a new article within the municipal zoning code.

LANGUAGE

Article X. Coastal Erosion Hazard Area Management

1. INTRODUCTON

1.1 Enactment. Pursuant to the provisions of Article 34 of the New York State Environmental Conservation Law and Section 10 of the Municipal Home Rule Law, the [*Town, Village, City*] of \_\_\_\_\_\_\_\_\_\_\_, County of\_\_\_\_\_\_\_\_\_\_\_\_\_, State of New York, hereby enacts by local law # \_\_\_of 19\_\_, this local law.

1.2 Title. This local law shall be known and may be cited as the *[Town, Village, City]* of \_\_\_\_\_\_\_\_ Coastal Erosion Hazard Area Law.

1.3 Effective Date. This local law shall take effect twenty (20) calendar days from \_\_\_, which is the date of this local law's adoption and filing pursuant to Section 27 of the Municipal Home Rule Law, or the date of filing the official maps, whichever is later.

1.4 Purpose. The *[Town, Village, City]* of \_\_\_\_\_\_\_\_\_\_\_\_\_ hereby assumes the responsibility and authority to implement and administer a coastal erosion management program within its jurisdiction pursuant to Article 34 of New York State Environmental Conservation Law. In addition, it is the purpose of this local law to:

a. Establish standards and procedures for minimizing and preventing damage to structures from coastal flooding and erosion and to protect natural protective features and other natural resources.

b. Regulate in coastal areas subject to coastal flooding and erosion, land use and development activities so as to minimize or prevent damage or destruction to manmade property, natural protective features, other natural resources, and to protect human life.

c. Regulate new construction or placement of structures in order to place them a safe distance from areas of active erosion and the impacts of coastal storms to ensure that these structures are not prematurely destroyed or damaged due to improper siting, as well as to prevent damage to natural protective features and other natural resources.

d. Restrict public investment in services, facilities, or activities which are likely to encourage new permanent development in erosion hazard areas.

e. Regulate the construction of erosion protection structures in coastal areas subject to serious erosion to assure that when the construction of erosion protection structures is justified, their construction and operation will minimize or prevent damage or destruction to man-made property, private and public property, natural protective features, and other natural resources.

1.5 Findings. The *[Town, Village, City]* of \_\_\_\_\_\_\_\_\_ finds that the coastal erosion hazard area:

a. Is prone to erosion from action of [*Lake Ontario, other*]. Such erosion may be caused by the action of waves, currents running along the shore, and wind-driven water and ice. Such areas are also prone to erosion caused by the wind, runoff of rain water along the surface of the land, or groundwater seepage, as well as by human activities such as construction, navigation and certain forms of recreation.

b. Experiences coastal erosion which causes extensive damage to publicly and privately-owned property and to natural resources as well as endangering human lives. When this occurs, individuals and private businesses suffer significant economic losses, as do the *[Town, Village, City]* and the State economies, either directly through property damage or indirectly through loss of economic return. Large public expenditures may also be necessitated for the removal of debris and damaged structures and replacement of essential public facilities and services.

c. Experiences erosion-related problems that are often contributed to by man's building without considering the potential for damage to property, by undertaking activities which destroy natural protective features such as dunes or vegetation, by building structures intended for erosion prevention which may exacerbate erosion conditions on adjacent or nearby property, and by water action produced by wakes from boats.

d. Is the subject of programs which foster erosion protection structures, either with private or public funds, which are costly, often only partially effective over time, and may even be harmful to adjacent or nearby properties. In some sections of the *[Town, Village, City]*, major erosion protection structures of great length would be required to effectively reduce future damages due to erosion.

1.6 Definitions

The following terms used in this local law have the meaning indicated, unless the context clearly requires otherwise.

a. ADMINISTRATOR--The local official responsible for administering and enforcing this local law. The powers and duties of this position are more fully described in Section 5.3.

b. BEACH--The zone of unconsolidated earth that extends landward from the mean low water line to the waterward toe of a dune or bluff whichever is most waterward. Where no dune or bluff exists landward of a beach, the landward limit of a beach is 100 feet landward from the place where there is a marked change in material or physiographic form or from the line or permanent vegetation, whichever is most waterward. Shorelands subject to seasonal or more frequent overwash or inundation are considered to be beaches.

c. BLUFF--Any bank or cliff with a precipitous or steeply sloped face adjoining a beach or a body of water. The waterward limit of a bluff is the landward limit of its waterward natural protective feature. Where no beach is present, the waterward limit of a bluff is mean low water. The landward limit is 25 feet landward of the receding edge or, in those cases where there is no discernible line of' active erosion, 25 feet landward of the point of inflection on the top of the bluff. (The point of inflection is that point along the top of the bluff where the trend of the land slope changes to begin its descent to the shoreline).

d. COASTAL EROSION HAZARD AREA MAP--The final map and any amendments thereof issued by the Commissioner of the New York State Department of Environmental Conservation, which delineates boundaries of Coastal Erosion Hazard Areas subject to regulation under this law.

e. COASTLINE AND COASTAL WATERS--The lands adjacent to the (Town's, Village's, City's) coastal waters is the coastline. Coastal waters are the Atlantic Ocean, the Long Island Sound, Lake Erie, Lake Ontario, the St. Lawrence River, the Hudson River, the Niagara River, and their connecting water bodies, bays, harbors, shallows, and marshes.

f. DEBRIS LINE--A linear accumulation of waterborne debris deposited on a beach by storm induced high water or by wave action.

g. DUNE--A ridge or hill of loose, windblown, or artificially placed earth the principal component of which is sand.

h. EROSION--The loss or displacement of land along the coastline due to the action of waves, currents, wind-driven water, waterborne ice, or other impacts of storms. It also means the loss or displacement of land due to the action of wind, runoff of surface waters, or ground waters, or groundwater seepage.

i. EROSION HAZARD AREA--An area of the coastline which is a structural hazard area, or a natural protective feature area.

j. EROSION PROTECTION STRUCTURE--A structure specifically designed to reduce or prevent erosion such as a groin, jetty, revetment. breakwater, or artificial beach nourishment project.

k. EXISTING STRUCTURE--A structure and appurtenances in existence or one where construction has commenced or one where construction has not begun but for which a building permit has been issued prior to \_\_\_\_\_\_\_\_\_\_\_\_\_, 19\_, which is the effective date of this local law.

I. GRADING--A redistribution of sand or other unconsolidated earth to effect a change in profile.

m. MAJOR ADDITION--An addition to a structure resulting in a 25 percent or greater increase in the ground area coverage of the structure other than an erosion protection structure or a pier, dock, or wharf. The increase will be calculated as the ground area coverage to be added, including any additions previously constructed under a Coastal Erosion Management Permit, divided by the ground area coverage of the "existing structure" as defined in EXISTING STRUCTURE.

n. MEAN LOW WATER--The approximate average low water level for a given body of water at a given location, determined by reference to hydrological information concerning water levels or other appropriate tests.

o. MOVABLE STRUCTURE--A structure designed and constructed to be readily relocated with minimum disruption of the intended use. Mobile homes and structures built on skids or piles and not having a permanent foundation are examples of movable structures.

p. NATURAL PROTECTIVE FEATURE--A nearshore area, beach, bluff, primary dune, secondary dune, or marsh, and its vegetation.

q. NATURAL PROTECTIVE FEATURE AREA--A land and/or water area containing natural protective features, the alteration of which might reduce or destroy the protection afforded other lands against erosion or high water, or lower the reserve of sand or other natural materials available to replenish storm losses through natural processes.

r. NEARSHORE AREA--Those lands under water beginning at the mean low water line and extending waterward in a direction perpendicular to the shoreline to a point where mean low water depth is 15 feet, or to a horizontal distance of 1,000 feet from the mean low water line, whichever is greater.

s. NORMAL MAINTENANCE--Periodic replacement or repair of same-kind structural elements or protective coatings which do not change the size, design or function of a functioning structure. A functioning structure is one which is fully performing as originally designed at the time that normal maintenance is scheduled to begin. Normal maintenance of a structure does not require a Coastal Erosion Management Permit.

t. PERSON--Any individual, public or private corporation, political subdivision, government agency, public improvement district, partnership, association, firm, trust, estate, or any other legal entity whatsoever.

u. PRIMARY DUNE--The most waterward major dune where there are two or more parallel dunes within a coastal area. Where there is only one dune present, it is the primary one. Occasionally one or more relatively small dune formations exist waterward of the primary dune. These smaller formations will be considered to be part of the primary dune for the purposes of this local law. The waterward limit of a primary dune is the landward limit of its fronting beach. The landward limit of the primary dune is 25 feet landward of its landward toe.

v. RECEDING EDGE--The most landward line of active erosion, or in cases where there is no discernible line of active erosion, it is the most waterward line of permanent vegetation.

w. RECESSION RATE--The rate, expressed in feet per year, at which an eroding shoreline moves landward.

x. REGULATED ACTIVITY--The construction, modification, restoration or placement of a structure, or major addition to a structure, or any action or use of land which materially alters the condition of land, including grading, excavating, dumping, mining, dredging, filling, or other disturbance of soil.

y. RESTORATION--The reconstruction without modification of a structure, the cost of which equals or exceeds 50 percent of the estimated full replacement cost of the structure at the time of restoration. Modifications, however, may be allowed if they do not exceed pre-existing size limits and are intended to mitigate impacts to natural protective features and other natural resources.

z. SECONDARY DUNE--The major dune immediately landward of the primary dune. The waterward limit of a secondary dune is the landward limit of its fronting primary dune. The landward limit of a secondary dune is 25 feet landward of its landward toe.

aa. SIGNIFICANT FISH AND WILDLIFE HABITAT--Those habitats which: are essential to the survival of a large portion of a particular fish or wildlife population; support rare or endangered species; are found at a very low frequency within a geographic area; support fish or wildlife populations having significant commercial or recreational value; or would be difficult or impossible to replace.

bb. STRUCTURAL HAZARD AREA--Those shorelands located landward of natural protective features and having shorelines receding at a long term average recession rate of one foot or more per year. The inland boundary of a structural hazard area is calculated by starting at the landward limit of the fronting natural protective feature and measuring along a line perpendicular to the shoreline a horizontal distance landward which is 40 times the long-term average annual recession rate.

cc. STRUCTURE--Any object constructed, installed or placed in, on, or under land or water including, but not limited to: a building; permanent shed; deck; in-ground and above-ground pool; garage; mobile home; road; public service distribution, transmission, or collection system; tanks; docks; piers; wharf; groins; jetties; seawalls; bulkheads; breakwaters; revetments; artificial beach nourishment; or any addition to or alteration of the same.

dd. TOE--The lowest surface point on a slope face of a dune or bluff.

ee. UNREGULATED ACTIVITY--Excepted activities which are not regulated by this local law include but are not limited to: elevated walkways or stairways constructed solely for pedestrian use and built by an individual property owner for the limited purpose of providing non-commercial access to the beach; docks, piers, wharves, or structures built on floats, columns, open timber piles, or other similar openwork supports with a top surface area of less than 200 square feet, or which are removed in the fall of each year; normal beach grooming or clean-up; maintenance of structures when normal and customary and/or in compliance with an approved maintenance program; planting vegetation and sand fencing so as to stabilize or entrap sand in primary dune and secondary dune areas, in order to maintain or increase the height and width of dunes; and routine agricultural operations including cultivation or harvesting, and the implementation of practices recommended in a soil and water conservation plan as defined in Section 3(12) of the Soil and Water Conservation Districts Law provided, however, that agricultural operations and implementation of practices will not be construed to include any activity that involves the construction or placement of a structure.

ff. VEGETATION--Plant life capable of surviving and successfully reproducing in the area or region and which is compatible with the environment of the coastal erosion hazard area.

2. REGULATIONS

2.1 Areas. The Coastal Erosion Hazard Area is hereby established to classify land and water areas within the *[Town, Village, City]* of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, based upon shoreline recession rates or the location of natural protective features. The boundaries of the Area are established on the final map prepared by the New York State Department of Environmental Conservation under Section 34-0104 of the New York State Environmental Conservation Law and entitled, "Coastal Erosion Hazard Area Map of the *[Town, Village, City]* of \_\_\_\_\_\_\_\_\_\_", including all amendments made thereto by the Commissioner of the New York State Department of Environmental Conservation pursuant to Section 34-0104 of the New York State Environmental Conservation Law.

2.2 Requirements. No person may engage in any regulated activity in an Erosion Hazard Area as depicted on the Coastal Erosion Hazard Areas Map of the *[Town, Village, City]* of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, as amended, without first obtaining a Coastal Erosion Management Permit. No Coastal Erosion Management Permit is required for unregulated activities.

2.3 General Standards. A Coastal Erosion Management Permit will be issued only with a finding by the Administrator that the proposed regulated activity:

a. Is reasonable and necessary, considering reasonable alternatives to the proposed activity and the extent to which the proposed activity requires a shoreline location.

b. Is not likely to cause a measurable increase in erosion at the proposed site and at other locations.

c. Prevents, if possible, or minimizes adverse effects on natural protective features and their functions and protective values, existing erosion protection structures, and natural resources.

2.4 Structural Hazard Area Restrictions. The following restrictions apply to regulated activities within Structural Hazard Areas:

a. A Coastal Erosion Management Permit is required for the installation of public service distribution, transmission, or collection systems for gas, electricity, water, or wastewater. Systems installed along the shoreline must be located landward of the shoreline structures.

b. The construction of non-movable structures or placement of major non-movable additions to an existing structure is prohibited.

c. Permanent foundations may not be attached to movable structures, and any temporary foundations are to be removed at the time the structure is moved. Below grade footings will be allowed if satisfactory provisions are made for their removal.

d. No movable structure may be located closer to the landward limit of a bluff than 25 feet.

e. No movable structure may be placed or constructed such that according to accepted engineering practice, its weight places excessive ground loading on a bluff.

f. Plans for landward relocation of movable structures must be included with each application for a permit. Movable structures which have been located within a Structural Hazard Area pursuant to a Coastal Erosion Management Permit must be removed before any part of the structure is within 10 feet of the receding edge. The last owner of record, as shown on the latest assessment roll, is responsible for removing that structure and its foundation, unless a Removal Agreement was attached to the original Coastal Erosion Management Permit.

With the attachment of a Removal Agreement to the Coastal Erosion Management Permit, the landowner or the signatory is responsible for the landward relocation of movable structures. Removal Agreements may be made when the last owner of record and the owner of the structure are different with the approval of the *[Town, Village, City]* at the time the permit is issued.

g. Debris from structural damage which may occur as a result of sudden unanticipated bluff edge failure, dune migration, or wave or ice action must be removed within sixty (60) days of the damaging event.

h. Any grading, excavation, or other soil disturbance conducted within a Structural Hazard Area must not direct surface water runoff over a bluff face.

2.5 Nearshore Area Restrictions. Nearshore areas dissipate a substantial amount of wave energy before it is expended on beaches, bluffs, or dunes by causing waves to collapse or break.

Nearshore areas also function as reservoirs of sand, gravel, and other unconsolidated material for beaches. Sandbars, which are located in nearshore areas, control the orientation of incoming waves and promote the development of ice cap formations which help protect shorelines during winter storms. The roots of aquatic vegetation in nearshore areas bind fine grained silts, clays, and organic matter to form a fairly cohesive bottom that resists erosion.

The following restrictions apply to regulated activities in nearshore areas:

a. All development is prohibited in nearshore areas unless specifically provided for by

this local law.

b. Excavating, grading, mining, or dredging which diminishes the erosion protection afforded by nearshore areas is prohibited, except construction or maintenance of navigation channels, bypassing sand around natural and man-made obstructions and artificial beach nourishment, all of which require a Coastal Erosion Management Permit.

c. Clean sand or gravel or an equivalent or slightly larger grain size is the only material which may be deposited within nearshore areas. Any deposition will require a Coastal Erosion Management Permit.

2.6 Beach Area Restrictions. Beaches buffer shorelands from erosion by absorbing wave energy that otherwise would be expended on the toes of bluffs or dunes. Beaches that are high and wide protect shorelands from erosion more effectively than beaches that are low or narrow. Beaches also act as reservoirs of sand or other unconsolidated material for longshore littoral transport and offshore sandbar and shoal formation.

The following restrictions apply to regulated activities in beach areas:

a. All development is prohibited on beaches unless specifically provided for by this local law.

b. Excavating, grading, or mining which diminishes the erosion protection afforded by beaches is prohibited.

c. Clean sand or gravel of an equivalent or slightly larger grain size is the only material which may be deposited within bench areas. Any deposition will require a Coastal Erosion Management Permit which may be issued only for expansion or stabilization of beaches.

d. Active bird nesting and breeding areas must not be disturbed unless such disturbance is pursuant to a specific wildlife management activity approved in writing by the New York State Department of Environmental Conservation.

e. [*Location for insertion of optional section allowing restoration of existing structures, damaged by non-erosion or flooding related causes, without a permit. See Addendum for specific language*.]

2.7 Dune Area Restrictions. Dunes prevent overtopping and store sand for coastal processes. High, vegetated dunes provide a greater degree of protection than low, unvegetated ones. Dunes are of the greatest protective value during conditions of storm induced high water. Because dunes often protect some of the most biologically productive areas as well as developed coastal areas, their protective value is especially great. The key to maintaining a stable dune system is the establishment and maintenance of beach grass or other vegetation on the dunes and assurance of a supply of nourishment sand to the dunes.

The following restrictions apply to regulated activities in dune areas:

a. All activities and development in dune areas are prohibited unless specifically provided for by this local law.

b. In primary dune areas:

(1) Excavating, grading, or mining of primary dunes is prohibited.

(2) Clean sand of a compatible type and size is the only material which may be deposited. Any deposition requires a Coastal Erosion Management Permit.

(3) All depositions must be vegetatively stabilized using species tolerant of the conditions at the site and must be placed so as to restore or increase the size of a dune or dune area.

(4) Active bird nesting and breeding areas must not be disturbed unless such disturbance is pursuant to a specific wildlife management activity approved in writing by the NYS Department of Environmental Conservation.

(5) Non-major additions to existing structures are allowed on primary dunes pursuant to a Coastal Erosion Management Permit and subject to permit conditions concerning the location, design, and potential impacts of the structure on the primary dune.

(6) Stone revetments or other erosion protection structures compatible with primary dunes will only be allowed at the waterward toe of primary dunes, and must not interfere with the exchange of sand between primary dunes and their fronting beaches.

c. In secondary dune areas:

(1) All depositions must be of clean sand of a compatible type and size, and all grading must be performed so as to increase the size of, or restore, a dune or former dune area.

(2) Excavating, grading, or mining must not diminish the erosion protection afforded by them.

(3) Non-major additions to existing structures are allowed on secondary dunes pursuant to a coastal erosion management permit.

(4) Permitted construction, reconstruction, restoration, or modifications must be built on adequately anchored pilings such that at least three feet of open space exists between the floor joists and the surface of the secondary dune; and the permitted activity must leave the space below the lowest horizontal structural members free of obstructions.

d. The restrictions of Section 2.10, Traffic Control, apply to dune areas.

e. [*Location for insertion of optional section allowing restoration of existing structures, damaged by non-erosion or flooding related causes, without a permit. See Addendum for specific language*.]

2.8 Bluff Area Restrictions. Bluffs protect shorelands and coastal development by absorbing the often destructive energy of open water. Bluffs are a source of depositional material for beaches and other unconsolidated natural protective features.

a. The following activities are prohibited on bluffs:

(1) All development unless specifically allowed by Subdivision 2.8 of this local law.

(2) Excavating or mining except when in conjunction with conditions stated in a Coastal Erosion Management Permit issued for minor alterations in construction of an erosion protection structure or for provision of shoreline access.

(3) The restrictions of Section 2.10, Traffic Control, apply to bluffs.

(4) Active bird nesting and breeding areas must not be disturbed unless such disturbance is pursuant to a specific wildlife management activity approved in writing by the New York State Department of Environmental Conservation.

(5) Soil disturbance that directs surface water runoff over a bluff face.

b. Activities specifically allowed under this Subdivision are:

(1) Minor alteration of a bluff done in accordance with conditions stated in a Coastal Erosion Management Permit issued for new construction, modification or restoration of an erosion protection structure.

(2) Bluff cuts done in accordance with conditions stated in a Coastal Erosion Management Permit issued for the provision of shoreline access. where:

(a) Cut is made in a direction perpendicular to the shoreline.

(b) Ramp slope may not exceed 1:6.

(c) Side slopes may not exceed 1:3 unless terraced or otherwise structurally stabilized.

(d) Side slopes and other disturbed non-roadway areas must be stabilized

with vegetation or other approved physical means.

(e) Completed roadway must be stabilized and drainage provided for.

(3) New construction, modification or restoration of walkways or stairways done in accordance with conditions of a Coastal Erosion Management Permit.

(4) Non-major additions to existing structures may be allowed on bluffs pursuant to a Coastal Erosion Management Permit.

(5) [*Location for insertion of optional section allowing restoration of existing structures, damaged by non-erosion or flooding related causes, without a permit. See Addendum for specific language*.]

2.9 Erosion Protection Structure Requirements. The following requirements apply to the construction, modification, or restoration of erosion protection structures:

a. The construction, modification, or restoration of erosion protection structures must:

(1) Not be likely to cause a measurable increase in erosion at the development site

or at other locations.

(2) Minimize, and if possible, prevent adverse effects upon natural protective features, existing erosion protection structures, and natural resources such as significant fish and wildlife habitats.

b. All erosion protection structures must be designed and constructed according to generally accepted engineering principles which have demonstrated success, or where sufficient data are not currently available, a likelihood of success in controlling long-term erosion. The protective measures must have a reasonable probability of controlling erosion on the immediate site for at least 30 years.

c. All materials used in such structures must be durable and capable of withstanding inundation, wave impacts, weathering, and other effects of storm conditions for a minimum of 30 years. Individual component materials may have a working life of less than 30 years only when a maintenance program ensures that they will be regularly maintained and replaced as necessary to attain the required 30 years of erosion protection.

d. A long-term maintenance program must be included with every permit application of construction, modification, or restoration of an erosion protection structure. The maintenance program must include specifications for normal maintenance of degradable materials. To assure compliance with the proposed maintenance programs, a bond may be required.

2.10 Traffic Control. Motorized and non-motorized traffic must comply with the following restrictions:

a. Motor vehicles must not travel on vegetation, must operate waterward of the debris line, and when no debris line exists must operate waterward of the waterward toe of the primary dune or bluff.

b. Motor vehicle traffic is prohibited on primary dunes, except for officially designated crossing areas, and on bluffs.

c. Pedestrian passage across primary dunes must utilize elevated walkways and stairways or other specially designed dune crossing structures.

3. EMERGENCY ACTIVITIES

3.1 Applicability. For the purposes of this section, emergency activities are those proposed actions designed to provide structural support to buildings and structures that have incurred or are in imminent peril of incurring structural damage or failure, and only where such failed buildings or structures would exacerbate erosion and increase scouring, battering, scraping action or damage to other buildings, structures and man-made protective features. Proposed actions must prevent, if possible, or minimize damage to natural protective features and other natural resources.

3.2 Notification to Administrator. Prior to the commencement of any emergency activity, the Administrator must be notified and must determine whether to grant approval pursuant to the provisions of this section. If circumstances warrant immediate action by a state or local agency and prior notice to the Administrator is not possible, then the Administrator shall be notified by that agency within 24 hours after commencement of the activity and must subsequently respond. The Administrator must always be notified in advance before any emergency activity is undertaken by any non-governmental entity. Notifications may be by certified mail, telegram, mailgram, facsimile, or other written form of communication.

a. A notification shall include the following information:

(1) A description of the proposed action and the manner in which it is to be undertaken.

(2) Location map and plan of the proposed action.

(3) Reasons why the situation is an emergency.

b. Prior to issuing an emergency authorization, the Administrator shall:

(1) Make a finding of emergency stating why the immediate action is needed and the consequences if the action is not immediately taken.

(2) Determine that the building or structure is structurally unsound or in imminent

peril of structural failure of harm if no remedial measures are undertaken. The Administrator may, in making such a determination, utilize the services and opinions of the Municipal Engineer, the Fire Marshall, the Building Department or other local official.

(3) Determine that the proposed emergency activity is the minimum reasonably necessary to stabilize the building or structure.

(4) Determine that the project will be carried out in a manner that will cause the least change, modification or adverse impact to life, health, property and natural

protective features or other natural resources.

c. The Administrator shall issue a decision granting or denying the emergency authorization within 48 hours of receipt of the information required in subsection a of this section. Such decision shall be issued by and bear the name and signature of the Administrator and will specify the following:

(1) Activity for which the: authorization is issued.

(2) Address and location where the activity is to be conducted.

(3) Name and address of the authorized person.

(4) Period of validity of the authorization.

(5) Terms and conditions of the authorization.

d. The Administrator may authorize an emergency action or activity with reasonable

conditions, including, but not limited to:

(1) Removal of damaged structures or buildings or portions thereof that have failed

and are unsafe or likely to become air or water-borne debris tending to exacerbate erosion or cause damage to other buildings, structures or natural protective features.

(2) Removal of any material or building or structure constructed or placed without a building permit, Coastal Erosion Hazard Area Permit or any other required permit or variance.

(3) Restoration of any natural protective feature that was, may be, or is in fact disturbed by the emergency activities.

e. An emergency authorization may be issued for a term not to exceed thirty (30) calendar days. Such authorization may be renewed for one term not to exceed thirty (30) calendar days, provided the authorized person requests such renewal in writing at least five (5) days prior to the expiration date. On or before sixty (60) calendar days after the Administrator's original approval, the project must be concluded or the authorized person must file with the Administrator a complete application for any necessary permits and subject to all procedural requirements. All renewal requests shall be made to the Administrator and include reasons why the situation remains an emergency.

3.3 Improper Notification and Cessation of Unjustified Activities. If the Administrator determines that a regulated activity has been undertaken without a Coastal Erosion Management Permit and does not meet the emergency activity criteria, including notification requirements, then the Administrator will order the immediate cessation of the activity. Additionally, any emergency authorization issued under this section is subject to termination or suspension by the Administrator upon his determination that the proposed activity does not or no longer constitutes all emergency activity; violates the terms and/or conditions of the emergency authorization; are undertaken in a manner that does not minimize or prevent damage to natural resources and natural protective features. In such an event, the Administrator shall issue an order notifying the authorized person to cease the action. In addition, the Administrator may require:

a. Removal of any structure that was constructed or placed without a Coastal Erosion

Management Permit, and

b. The return to former conditions of any natural protective feature that was excavated, mined, or otherwise disturbed without a Coastal Erosion Management Permit.

4. VARIANCES AND APPEALS

4.1 Variances from Standards and Restrictions. Strict application of the standards and restrictions of this local law may cause practical difficulty or unnecessary hardship. When this can be shown, such standards and restrictions may be varied or modified provided that the following criteria are met:

a. No reasonable, prudent, alternative site is available.

b. All responsible means and measures to mitigate adverse impacts on natural systems and their functions and values have been incorporated into the activity's design at the property owner's expense.

c. The development will be reasonably safe from flood and erosion damage.

d. The variance requested is the minimum necessary to overcome the practical difficulty

or hardship which was the basis for the requested variance.

e. Where public funds are utilized, the public benefits must clearly outweigh the long-term adverse effects.

4.2 Format and Procedure. Any request for a variance must be in writing and specify the standard, restriction, or requirement to be varied and how the requested variance meets the criteria of Section 4.1 of this local law. The burden of demonstrating that the requested variance meets those criteria rests entirely with the applicant.

4.3 Fees. Each variance request must be accompanied by the required fee or fees as established

by the *[Town, Village, City]* legislative body under separate resolution.

4.4 Expiration. Any construction activity allowed by a variance granted by the Coastal Erosion Hazard Board of Review must be completed within one (1) year from the date of approval or approval with modifications or conditions. Variances expire at the end of this one (1) year period without further hearing or action by the Coastal Erosion Hazard Board of Review.

4.5. Coastal Erosion Hazard Board of Review. The \_\_\_\_\_\_\_\_\_\_\_\_\_is hereby designated as the Coastal Erosion Hazard Board of Review and has the authority to:

a. Hear, approve, approve with modification or deny requests for variances or other forms of relief from the requirements of this local law.

b. Hear and decide appeals where it is alleged that there is error in any order, requirement, decision, or determination made by the Administrator in the enforcement of this local law, including any order requiring an alleged violator to stop, cease and desist.

4.6 Appeal. The Coastal Erosion Hazard Board of Review may, in conformity with the provisions of this local law, reverse or affirm, wholly or partly, or may modify the order, requirement, decision, or determination of the Administrator, including stop or cease and desist orders. Notice of such decision will forthwith be given to all parties in interest. The rules and procedures for filing appeals are as follows.

a. Appeals must be filed with the Municipal Clerk within 30 days of the date of the adverse decision.

b. All appeals made to the Coastal Erosion Hazard Board of Review must be in writing on standard forms prescribed by the Board. The Board will transmit a copy to the Commissioner of the New York State Department of Environmental Conservation for the Commissioner's information.

c. All appeals must refer to the specific provisions of this local law involved, specify the alleged errors, the interpretation thereof that is claimed to be correct and the relief which the appellant claims.

4.7 Appeal to the Court. Any person or persons, jointly or severally aggrieved by a decision by the Coastal Erosion Hazard Board of Review or any officer, department, Board or Bureau of the *[Town, Village, City]*, may apply to the Supreme Court for review by a proceeding under Article 78 of the Civil Practice Law and Rules.

5. ADMINISTRATION AND ENFORCEMENT

5.1 Coastal Erosion Management Permits. A Coastal Erosion Management Permit will be issued for regulated activities which comply with the General Standards (2.3), restrictions, and requirements of the applicable sections of this local law, providing the following is adhered to:

a. The application for a Coastal Erosion Management Permit must be made upon the form provided by the Administrator and must include the following minimum information:

(1) A description of the proposed activity.

(2) A map drawn to a scale no smaller than 1:24,000, showing the location of the proposed activity.

(3) Any additional information the Administrator may require to properly evaluate the proposed activity.

b. Each application for a Coastal Erosion Management Permit must be accompanied by the required fee or fees as established by the *[Town, Village, City]* legislative body under separate resolution.

c. Permits will be issued by, and bear the name and signature of the Administrator, and

will specify the:

(1) Activity or operation for which the permit is issued.

(2) Address or location where the activity or operation is to be conducted.

(3) Name and address of permittee.

(4) Permit number and date of issuance.

(5) Period of permit validity. If not otherwise specified a permit will expire 1 (one)

year from the date of issuance.

(6) The terms and conditions of the approval.

d. When more than one Coastal Erosion Management Permit is required for the same property or premises under this local law, a single permit may be issued listing all activities permitted and any conditions, restrictions or bonding requirements. Revocation of a portion or portions of such consolidated permits will not invalidate the remainder.

e. A Coastal Erosion Management Permit may be issued with such terms and conditions

as are necessary to ensure compliance with the policies and provisions of Article 34 of the Environmental Conservation Law, the Coastal Erosion Management Regulations implementing Article 34 (6 NYCRR Part 505), and the laws and policies of the *[Town, Village, City]*.

f. When an application is made for a Coastal Erosion Management Permit, variance thereto, or other form of approval required by this local law, and such activity is subject to other permit, variance, hearing, or' application procedures required by another federal, state or local regulatory agency pursuant to any federal, state, or local law or ordinance, the Zoning Enforcement Officer shall, at the request of the applicant, consolidate and coordinate the application, permit, variance and hearing procedures as required by each regulatory agency into a single, comprehensive hearing and review procedure. However, nothing contained in this section shall be deemed to limit or restrict any regulatory agencies, which are properly a party to such a consolidated review proceeding, from the independent exercise of such discretionary authority with respect to the issuance, denial or modification of such permits, variances or other forms of approval as they may have been granted by law.

5.2 Bonds. The *[Town, Village, City]* may require a bond or other form of financial security. Such bond or security must be in an amount, with such surety and conditions as are satisfactory to the *[Town, Village, City]* so as to insure compliance with the terms and conditions stated in the Coastal Erosion Management Permit.

5.3 Administrator. The authority for administering and enforcing this local law is hereby conferred upon the Administrator. The Administrator has the powers and duties to:

a. Apply the regulations, restrictions, and standards or other provisions of this local law.

b. Explain to applicants the map which designates the land and water areas subject to regulation and advise applicants of the standards, restrictions and requirements of this local law.

c. Review and take appropriate actions on completed applications.

d. Issue and sign all approved permits.

e. Transmit written notice of violations to property owners or to other responsible persons.

f. Prepare and submit reports.

g. Perform compliance inspections.

h. Serve as the primary liaison with the New York State Department of Environmental Conservation.

i. Keep official records of all permits, inspections, inspection reports, recommendations, actions of the Coastal Erosion Hazard Board of Review, and any other reports or communications relative to this local law or request for information from the New York State Department of Environmental Conservation.

j. Perform normal and customary administrative functions required by the *[Town, Village, City]*, relative to the Coastal Erosion Hazard Areas Act, Article 34 of the New York State Environmental Conservation Law, 6 NYCRR Part 505, and this local law.

k. Have, in addition, powers and duties as are established in, or reasonably implied from this local law as are necessary to achieve its stated purpose.

5.4 Interpretation. The provisions, regulations, procedures and standards of this local law will be held to be the minimum requirements necessary to carry out the purposes of this local law.

5.5 Conflicts. The provisions of this local law will take precedence over any other laws, ordinances, or codes in effect in the *[Town, Village, City]* to the extent that the provisions of this local law are more stringent than such other laws, ordinances, or codes. A Coastal Erosion Management Permit issued pursuant to this local law does not relieve the permit applicant from the responsibility of obtaining other permits or approvals as may be necessary nor does it convey any rights or interest in real property.

5.6 Severability. The provisions of this local law are severable. If any clause, sentence, paragraph, subdivision, section or part is adjudged invalid by a court of competent jurisdiction, the effect of such order or judgment does not affect or invalidate any other provisions of this local law or their application to other persons and circumstances.

5.7 Environmental Review. All regulated activities are subject to the review procedures required by the New York State Environmental Quality Review Act (SEQRA), Article 8 of the New York State Environmental Conservation Law. The applicant may be required to submit information necessary for compliance with SEQR in addition to information required under this local law.

5.8 Violations and Penalties. A violation of this local law is hereby declared to be an offense punishable by a fine not exceeding $250.00 or imprisonment for a period not to exceed six months or both. Each day's continued violation of this local law will constitute a separate additional violation. Nothing herein will prevent the proper local authorities of the *[Town, Village, City]* from taking such other lawful actions or proceedings as may be necessary to restrain, correct, or abate any violation of this local law.

6. AMENDMENTS

6.1 Procedure. The *[Town, Village, City]* legislative body may, on its motion or on petition, or on recommendation from the Planning Board, amend, supplement or repeal the provisions, regulations, procedures or standards of this local law.

When an amendment is duly proposed, the *[Town, Village, City]* legislative body must:

a. Notify the Commissioner of the New York State Department of Environmental Conservation in writing of all proposed amendments and request the Commissioner's advice as to whether such amendment is subject to the Commissioner's approval, and if so, whether such amendment conforms to the minimum standards of a certified program.

b. Issue public notice and conduct a hearing on all proposed amendments. The *[Town, Village, City]* legislative body, by resolution, must cause notice of such hearing's time, date, and place to be published in the official newspaper not less than 10\* days prior to the date of the hearing.

c. Refer to the proposed amendment at least 30 days prior to the public hearing, in writing to:

(1) The Planning Board, unless initiated thereby, for its review of the amendment and its report to the *[Town, Village, City]* legislative body of recommendations thereon, including a full statement of reasons for such recommendations.

(2) The County Planning Board for its review and recommendations pursuant to

Article 12-B, Section 239 of the New York State General Municipal Law.

6.2 Commissioner Approval. After enactment the amendment must be sent to the Commissioner of Environmental Conservation for Certification.

6.3 Recording. After an amendment to this local law has: been initially reviewed and found to be in conformance by the Commissioner of the New York State Department of Environmental Conservation; completed the public hearing process and intergovernmental review; been finally approved and adopted by the *[Town, Village, City]* legislative body; and been certified by the Commissioner; the Clerk will as prescribed by Section 27 of the Municipal Home Rule Law:

a. Record the amended local law in the Municipal Clerk's Minute Book and in the Recorded Book of Local Laws.

b. File the amended local law within five days after adoption as follows:

(1) One copy in the Clerk's office.

(2) One copy in the Office of the State Comptroller.

(3) Three copies in the Office of the Secretary of State.

(4) One copy with the Commissioner of the New York State Department of Environmental Conservation.

*\*Villages and Cities are required to advertise five days prior to hearings. Towns are required to advertise ten days prior to hearings.*

ADDENDUM

*The Coastal Erosion Management Regulations (6 NYCRR Part 505) contain provisions relating to*

*the restoration of existing structures that are damaged or destroyed by causes not related to coastal flooding or erosion, without requirement for a permit. Because this provision may conflict with existing municipal ordinances or requirements*, *municipalities* *may not want to include it in any local erosion management ordinance enacted to carry out the purposes and policies of the Coastal Erosion Hazard Areas Act (ECL Article 34).*

*It is important to recognize that this provision allows the restoration of a pre-existing, non-conforming structure without obtaining a coastal erosion management permit, nor does it impose any time limit within which such restoration must be undertaken. However, 6 NYCRR 505.17(a) specifically allows municipalities to adopt programs that are more stringent than the minimum standards contained in the statewide regulations. Not including the exception for structures destroyed by other causes would be considered more stringent, hence allowable, under this allowance.*

*If you wish to allow the unregulated restoration of pre-existing non-conforming structures the following Sections should be inserted:*

2.6(e) The restoration of existing structures, on beaches, that are damaged or destroyed by events not related to coastal flooding or erosion may be undertaken without a coastal erosion management permit.

2.7(e) The restoration of existing structures, on dunes, that are damaged or destroyed by events not related to coastal flooding or erosion may be undertaken without a coastal erosion management permit.

2.8(b)(5) The restoration of existing structures, on bluffs, that are damaged or destroyed by events not related to coastal flooding or erosion may be undertaken without a coastal erosion management permit.

3.1.2 Alternative Coastal Erosion Hazard Area Management Model

When seeking to have authority to regulate coastal erosion hazard areas delegated to it by the New York State Department of Environmental Conservation (NYSDEC), a municipality may choose to adopt a local law or ordinance that is structured differently or contains stricter standards than the NYSDEC model. For example, the law or ordinance could prohibit hard structures in Natural Protective Feature Areas (NPFA). This would be allowed so long as it meets minimum NYSDEC standards and is approved by the NYSDEC.

The Town of Brookhaven (NY) CEHA law on which this model is based has been found by NYSDEC to meet the minimum standards needed for a municipality to administer the State Coastal Erosion Hazard Area program. Brookhaven’s CEHA law went further than the state model by expanding its definition of “regulated activities” to include any alteration of existing vegetation that would diminish said vegetation's protection of dunes and bluffs from erosion. The Brookhaven law also incorporates an exception, provided in the addendum of the state model CEHA law, which allows for the restoration of existing structures that were damaged or destroyed by events other than coastal flooding and erosion.

Language in this model relating to Structural Hazard Areas was adapted from the Coastal Erosion Hazard Area Management model presented in section 3.1.2 of this chapter. The Town of Brookhaven CEHA law does not address Structural Hazard Areas.

USAGE

Adopt as a standalone provision in the municipal code, or as a new article within the municipal zoning code.

ADAPTED FROM THE FOLLOWING SOURCE

Town of Brookhaven (NY) Municipal Code, Chapter 76 Coastal Erosion Hazard Areas.[[14]](#endnote-15)

NYSDEC Coastal Erosion Hazard Area Management Model Local Law (see section 3.1.2 of this chapter).

LANGUAGE

Article X. Coastal Erosion Hazard Areas

A. Legislative intent.

(1) Purpose. The *[City Council/Town Board/Board of Trustees]* of the *[City/Town/Village of \_\_\_\_\_\_\_\_\_\_]* hereby declares its intent to establish a coastal erosion management program pursuant to its authority under Article 34 of the Environmental Conservation Law, applicable to *[insert area of applicability, such as the town's north shore]*, in furtherance of this *[Council/Board]*'s ongoing policy of preservation, protection and enhancement of the *[City/Town/Village]*’s unique natural environment by implementing this program and through the regulatory framework for the *[City/Town/Village]’*s coastal areas as set forth herein below, which includes but is not limited to the following goals and objectives:

(a) To establish standards calculated to minimize and/or prevent damage to existing structures from coastal flooding and erosion and to preserve natural protective features and/or other natural resources.

(b) To regulate land use and development activities so as to minimize and/or prevent damage and/or destruction to existing physical improvements, natural protective features, other natural features and resources, and for the protection of human life.

(c) To regulate new construction in environmentally sensitive areas, including but not limited to the siting of structures a safe distance away from areas of active erosion and away from reasonably anticipated impacts of coastal storms in order to prevent premature damage and/or destruction

(d) To regulate the construction of erosion protection structures in coastal areas which are subject to serious erosion, in order to assure that, if justified, the construction and operation of such structures will minimize or prevent damage of or destruction to improvements thereto on private and public real property, natural protective features, and other natural resources.

(e) To restrict public investment in services, facilities, or activities which are likely to encourage new permanent development in erosion hazard areas.

(2) Findings. This [*City Council/Town Board/Board of Trustees*] hereby finds and determines that the coastal erosion hazard areas:

(a) Are prone to erosion from the action of the [*insert body of water, such as Long Island Sound or Atlantic Ocean*]. Such erosion may be caused by the action of waves, currents running along the shore, and wind-driven water and ice. Such areas are also prone to erosion caused by the wind, runoff of rainwater along the surface of the land, or groundwater seepage, as well as by human activities such as development, construction of shoreline armoring, navigation and certain forms of recreation.

(b) Experience coastal erosion which causes extensive damage to publicly and privately-owned property and to natural resources as well as endangering human lives. When this occurs, individuals and private businesses suffer significant economic losses, as do the municipal and the state economies, either directly through property damage or indirectly through loss of economic return. Large public expenditures may also be necessitated for the removal of debris and damaged structures and the replacement of essential public facilities and services.

(c) Experience erosion-related problems that are often contributed to by man's building without considering the potential for damage to property, by undertaking activities which destroy natural protective features such as dunes or vegetation, by building structures intended for erosion prevention which may exacerbate erosion conditions on adjacent or nearby property, and by water action produced by wakes from boats.

(d) Are the subject of programs which foster erosion protection structures, either with private or public funds, which are costly, often only partially effective over time, and may even be harmful to adjacent or nearby properties. In some sections of the [*City/Town/Village*], major erosion protection structures of great length would be required to effectively reduce future damages due to erosion.

B. Definitions. As used in this chapter, the following terms shall have the meanings indicated:

(1) Administrator. The local official responsible for administering and enforcing this local law.

(2) Apparent Low Water. The approximate average low water level for a given body of water at a given location, determined by reference to hydrological information concerning water levels or other appropriate tests.

(3) Beach. The zone of unconsolidated earth that extends landward from the apparent low water line to the waterward toe of a dune or bluff, whichever is most waterward; where no dune or bluff exists landward of a beach, the landward limit of a beach shall be 100 feet landward from the place where there is a marked change in natural material or physiographic form, or from the line of permanent vegetation, whichever is most waterward; shorelands subject to seasonal or more frequent overwash or inundation shall constitute a beach.

(4) Bluff. Any bank or cliff with a precipitous or steeply sloped face adjoining a beach or a body of water. The waterward limit of a bluff is the landward limit of its waterward natural protective feature. Where no beach is present, the waterward limit of a bluff is mean low water. The landward limit is 25 feet landward of the receding edge or, in those cases where there is no discernible line of active erosion, 25 feet landward of the point of inflection on the top of the bluff. (The point of inflection is that point along the top of the bluff where the trend of the land slope changes to begin its descent to the shoreline.)

(5) Coastal Erosion Hazard Areas (CEHAs). Those so identified and depicted on the final maps prepared by the State Department of Environmental Conservation, as amended by the Commissioner, pursuant to § 34-0104 of the Environmental Conservation Law, entitled "Coastal Erosion Hazard Area Map for the [name municipality and area]" and "Coastal Erosion Hazard Area Map" for [*name municipality and area*].

(6) Coastal Erosion Hazard Area Map. The final map, and amendments thereto as shall be issued by the Commissioner of the Department of Environmental Conservation, delineating boundaries of coastal erosion hazard areas.

(7) Coastal Erosion Management Permit. A written approval for the undertaking of any regulated activity within coastal erosion hazard areas as mapped by the Commissioner.

(8) Coastal Vegetation. Plant life capable of surviving and successfully reproducing and which is compatible with the natural environment of the designated coastal erosion hazard area(s).

(9) Coastal Waters. Include [*name body of water, such as Long Island Sound and the Atlantic Ocean*].

(10) Coastline. Lands adjacent to the [*City/Town/Village*]’s own coastal waters.

(11) Commissioner. The Commissioner of the Department of Environmental Conservation.

(12) Debris Line. A linear accumulation of water-borne debris deposited on a beach by high water or by wave action.

(13) Dune. A ridge or hill of loose, windblown or artificially placed earth, the principal component of which is sand, includes the primary dune and a secondary dune, if existent.

(14) Emergency. A natural or an accidental human-made event which presents an immediate threat to life, health, safety, property, or the environment.

(15) Emergency Activities. Those proposed actions designed to provide structural support to buildings or structures that have incurred or are in imminent peril of incurring damage and without which such buildings or structures may suffer such further failure as may cause them to exacerbate erosion, or increase damage to other buildings, or structures, or to natural or man-made protective features, by water- or wind-borne remnants and debris from such failed buildings or structures.

(16) Erosion. The loss or displacement of land along the coastline due to the action of waves, currents, wind-driven water, water-borne ice or other impacts of storms and/or the loss or displacement of land due to the action of wind, surface runoff or groundwater seepage.

(17) Erosion Hazard Area. An area of the coastline which is a Structural Hazard Area and/or a Natural Protective Feature Area.

(18) Erosion Protection Structure. A structure specifically designed to reduce or prevent erosion such as a groin, jetty, revetment, breakwater or artificial beach nourishment project.

(19) Existing Structure. A structure and appurtenances in existence or one where construction has commenced or one where construction has not begun but for which a building permit has been issued prior to the effective date of this chapter. “Existing structure” also includes any structure or appurtenance which was initially constructed outside an erosion hazard area, but as a result of amendments to coastal erosion hazard area maps is located in an erosion hazard area.

(20) Functional Structure. A functioning structure is one, which is fully performing as originally designed.

(21) Grading. A redistribution of sand or other unconsolidated earth to effect a change in profile.

(22) Major Addition. An addition to a structure resulting in a twenty-five-percent or greater increase in the ground area coverage of the structure other than an erosion protection structure or a pier, dock or wharf. The increase will be calculated as the ground area coverage to be added, including any additions previously constructed under a coastal erosion management permit, divided by the ground area coverage of the existing structure as defined in “existing structure.”

(23) Minor Addition. Any addition other than a major addition.

(24) Modification. A change in the size, design or function of a structure or erosion protection structure.

(25) Movable Structure. A structure designed and constructed to be readily relocated with minimum disruption of the intended use. Mobile homes and structures built on skids or piles and not having a permanent foundation are examples of movable structures.

(26) Natural Protective Feature. A near-shore area, beach, bluff, primary dune, secondary dune or marsh and its vegetation.

(27) Natural Protective Feature Area. A land and/or water area containing natural protective features, the alteration of which may reasonably be anticipated to reduce or destroy the protection afforded nearby lands against erosion from natural high water, or result in the lowering of existing sand reserve(s), or natural materials available for natural replenishment of storm losses through natural processes.

(28) Near-Shore Area. Underwater lands beginning at the apparent low water line and extending waterward in a direction perpendicular to the shoreline to a point where apparent low water depth is 15 feet, or to a horizontal distance of 1,000 feet from the apparent low water line, whichever is greater.

(29) Normal Maintenance. Periodic replacement or repair of like-kind structural elements or protective coatings which do not result in the alteration of the size, design or function of an existing functional structure.

(30) Person. Any individual, public or private corporation, political subdivision, government agency, public improvement district, partnership, association, firm, trust, estate or any legal entity whatsoever.

(31) Primary Dune. The most waterward major dune where there are two or more parallel dunes within a coastal area. Where there is only one dune present, it is the primary dune. Occasionally one or more relatively small dune forms exist seaward of the primary dune. These smaller formations will be considered to be part of the primary dune for the purposes of this chapter. The seaward limit of the primary dune is the landward limit of its fronting beach. The landward limit of the primary dune is 25 feet landward of its landward toe.

(32) Receding Edge. The most landward line of active erosion, or in cases where there is no discernible line of active erosion, it is the most waterward line of permanent vegetation.

(33) Recession Rate. The average rate, expressed in feet per year, at which an eroding shoreline moves landward.

(34) Regulated Activity. The construction, modification, restoration or placement of a structure, major addition to a structure, or any action or use of land which materially alters the condition of land or the vegetation protective thereof including grading, excavating, dumping, mining, dredging, filling, other disturbance to the soils, or the alteration of existing vegetation protecting a bluff or dune area which diminishes said vegetation's protective quality applicable to a natural protective feature relating to erosion, such as the cutting (mowing) of grasses, the cutting or pruning or topping of shrubs and trees.

(35) Restoration. The reconstruction without modification of a structure, the cost of which equals or exceeds 50 percent of the estimated current full replacement cost thereof at the time of restoration. Modifications, however, maybe allowed if they do not exceed preexisting size limits and are intended to mitigate the impacts to natural protective features and other natural resources.

(36) Secondary Dune. The major dune immediately landward of a primary dune, the seaward limit of which is the landward limit of its fronting primary dune, and the landward limit of which is 25 feet landward of its landward toe.

(37) Significant Fish and Wildlife Habitat. Habitats which:

(a) are essential to the survival of a substantial portion of a particular fish or wildlife population;

(b) support rare or endangered species;

(c) are found at a very low frequency within a geographic area;

(d) support fish or wildlife populations having important commercial or recreational value(s); or

(e) that would be difficult or impossible to replace.

(38) Structure. Any fabricated object constructed, installed or placed in, on, or under land or water, including, but not limited to: building(s); shed(s); decks; swimming pools; garages; mobile homes; roads; public service distribution and transmission facilities, or collection system(s); tanks; docks; piers; wharfs; groins; jetties; seawalls; bulkheads; breakwaters; revetments; and any addition to or alteration of the aforesaid.

(39) Structural Hazard Area. Those shorelands located landward of natural protective features and having shorelines receding at a long term average recession rate of one foot or more per year. The inland boundary of a structural hazard area is calculated by starting at the landward limit of the fronting natural protective feature and measuring along a line perpendicular to the shoreline a horizontal distance landward which is 40 times the long-term average annual recession rate.

(40) Toe. The lowest point on a dune or bluff slope.

(41) Unregulated Activity. Activities not subject to regulation under this law, including but not limited to: elevated walkways and stairways constructed solely for pedestrian use and installed by an individual property owner(s) solely for noncommercial access to the beach; ordinary beach grooming and clean-up; ordinary and customary maintenance of structures and vegetation in compliance with an approved maintenance program; planting coastal vegetation; establishing sand fencing so as to stabilize or entrap sand in primary dune and secondary dune areas which are intended to stabilize and/or enhance dune dimensions or increase dune height; the implementation of practices recommended in a soil and water conservation plan as defined in Section 3(12) of the Soil and Water Conservation Districts Law, provided that agricultural operations and the implementation of practices as aforesaid shall not be construed to include any activity that involves the construction or installation of a structure(s).

(42) Vegetation. Plant life capable of surviving and successfully reproducing in the area or region and which is compatible with the environment of the coastal erosion hazard area.

C. Prohibitions. The following enumerated activities shall be prohibited in coastal erosion hazard areas:

(1) In near-shore areas:

(a) Excavation, grading, mining or dredging which is reasonably anticipated to result in the diminution of erosion protection afforded by existing features of the near-shore area, unless specifically authorized by this chapter;

(b) Construction of new structure(s) unless otherwise specifically authorized by this chapter;

(c) Activities not otherwise authorized by this chapter.

(2) In beach areas:

(a) Excavation, grading or mining which diminishes the erosion protection afforded by the beach as then configured;

(b) Construction of new structure(s) unless otherwise specifically authorized by this chapter;

(c) Disturbance to active bird nesting and breeding areas unless such disturbance is pursuant to an approved wildlife management activity as evidenced by a duly authenticated written approval by the Department of Environmental Conservation; and

(d) Activities not otherwise authorized by this chapter.

(3) In primary dune areas:

(a) Excavation, grading or mining of a primary dune;

(b) Vehicular traffic except in areas specifically designated for dune crossing by vehicles;

(c) The construction and/or installation of any new structure unless otherwise authorized by this chapter;

(d) Disturbance to active bird nesting and breeding areas unless such disturbance is pursuant to an approved wildlife management activity as evidenced by a duly authenticated written approval by the Department of Environmental Conservation;

(e) Activities not otherwise authorized by this chapter; and

(f) Pedestrian traffic which causes sufficient damage to primary dunes to diminish the erosion protection afforded by them.

(4) In bluff areas:

(a) Excavation, grading or mining except:

[i] The minor alteration of a bluff subject to such reasonable conditions as may be set forth in a coastal erosion management permit issued thereof; and

[ii] A bluff cut made in a direction perpendicular to the shoreline to provide shoreline access so long as: the ramp slope of the bluff cuts shall not exceed 1:6; the side slopes shall not exceed 1:3, unless terraced or otherwise structurally stabilized; side slopes and other disturbed non-roadway areas are stabilized with vegetation and/or other approved physical means; and completed roadways are stabilized with adequate drainage, all of which shall be subject to such reasonable conditions as may be set forth in the permit therefor.

(b) Vehicular traffic;

(c) All construction or installation of improvements unless otherwise authorized by the provisions of this chapter;

(d) Disturbance of soil(s) which may be reasonably anticipated to result in the redirection of surface water runoff over a bluff face;

(e) Disturbance to active bird nesting and breeding areas unless part of an authorized wildlife management activity, evidenced by a duly authenticated written approval by the Department of Environmental Conservation; and

(f) All other activities unless otherwise authorized by the provisions of this chapter.

D. Structural Hazard Area Restrictions. The following restrictions apply to regulated activities within Structural Hazard Areas:

(1) A Coastal Erosion Management Permit is required for the installation of public service distribution, transmission, or collection systems for gas, electricity, water, or wastewater. Systems installed along the shoreline must be located landward of the shoreline structures.

(2) The construction of non-movable structures or placement of major non-movable additions to an existing structure is prohibited.

(3) Permanent foundations may not be attached to movable structures, and any temporary foundations are to be removed at the time the structure is moved. Below grade footings will be allowed if satisfactory provisions are made for their removal.

(4) No movable structure may be located closer to the landward limit of a bluff than 25 feet.

(5) No movable structure may be placed or constructed such that according to accepted engineering practice, its weight places excessive ground loading on a bluff.

(6) Plans for landward relocation of movable structures must be included with each application for a permit. Movable structures which have been located within a Structural Hazard Area pursuant to a Coastal Erosion Management Permit must be removed before any part of the structure is within 10 feet of the receding edge. The last owner of record, as shown on the latest assessment roll, is responsible for removing that structure and its foundation, unless a Removal Agreement was attached to the original Coastal Erosion Management Permit.

With the attachment of a Removal Agreement to the Coastal Erosion Management Permit, the landowner or the signatory is responsible for the landward relocation of movable structures. Removal Agreements may be made when the last owner of record and the owner of the structure are different with the approval of the *[Town, Village, City]* at the time the permit is issued.

(7) Debris from structural damage which may occur as a result of sudden unanticipated bluff edge failure, dune migration, or wave or ice action must be removed within sixty (60) days of the damaging event.

(8) Any grading, excavation, or other soil disturbance conducted within a Structural Hazard Area must not direct surface water runoff over a bluff face.

E. Coastal erosion management permits. A permit shall be required for any of the following activities when proposed for sites located within a coastal erosion hazard area:

(1) In near-shore areas:

(a) Excavation, grading and dredging activities performed in conjunction with the construction and/or maintenance of navigation channels; the bypassing of sand around natural and man-made obstructions; and artificial beach nourishment;

(b) The deposit of clean sand or gravel so long as any such material is comprised of grains equivalent to or slightly larger in size to that of existing near-shore area sediments; and

(c) The new construction, modification, or restoration of docks, piers, wharves, groins, jetties, seawalls, bulkheads, breakwaters, revetments, and artificial beach nourishment.

(2) In beach areas:

(a) The deposit of clean sand or gravel so long as any such material shall be composed of an equivalent or slightly larger grain size than existing beach sand or gravel;

(b) Minor additions to existing structures; and

(c) The modification or restoration of docks, piers, wharves, boardwalks, groins, jetties, seawalls, bulkheads, breakwaters, revetments, and artificial beach nourishment.

(d) Exceptions. Docks, piers, wharves, or other similar water-access structures built on floats, columns, open timber, piles, or similar open-work supports having a top surface area of 200 square feet or less or docks, piers, wharves, or other structures built on floats and removed in the fall of each year are excepted from this permit requirement.

(3) In primary dune areas:

(a) The deposit of clean sand, so long as composed of material which is of a compatible type and size to that of the existing sands, which deposits shall be vegetatively stabilized, within the time period specified in the permit, using species tolerant of existing conditions and placed in such a manner as to increase the size of and/or restore the dune or dune area;

(b) Minor additions to existing structures;

(c) New construction, modification, or restoration of stone revetments or other erosion protection structures compatible with primary dunes, provided they are located at the seaward toe of the primary dune and do not interfere with the exchange of sand between the primary dune and its fronting beach; and

(d) New construction, modification, or restoration of elevated walkways or stairways.

(4) In secondary dune areas:

(a) The deposit of clean sand of a compatible type and size to that existing so long as said deposit increases the size or restores the dune or former dune area;

(b) Excavation, grading, or mining so long as no diminution of the erosion protection afforded by the secondary or primary dune may be reasonably anticipated to result;

(c) Minor additions to existing structures; and

(d) The construction of new structures, restoration, or modification of existing structures or major addition to an existing structure so long as built on adequately anchored pilings providing a minimum of three feet of open space between the unobstructed floor joists and dune surface.

(5) In bluff areas:

(a) Minor alterations, excavation, mining and filling associated with the construction of an erosion protection structure;

(b) Bluff cuts, so long as:

[i] Made in a direction perpendicular to the shoreline;

[ii] The ramp slope does not exceed 1:6;

[iii] The side slopes do not exceed 1:3 unless terraced or otherwise structurally stabilized;

[iv] The side slopes and other disturbed non-roadway areas are stabilized with vegetation or other physical means; and

[v] The access roadway, if any, is stabilized and includes adequate drainage facilities;

(c) Construction of walkways or stairways;

(d) Restoration or modification of existing walkways or stairways;

(e) Minor additions to existing structures.

(6) Erosion protection structures requirements. The construction, modification or restoration of erosion protection structures, including the modification or restoration of existing erosion protection structure, excluding normal maintenance, subject to the following:

(a) The proposed improvement(s) is not reasonably anticipated to result in a measurable increase in erosion at the development site or elsewhere;

(b) The proposed improvement(s) minimizes and/or prevents adverse effects upon natural protective features, and natural resources such as significant fish and wildlife habitats to the main extent practicable;

(c) Such improvement(s) are designed and constructed in accordance with generally accepted engineering principles and are demonstrably successful in controlling long-term erosion, or for which there is a reasonable probability of controlling erosion at the site for a period of at least 30 years;

(d) All materials used in such structures shall be durable and capable of withstanding inundation, wave impacts, weathering, and other effects of storm conditions for a minimum of 30 years. Component materials which have a working life of less than 30 years shall be subject to a program ensuring regular maintenance and/or replacement during a period of 30 years; and

(e) Where appropriate, the establishment of a long-term maintenance program for the new, modified or reconstructed erosion protection structure and/or improvement, including specifications for regular maintenance of degradable materials and replacement thereof.

(7) Permits shall be issued only upon the Administrator's determination and findings that the proposed activity:

(a) Is reasonable and necessary upon consideration of alternatives to the proposed activity and its proposed location;

(b) Is not likely to cause a measurable increase in erosion at the proposed site and/or at other related locations; and

(c) Prevents or minimizes, to the maximum extent practicable, adverse effects on:

[i] Natural protective features;

[ii] Their functions and protective values;

[iii] Existing erosion protection structures; and

[iv] Existing natural resources, including but not limited to significant fish and wildlife habitats and shellfish beds.

(8) Application. The permit application shall be on such form as may be promulgated by the Administrator, which shall include, at minimum, the following information:

(a) A description of the proposed activity;

(b) A map drawn to a scale no smaller than 1:24,000, showing the location of the proposed activity;

(c) Any additional information deemed reasonably necessary by the Administrator to properly evaluate the proposed activity; and

(d) Fee.

(9) Contents. Permits shall set forth the following elements:

(a) The activity(ies) authorized;

(b) The address or location of the proposed activity;

(c) The name and address of the applicant;

(d) Permit number and date of issuance;

(e) The period covered by the permit, if not otherwise specified, shall be one year from date of issuance; and

(f) Terms and conditions as the Administrator deems necessary to ensure compliance with Article 34 of the Environmental Conservation Law, its implementing regulations, (6 NYCRR Part 505) and other relevant provisions of the Code of the [*City/Town/Village*].

(10) Consolidated permits. When more than one coastal erosion management permit may otherwise be required for the same property and/or location pursuant to the provisions of this chapter, a consolidated permit may be issued for all such activities with conditions; revocation or annulment of one or more such authorized activity(ies) therein shall not invalidate other activities authorized by the consolidated permit.

(11) Coordination of review. When an application is made for a coastal erosion management permit, or other form of approval required by this chapter and such activity is subject to other permit hearings or approvals pursuant to any federal, state or local law or regulation, the Administrator shall, upon request of the applicant, consolidate and coordinate all required applications, permits, hearings and/or proceedings. Nothing contained herein shall be construed to limit or restrict any other governmental entity's jurisdiction.

(12) Security. The Town Board may require such security as it shall determine appropriate and necessary to insure satisfactory completion of the proposed improvements and/or activity(ies).

F. Exceptions. A permit, as otherwise required by this chapter, shall not be required for the following activities:

(1) In near-shore areas: The normal maintenance of structures.

(2) In beach areas:

(a) The normal maintenance of structures;

(b) The restoration of existing structures that are damaged or destroyed by events not related to coastal flooding and erosion; and

(c) Beach grooming or clean-up operations.

(3) In primary dune areas:

(a) The normal maintenance of structures;

(b) The restoration of existing structures that were damaged or destroyed by events other than coastal flooding and erosion;

(c) Elevated walkways or stairways constructed solely for pedestrian use and built by or for an individual property owner or homeowners' association for the limited purpose of providing noncommercial access to the beach [*note that this exception may not be beneficial for all municipalities and see section 3.3.3 of this chapter*]; and

(d) Vegetative planting and sand fencing intended to stabilize or entrap sand in order to maintain or increase the height and width of dunes, provided that the vegetative plantings are native species tolerant to salt spray and sand burial, such as American beach grass.

(4) In secondary dunes areas:

(a) The normal maintenance of structures;

(b) The restoration of existing structures that were damaged or destroyed by events other than coastal flooding and erosion; and

(c) Elevated walkways or stairways constructed solely for pedestrian use and built by or for an individual property owner or homeowners' association for the limited purpose of providing noncommercial access to the beach. [*Note that this exception may not be beneficial for all municipalities and see section 3.3.3 of this chapter.*]

(5) In bluff areas:

(a) The normal maintenance of structures;

(b) The restoration of existing structures that are damaged or destroyed by events other than coastal flooding and erosion; and

(c) Elevated walkways or stairways constructed solely for pedestrian use and built by or for an individual property owner or homeowners' association for the limited purpose of providing noncommercial access to the beach. [*Note that this exception may not be beneficial for all municipalities and see section 3.3.3 of this chapter.*]

(6) In water and/or shore areas:

(a) Docks, piers, wharves, or other water-access structures built on floats, columns, open timber, piles, or similar open-work supports having a top surface area of 200 square feet or less; and

(b) Docks, piers, wharves, or other water access structures built on floats which are removed in the fall of each year.

(7) Vehicular and pedestrian travel, subject to the following restrictions:

(a) No vehicles of any kind whatsoever may be driven on or over a bluff or primary dune, except at vehicle crossing areas designated by the [*village/town/city*];

(b) Vehicle(s) shall not be driven on or over vegetation and/or vegetated areas; vehicles may be driven waterward of the debris line, or where no debris line exists, waterward of the waterward toe of the primary dune or bluff;

(c) Pedestrians shall not traverse or walk across a primary dune except on elevated walkways, stairways or other dune crossing structures.

G. Exemption for emergency activities.

(1) Applicability. Emergency activities necessary to protect public health, safety or welfare, including the prevention of damage to natural resources, shall be exempt from the regulations set forth in this chapter so long as such emergency activities shall be undertaken in such manner as to avoid, prevent and/or minimize damage to natural protective features and other natural resources to the maximum extent practicable under the circumstances and shall comply with the requirements set forth in this section.

(2) Written notification. Written notice of contemplated emergency measures shall be provided to the Administrator at least two days prior to the commencement of such work by the person, governmental body or entity authorized and/or required to undertake such emergency measure(s), which notice shall include the following:

(a) Description of the proposed action;

(b) A location map and plan of the proposed action at a scale and in sufficient detail to fully disclose the nature and extent of the contemplated activity; and

(c) The rationale for the determination characterizing the circumstances as constituting an emergency.

(3) Findings. Prior to issuing an emergency authorization or emergency permit, the Administrator shall determine that:

(a) An emergency situation exists;

(b) The proposed activity will result in the least impact to life, health, property, and natural resources as reasonably practicable under the circumstances; and

(c) The proposed activity provides the necessary structural support to threatened building(s) and/or structure(s).

(4) Permit issuances. The Administrator shall grant or deny the emergency authorization and/or emergency permit within 48 hours of receipt of an application.

(5) Duration. Emergency authorization(s) and/or emergency permit(s) shall be limited to a duration of 30 days or less and may be renewed for a maximum of an additional 30 days; if project activities are not concluded within the maximum allowable 60-day period, the project proponent shall make application for a coastal erosion management permit in order to continue and/or complete the work previously authorized.

(6) Erroneous determination of emergency. In the event that the Administrator determines that regulated activity has been undertaken in the absence of circumstances which constitutes the existence of an emergency the Administrator may:

(a) Order the immediate cessation of the activity;

(b) Order the removal of any structure constructed or installed without authorization;

(c) Order the restoration of the site and/or any natural protective feature(s) that was excavated, mined or otherwise disturbed.

H. Duties and powers of Administrator. The Administrator shall be charged with the following duties:

(1) Enforce the provisions of this chapter;

(2) Provide applicants with opportunity for review and explanation of the map(s) which designate the land and water areas subject to regulation by this chapter;

(3) Review and approve, with or without modification(s) and/or condition(s), or deny permit applications;

(4) Provide written notice of any violation(s) to the owner(s), tenant(s) or occupant(s) of property or premises located within designated coastal erosion hazard areas;

(5) Prepare and submit reports to the [*City Council/Town Board/Board of Trustees*];

(6) Perform compliance inspections;

(7) Act as liaison with the Department of Environmental Conservation with respect to the implementation of the provisions of this chapter;

(9) Maintain the official records of all permits, inspections, inspection reports, recommendations, actions of the Coastal Erosion Hazard Board of Review and any other reports or communications relative to the enforcement of the provisions of this chapter;

(10) Perform normal and customary administrative functions authorized by the provisions of this chapter or relative to the provisions of Article 34 of the Environmental Conservation Law, and the implementing regulations set forth at 6 NYCRR Part 505;

(11) Otherwise exercise the powers and duties conferred upon him/her by this article.

I. Appeals.

(1) Coastal Erosion Hazard Board of Review. The [*Zoning Board of Appeals/Planning Board]* is hereby designated as the Coastal Erosion Hazard Board of Review and is hereby authorized to affirm and/or modify and/or annul any order, hear and decide appeals on the Administrator's interpretation of this chapter and to affirm the requirement, decision or determination of the Administrator, by written decision, after a public hearing, which shall be filed within five days in the office of the [*City/Town/Village*] Clerk, the office of the Administrator, and served by mail upon the applicant.

(2) Appeals shall be filed with the Zoning Board of Appeals within 30 days of the date of filing in the office of the [*City/Town/Village*] Clerk of the order, determination or decision of the Administrator.

(3) Appeals shall be in writing in such form as may be prescribed by the Board of Zoning Appeals, with a copy thereof simultaneously served upon the Administrator and shall include ground(s) upon which it is based, including but not limited to the relevant provisions of this chapter and/or the disputed interpretation thereof.

(4) In making its determination the Zoning Board of Appeals shall take into consideration whether or not:

(a) A reasonable, prudent, alternative site(s) is available;

(b) All reasonable means and mitigation measures limiting adverse impacts on natural systems and their functions and/or values are incorporated into the activity's design;

(c) The structure or improvement is reasonably calculated to be impervious to flood and erosion damage;

(d) The relief requested is the minimum necessary to render the proposed activity viable; and

(e) The public benefit(s) clearly outweighs the long-term adverse effects, in a case where public funds are to be utilized for the proposed activity(ies).

J. Judicial review. Any person or persons, jointly or severally aggrieved by any decision/order of the Coastal Erosion Hazard Board of Review, or any officer, department, board or bureau of the *[City/Town/Village]* may apply to the Supreme Court for review by a proceeding under Article 78 of the Civil Practice Law and Rules, within 30 days of the filing of such order or decision in the office of the *[City/Town/Village]* Clerk.

K. Interpretation. The standards and criteria set forth in this chapter shall be deemed the minimum requirements necessary to satisfy the purposes and goals of this chapter.

L. Conflicts. The provisions of this chapter shall supersede any other local laws or ordinances to the extent that the provisions herein are more stringent. A coastal erosion management permit issued pursuant to the provisions of this chapter shall not relieve the applicant from any obligation to obtain any other permit(s) or approval(s) as may be required for the proposed activities and/or improvements.

M. Severability. The provisions of this chapter shall be severable. If any clause, sentence, paragraph, subdivision, section or part is adjudged invalid by a court of competent jurisdiction, and the effect of such order or judgment shall not affect or invalidate any other provisions of this chapter or its application to other persons and circumstances.

N. Environmental review. All activities regulated by this chapter shall be subject to review pursuant to the Environmental Conservation Law Article 8 (SEQRA).

O. Penalties for offenses. A violation of this chapter and/or the conditions or restrictions established in a coastal erosion management permit is hereby declared to be an offense punishable by a fine not exceeding $250 or imprisonment for a period not to exceed six months, or both. Each day's continued violation shall constitute a separate additional violation. Nothing herein shall prevent the *[City/Town/Village]* from taking such other lawful actions or proceedings as may be necessary to restrain, correct or abate any such violation of the provision of this chapter.

P. Amendments. In the event that the *[City Council/Town Board/Board of Trustees]* shall consider or undertake to amend the provisions of this chapter, written notice shall be provided to the Commissioner of the Department of Environmental Conservation (NYSDEC) together with a request for his/her advisement as to whether or not such amendment is consistent with the minimum standards of a certified program. Upon the *[City Council/Town Board/Board of Trustees]*'s adoption of any amendment(s) to this chapter, said amendment shall be forwarded to the Commissioner of NYSDEC for certification thereof.

3.1.3 Shoreline Protection Outside of Coastal Erosion Hazard Areas

Virtually all of New York’s coastlines are vulnerable to coastal hazards including flooding, storm surge, erosion, short-term water level changes and/or long-term sea level rise. Municipalities whose coastlines are not, or only partially, regulated under the NYS Coastal Erosion Hazard Areas (CEHA) Law can address erosion and other coastal hazards, establish coastal protection measures, and reduce risk to coastal communities by adopting or modifying their zoning laws (*see Chapter 1 Basic Land Use Tools for Resiliency*).



Structures built seaward, on top of, or immediately adjacent to natural coastal features such as dunes tend to exacerbate erosion and are vulnerable to storm damage.

Municipalities may extend coastal protection measures to areas of coastal erosion not regulated by State law using the authority granted by the State zoning enabling statutes, the New York State Constitution Article IX, or the Municipal Home Rule Law §10. One approach would be to amend the zoning law to include a coastal or shoreline overlay district. An overlay district is a district of any shape or size that is superimposed over the underlying “base” zoning district(s) to protect a resource (e.g., a river or historic area), address a special problem, or guide development within a special area. The overlay district essentially adds a layer of safeguards, standards or incentives that may not have been considered for the base zoning uses. Base zoning requirements still apply, but they are superseded by overlay district standards in cases where base and overlay requirements conflict.

When adopting an overlay district, the municipality must:

* + Identify the area(s) of the municipality that would be included in the overlay district and prepare a map showing those areas as an overlay to the municipal zoning map.
  + Amend the section of the zoning law establishing zoning districts to include the new overlay district.
  + Amend use and dimensional standards to include requirements related to the new zoning district.

The model presented below is adapted from the Town of Hamlin’s Conservation Overlay District, which applies to smaller local streams and water bodies in addition to the Town’s Lake Ontario shoreline. The model provides basic shoreline protections by establishing a vegetative buffer and giving a municipal planning board the opportunity to take a closer look at proposed development and other activities near the shoreline. As this model does not contain specific provisions addressing shoreline development in sensitive or high-risk areas, municipalities facing significant erosion, storm surge or flood hazard may wish to consider incorporating provisions from the shoreline management alternatives analysis (3.4) and setbacks (3.2) sections of this chapter.

Additional model laws to reduce flood risk to people and property are provided in *Chapter 4: Management of Floodplain Development*.

USAGE

Create a coastal or shoreline overlay district by preparing a map showing these areas as an overlay to the municipal zoning map. Amend the section of the zoning law establishing zoning districts to include the new overlay district and the requirements of that district. Add any needed definitions to the definition section of the zoning law.

ADAPTED FROM THE FOLLOWING SOURCE

Town of Hamlin (NY) Municipal Code, Chapter 520 Zoning, Article V Special Purpose Districts, Section 520-24 C/O District (Conservation Overlay)[[15]](#endnote-16)

LANGUAGE

Section X. Shoreline Overlay District (S/O)

[A.](https://ecode360.com/14920074#14920074)Statement of purpose.

[(1)](https://ecode360.com/14920075#14920075) The purpose of the S/O District is to provide special controls to guide land development along water bodies in the [*City/Town/Village of* \_\_\_\_\_\_]. The district encourages planning and development of land which will protect and preserve sensitive environmental areas; protect such development and land from periodic flooding; minimize soil erosion, sedimentation and slope failure due to removal of vegetation, dredging, filling, damming or channelization; protect scenic views and natural character of the area; and prevent activities which will cause water pollution.

[(2)](https://ecode360.com/14920076#14920076)The S/O District regulations are not intended to be substituted for other zoning district provisions. The requirements of an overlay district are to be superimposed on the primary zoning district provisions and are considered as additional requirements to be met by the applicant, prior to project approval.

[B.](https://ecode360.com/14920077#14920077)Delineation of district boundaries.

[(1)](https://ecode360.com/14920078#14920078)The location and boundaries of the S/O District shall be delineated on the Official [Zoning Map](https://ecode360.com/attachment/HA0223/HA0223-520b%20Zoning%20Map.pdf) of the [*City/Town/Village of \_\_\_\_\_\_*].

[(2)](https://ecode360.com/14920079#14920079)The boundaries of the S/O District shall be as follows: [*describe boundaries, such as the landward boundary of the one-hundred-year flood zone*].

[C.](https://ecode360.com/14920085#14920085)Regulated activities. No person shall be issued a building permit or other necessary [*city/town/village*] permit to conduct any of the following regulated activities within the S/O District without first applying for and obtaining a shoreline development permit pursuant to the requirements of this section. Agricultural operations, provided that they are located within an agricultural district or have entered into an individual commitment pursuant to Article 25AA of the Agriculture and Markets Law, are not required to obtain a conservation development permit.

[(1)](https://ecode360.com/14920086#14920086)Construction of new buildings or structures or additions to or modifications of existing buildings or structures.

[(2)](https://ecode360.com/14920087#14920087)Construction or placement of any on-site sewage disposal system, including individual sewage disposal systems.

[(3)](https://ecode360.com/14920088#14920088)Filling, cutting or excavation either on land or within a watercourse.

[(4)](https://ecode360.com/14920089#14920089)Removal of natural vegetation.

[(5)](https://ecode360.com/14920090#14920090)Discharge of stormwater and/or construction and placement of a private commercial or municipal stormwater runoff system.

[(6)](https://ecode360.com/14920091#14920091)Outside storage of materials and equipment used in the conduct of a business.

[(7)](https://ecode360.com/14920093#14920093)Construction of public or private roads, trails and bridges.

[(8)](https://ecode360.com/14920094#14920094)Boat-launching sites and fishing access parking areas.

[D.](https://ecode360.com/14920095#14920095)Additional regulations and requirements.

[(1)](https://ecode360.com/14920096#14920096)Development standards and permit conditions.

[(a)](https://ecode360.com/14920097#14920097)In approving, denying or placing conditions on an application for a shoreline development permit, the Planning Board shall consider the effect that the proposed regulated activity will have on the public health, safety and welfare and on the protection or enhancement of the fragile and environmentally sensitive lands within the district.

[(b)](https://ecode360.com/14920098#14920098)No permit to undertake a regulated activity within the S/O District shall be issued by the Planning Board unless it determines that the proposed project complies with the following standards:

[[i]](https://ecode360.com/14920099#14920099)The proposed activity provides adequate measures to prevent disruption and pollution of fish and wildlife habitats and coastal waters by construction activities, stormwater runoff, septic and sewage systems and any other activity on the site, including any activity that degrades water quality, increases temperature or turbidity, alters water depths, reduces flows or would adversely affect the fisheries' resources. Discharges of sewage or stormwater runoff containing sediments or chemical pollutants (including fertilizers, herbicides or insecticides) would adversely impact fish or wildlife species.

[[ii]](https://ecode360.com/14920100#14920100)To the greatest extent practical, a natural vegetative buffer of 100 feet shall be retained adjacent to water bodies to absorb floodwaters, to trap sediments, to protect adjacent fish and wildlife habitats and to protect scenic qualities.

[[iii]](https://ecode360.com/14920101#14920101)Site preparation, including stripping of vegetative cover or grading, shall be undertaken so that the amount of time that disturbed ground surfaces are exposed to the energy of rainfall and runoff water is limited. During construction, erosion protection measures such as temporary vegetation, retention ponds, recharge basins, berming, silt traps and mulching shall be used to ensure that sedimentation is minimized and mitigated. Finally, disturbed soils shall be stabilized and revegetated.

[[iv]](https://ecode360.com/14920102#14920102)Adequate measures shall be taken to minimize flooding and erosion hazards through nonstructural means and appropriate siting of structures. Long-term structural measures shall be used only upon demonstration that habitat and hydrologic factors will not be adversely affected.

[[v]](https://ecode360.com/14920103#14920103)The project shall provide adequate measures to protect surface water and groundwater from direct or indirect pollution and from overuse.

[[vi]](https://ecode360.com/14920104#14920104)Fill shall not encroach on floodway areas. All fill shall be compacted at a final angle of repose which provides stability for the material, minimizes erosion and prevents settlement.

[[vii]](https://ecode360.com/14920105#14920105)Roads, trails and walking paths along water bodies shall be sited and constructed so they are not a source of runoff and sedimentation. Further, such roads, trails and walking paths shall be constructed and sited in such a manner as to maximize the visual opportunities on a water body while maintaining the scenic qualities of the water body.

[[viii]](https://ecode360.com/14920107#14920107)Stormwater runoff shall not be directly discharged into wetlands, nor shall pollutants of any type be discharged into wetlands.

[[ix]](https://ecode360.com/14920108#14920108)All wetland vegetation, including that within the one-hundred-foot buffer area, shall be maintained to the greatest extent practicable. Dredging, site construction or any development activity should not disturb wetlands either by direct removal of vegetation or substrate, by the alteration of adjacent slopes that would undermine the stability of the substrate or by filling or dumping any material, either directly or indirectly.

[[x]](https://ecode360.com/14920109#14920109)Subsurface sediments shall be maintained to provide structural support for the soils of the wetlands.

[[xi]](https://ecode360.com/14920110#14920110)The elevation of the wetland shall not be altered.

[[xii]](https://ecode360.com/14920111#14920111)If bulkheading is required for filled land or for soil stabilization adjacent to a wetland, the bulkhead should be located upland from the wetland. Bulkheads should not block the surface and subsurface flow of freshwater to the wetland.

[[xiii]](https://ecode360.com/14920112#14920112)No material shall be deposited onto a wetland.

[[xiv]](https://ecode360.com/14920113#14920113)No part of a septic system, including the taper, shall be located within 150 feet of [*insert name of waterbody, such as Lake Ontario*] or wetlands adjacent to [*insert name of waterbody]*. This distance shall be measured from mapped edge, not the Shoreline Overlay boundary.

[[xv]](https://ecode360.com/14920114#14920114)Access from uplands through wetlands to reach open waters should be above the wetlands on piers of sufficient height to allow light penetration and the movement of waters.

[[vi]](https://ecode360.com/14920115#14920115)New structures shall be designed and constructed in accord with erosion control standards and stormwater control standards contained in Chapter 6 of the NYSDEC Stream Corridor Management Manual.

[[xvii]](https://ecode360.com/14920116#14920116)Unnecessary obstruction of public and semipublic access to the waterfront shall be avoided.

[(2)](https://ecode360.com/14920117#14920117)Shoreline development permit procedure.

[(a)](https://ecode360.com/14920118#14920118)A shoreline development permit shall be required subject to the provisions of this section and prior to the issuance of any building permit for any regulated activity in the designated S/O District.

[(b)](https://ecode360.com/14920119#14920119)Applications for shoreline development permits shall be made to the Planning Board on forms available in the office of the [*Building Inspector/Code Official/Zoning Enforcement Officer*]. Such an application shall be made by the property owner or his/her agent and shall be accompanied by any materials or information deemed appropriate by the Planning Board, including but not limited to a scaled site plan prepared and certified by a licensed engineer or land surveyor, that contains the following:

[[i]](https://ecode360.com/14920120#14920120)A location plan and boundary survey of the property.

[[ii]](https://ecode360.com/14920121#14920121)The location of all S/O District boundaries; designated [*city/town/village*] open space; [*city/town/village*], county, state or national parkland; or other similar areas within and/or adjacent to the property.

[[iii]](https://ecode360.com/14920122#14920122)The location of all existing and proposed buildings, structures, utility lines, sewers, water and storm drains on the property or within 200 feet of the proposed work site.

[[iv]](https://ecode360.com/14920123#14920123)The location of all existing and proposed impervious surfaces such as driveways, sidewalks, etc., on the property or within 200 feet of the proposed work site.

[[v]](https://ecode360.com/14920124#14920124)Existing and proposed contour levels at one-foot intervals for the property.

[[vi]](https://ecode360.com/14920125#14920125)The location of all trees having a caliper of three inches or more. In addition, important areas of vegetation, such as wetlands, shall also be shown.

[[vii]](https://ecode360.com/14920126#14920126)A planting plan showing the location of all proposed new plantings and the integration of existing vegetation into the final site design.

[(c)](https://ecode360.com/14920127#14920127)All nonresidential development shall show the location of all existing and proposed drainage patterns, drainageways, swales, etc., within and/or adjacent to the property.

[(d)](https://ecode360.com/14920128#14920128)Where site plan review or special permit review coincides with the issuance of a shoreline development permit, the Planning Board may determine to combine the required minimum information into a single site plan.

[(e)](https://ecode360.com/14920129#14920129)The Planning Board shall not issue a shoreline development permit without a determination from the Waterfront Advisory Committee (if applicable) that the proposed activity is consistent, to the maximum extent practicable, with the [*City/Town/Village of* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_] Local Waterfront Revitalization Program (LWRP). [*If the community does not have an LWRP, consider requiring a determination from a conservation advisory committee that the proposed regulated activity will not have a harmful effect on the public health, safety and welfare or negatively affect fragile and environmentally sensitive lands within the district.]*

[(f)](https://ecode360.com/14920130#14920130)The Planning Board shall have the authority to approve or deny a shoreline development permit, subject to the standards contained in this section. Any permit issued in accordance with the provisions of this section may be issued with conditions. Such conditions, as are deemed necessary, may be imposed to ensure the preservation and protection of environmentally sensitive areas and to ensure compliance with the policies and provisions of this section. Every permit issued pursuant to this section shall contain the following conditions:

[[i]](https://ecode360.com/14920131#14920131)The municipal building inspector, municipal engineer and/or other appropriate [*city/town/village*] official shall have the right to inspect the project from time to time.

[[ii]](https://ecode360.com/14920132#14920132)The permit shall expire on a particular date.

[[iii]](https://ecode360.com/14920133#14920133)The permit holder shall notify the building inspector or other appropriate [*city/town/village*] official of the date on which project construction is to begin, at least five days in advance of such date.

[[iv]](https://ecode360.com/14920134#14920134)The shoreline development permit shall be prominently displayed at the project site during the undertaking of the activities authorized by the permit.

[(g)](https://ecode360.com/14920135#14920135)Suspension or revocation of permits. The [*Building Inspector/Code Official/Zoning Enforcement Officer*] may suspend a permit (temporarily) until such time as the Planning Board reviews the suspension. The Board, upon recommendation of the Building Inspector or other appropriate [*city/town/village*] official and subject to a majority vote of the Board, may suspend or revoke a development permit issued in accordance with the provisions of this section where it has found evidence that the applicant has not complied with any or all terms or conditions of such permit, has exceeded the authority granted in the permit or has failed to undertake the project in the manner set forth in the final plans approved by the Board. The Planning Board shall set forth, in writing, its findings and reasons for revoking or suspending a permit issued pursuant to this section and shall forward a copy of the findings to the applicant.

[(h)](https://ecode360.com/14920136#14920136)The [*city/town/village*] has authority to require posting of a performance bond to insure performance.

Endnotes

1. *A Landowner’s Guide to Protecting Shoreline Ecosystems.* (2014). Islands Trust. Retrieved 5/24/2019 from <http://www.islandstrust.bc.ca/media/282417/Landowners-Guide-September-draft-revised.pdf> [↑](#endnote-ref-2)
2. Town of East Hampton (NY) Municipal Code, Chapter 255 Zoning, Article IV Protection of Natural Resources, Section 255-4-15 Legislative findings regarding the functions and benefits of natural resources. Retrieved 5/24/2109 from <https://ecode360.com/10414678> [↑](#endnote-ref-3)
3. *Coastal Risk Reduction and Resilience*. (September 2013). U.S. Army Corps of Engineers. Retrieved 5/24/2019 from <https://www.usace.army.mil/corpsclimate/climate_preparedness_and_resilience/coastal-Risk-and-Reduction-and-Resilience/> [↑](#endnote-ref-4)
4. *Protecting the Pathways: A Climate Change Adaptation Framework for Hudson River Estuary Tidal Wetlands*. (May 2016). Scenic Hudson. Retrieved 5/24/2019 from <http://www.scenichudson.org/sites/default/files/protecting-the-pathways.pdf> [↑](#endnote-ref-5)
5. Coastal Resilience. The Nature Conservancy. Retrieved 5/24/2019 from [www.coastalresilience.org](http://www.coastalresilience.org) [↑](#endnote-ref-6)
6. *How are coastal areas regulated by the CEHA Permit Program?* NYS Department of Environmental Conservation, Coastal Management. Retrieved 5/24/2019 from <http://www.dec.ny.gov/lands/86541.html> [↑](#endnote-ref-7)
7. New York State Environmental Conservation Law, Article 34 Coastal Erosion Hazard Areas. Retrieved 5/24/2019 from <https://www.nysenate.gov/legislation/laws/ENV/A34> [↑](#endnote-ref-8)
8. Coastal Management. NYS Department of Environmental Conservation. Retrieved 5/24/2019 from <https://www.dec.ny.gov/lands/28923.html> [↑](#endnote-ref-9)
9. *New York Codes, Rules and Regulations*. Part 505 Coastal Erosion Management. Retrieved 5/24/2019 from <https://govt.westlaw.com/nycrr/Document/I4ebe020bcd1711dda432a117e6e0f345?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)> [↑](#endnote-ref-10)
10. *Certified CEHA Communities*. NYS Department of Environmental Conservation. Retrieved 6/14/2019 from <http://www.dec.ny.gov/lands/86552.html>. [↑](#endnote-ref-11)
11. *How are coastal areas regulated by the CEHA Permit Program?* NYS Department of Environmental Conservation, Coastal Management. Retrieved 5/24/2019 from <http://www.dec.ny.gov/lands/86541.html> [↑](#endnote-ref-12)
12. *National Flood Insurance Program, Community Rating System: CRS Credit for Management of Coastal Erosion Hazards.* (2006). FEMA. Retrieved 7/3/2019 from <http://www.fema.gov/media-library-data/20130726-1755-25045-9869/crs_credit_coastal_erosion.pdf> [↑](#endnote-ref-13)
13. *CEHA Map Revision Process*. NYS Department of Environmental Conservation. Retrieved 6/4/2019 from <http://www.dec.ny.gov/lands/90934.html> [↑](#endnote-ref-14)
14. Town of Brookhaven (NY) Municipal Code, Chapter 76 Coastal Erosion Hazard Areas. Retrieved 5/24/2019 from <http://ecode360.com/8595615> [↑](#endnote-ref-15)
15. Town of Hamlin (NY) Municipal Code, Chapter 520 Zoning, Article V Special Purpose Districts, Section 520-24 C/O District (Conservation Overlay). Retrieved 6/24/2019 from <https://ecode360.com/14920073> [↑](#endnote-ref-16)